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**Department of Defense
Fiscal Year (FY) 2018 Budget Estimates**

May 2017



Defense-Wide

Defense-Wide Justification Book Volume 5 of 5

Research, Development, Test & Evaluation, Defense-Wide

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Defense-Wide • Budget Estimates FY 2018 • RDT&E Program

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Department of Defense
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

17 May 2017

Appropriation	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO
Research, Development, Test & Eval, DW	19,006,805	18,646,142	19,216,481	177,087	246,658	-3,000	243,658
Total Research, Development, Test & Evaluation	19,006,805	18,646,142	19,216,481	177,087	246,658	-3,000	243,658

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Department of Defense
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17 May 2017

Appropriation -----	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Research, Development, Test & Eval, DW	18,826,229	19,463,139	-3,000	19,460,139	20,490,902	226,096	20,716,998
Total Research, Development, Test & Evaluation	18,826,229	19,463,139	-3,000	19,460,139	20,490,902	226,096	20,716,998

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Summary Recap of Budget Activities -----							
Basic Research	613,178	629,895	629,895				
Applied Research	1,659,070	1,786,523	1,786,523				
Advanced Technology Development	3,162,869	3,190,666	3,255,350				
Advanced Component Development And Prototypes	7,097,448	6,919,519	7,142,757				
System Development And Demonstration	529,149	628,218	644,571				
Management Support	1,332,929	897,599	1,014,263				
Operational System Development	4,612,162	4,256,406	4,405,806	162,419	231,990	-3,000	228,990
Undistributed		337,316	337,316	14,668	14,668		14,668
Total Research, Development, Test & Evaluation	19,006,805	18,646,142	19,216,481	177,087	246,658	-3,000	243,658
Summary Recap of FYDP Programs -----							
General Purpose Forces	73,054	70,075	70,075				
Intelligence and Communications	550,136	555,112	559,034				
Research and Development	14,147,946	13,793,461	14,218,836				
Central Supply and Maintenance	23,552	3,908	3,908				
Training Medical and Other	41,735	34,384	34,384				
Administration and Associated Activities	39,799	370,129	370,129	14,668	14,668		14,668
Special Operations Forces	483,423	491,759	524,459				
Space							
Classified Programs	3,647,160	3,327,314	3,435,656	162,419	231,990	-3,000	228,990
Total Research, Development, Test & Evaluation	19,006,805	18,646,142	19,216,481	177,087	246,658	-3,000	243,658

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Summary Recap of Budget Activities	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total

Basic Research	629,895	629,895		629,895	697,347		697,347
Applied Research	1,786,523	1,786,523		1,786,523	1,914,090		1,914,090
Advanced Technology Development	3,190,666	3,255,350		3,255,350	3,445,847	25,000	3,470,847
Advanced Component Development And Prototypes	6,919,519	7,142,757		7,142,757	7,736,741		7,736,741
System Development And Demonstration	628,218	644,571		644,571	818,819		818,819
Management Support	897,599	1,014,263		1,014,263	1,010,530		1,010,530
Operational System Development	4,421,825	4,637,796	-3,000	4,634,796	4,867,528	201,096	5,068,624
Undistributed	351,984	351,984		351,984			
Total Research, Development, Test & Evaluation	18,826,229	19,463,139	-3,000	19,460,139	20,490,902	226,096	20,716,998
Summary Recap of FYDP Programs							

General Purpose Forces	70,075	70,075		70,075	72,790		72,790
Intelligence and Communications	555,112	559,034		559,034	588,968		588,968
Research and Development	13,793,461	14,218,836		14,218,836	15,305,560	25,000	15,330,560
Central Supply and Maintenance	3,908	3,908		3,908	4,694		4,694
Training Medical and Other	34,384	34,384		34,384	44,500		44,500
Administration and Associated Activities	384,797	384,797		384,797	35,060		35,060
Special Operations Forces	491,759	524,459		524,459	633,829	4,920	638,749
Space					52,543		52,543
Classified Programs	3,492,733	3,667,646	-3,000	3,664,646	3,752,958	196,176	3,949,134
Total Research, Development, Test & Evaluation	18,826,229	19,463,139	-3,000	19,460,139	20,490,902	226,096	20,716,998

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Applied Research	1,659,070	1,786,523	1,786,523				
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Advanced Component Development And Prototypes	7,097,448	6,919,519	7,142,757				
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Management Support	1,332,929	897,599	1,014,263				
Operational System Development	4,612,162	4,256,406	4,405,806	162,419	231,990	-3,000	228,990
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Total Research, Development, Test & Evaluation	19,006,805	18,646,142	19,216,481	177,087	246,658	-3,000	243,658
Summary Recap of FYDP Programs							
General Purpose Forces	73,054	70,075	70,075				
Intelligence and Communications	550,136	555,112	559,034				
Research and Development	14,147,946	13,793,461	14,218,836				
Central Supply and Maintenance	23,552	3,908	3,908				
Training Medical and Other	41,735	34,384	34,384				
Administration and Associated Activities	39,799	370,129	370,129	14,668	14,668		14,668
Special Operations Forces	483,423	491,759	524,459				
Space							
Classified Programs	3,647,160	3,327,314	3,435,656	162,419	231,990	-3,000	228,990
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Summary Recap of Budget Activities							
Basic Research	629,895	629,895		629,895	697,347		697,347
Applied Research	1,786,523	1,786,523		1,786,523	1,914,090		1,914,090
Advanced Technology Development	3,190,666	3,255,350		3,255,350	3,445,847	25,000	3,470,847
Advanced Component Development And Prototypes	6,919,519	7,142,757		7,142,757	7,736,741		7,736,741
System Development And Demonstration	628,218	644,571		644,571	818,819		818,819
Management Support	897,599	1,014,263		1,014,263	1,010,530		1,010,530
Operational System Development	4,421,825	4,637,796	-3,000	4,634,796	4,867,528	201,096	5,068,624
Undistributed	351,984	351,984		351,984			
Total Research, Development, Test & Evaluation	18,826,229	19,463,139	-3,000	19,460,139	20,490,902	226,096	20,716,998
Summary Recap of FYDP Programs							
General Purpose Forces	70,075	70,075		70,075	72,790		72,790
Intelligence and Communications	555,112	559,034		559,034	588,968		588,968
Research and Development	13,793,461	14,218,836		14,218,836	15,305,560	25,000	15,330,560
Central Supply and Maintenance	3,908	3,908		3,908	4,694		4,694
Training Medical and Other	34,384	34,384		34,384	44,500		44,500
Administration and Associated Activities	384,797	384,797		384,797	35,060		35,060
Special Operations Forces	491,759	524,459		524,459	633,829	4,920	638,749
Space					52,543		52,543
Classified Programs	3,492,733	3,667,646	-3,000	3,664,646	3,752,958	196,176	3,949,134
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Chemical and Biological Defense Program	978,327	884,989	884,989				
Defense Advanced Research Projects Agency	2,868,281	2,973,036	2,973,036				
Defense Contract Management Agency	12,042	11,505	11,505				
Defense-Wide		337,316	337,316	14,668	14,668		14,668
Defense Human Resources Activity	18,695	23,898	23,898				
Defense Intelligence Agency							
Defense Information Systems Agency	252,313	251,852	248,716				
Defense Logistics Agency	214,251	188,241	188,070				
Defense Security Cooperative Agency	10,510	9,572	9,572				
Defense Security Service	8,462	9,275	12,175				
Defense Technical Information Center	57,133	48,234	48,234				
Defense Threat Reduction Agency	503,342	461,305	461,305				
Missile Defense Agency	6,210,652	5,892,757	5,969,695				
National Geospatial Intelligence Agency							
National Security Agency							
Office of Secretary of Defense	3,381,638	3,430,277	3,770,685				
U.S., Special Operations Command	554,145	497,174	529,874				
The Joint Staff	77,021	68,586	73,886				
Washington Headquarters Services	975	827	827				
Total Research, Development, Test & Evaluation	19,006,805	18,646,142	19,216,481	177,087	246,658		243,658

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Chemical and Biological Defense Program	884,989	884,989		884,989	1,095,642		1,095,642
Defense Advanced Research Projects Agency	2,973,036	2,973,036		2,973,036	3,170,390		3,170,390
Defense Contract Management Agency	11,505	11,505		11,505	12,322		12,322
Defense-Wide	351,984	351,984		351,984			
Defense Human Resources Activity	23,898	23,898		23,898	35,249		35,249
Defense Intelligence Agency							
Defense Information Systems Agency	251,852	248,716		248,716	256,494		256,494
Defense Logistics Agency	188,241	188,070		188,070	319,796		319,796
Defense Security Cooperative Agency	9,572	9,572		9,572	16,619		16,619
Defense Security Service	9,275	12,175		12,175			
Defense Technical Information Center	48,234	48,234		48,234	58,332		58,332
Defense Threat Reduction Agency	461,305	461,305		461,305	469,957		469,957
Missile Defense Agency	5,892,757	5,969,695		5,969,695	6,200,711		6,200,711
National Geospatial Intelligence Agency							
National Security Agency							
Office of Secretary of Defense	3,430,277	3,770,685		3,770,685	4,041,233	25,000	4,066,233
U.S., Special Operations Command	497,174	529,874		529,874	639,325	4,920	644,245
The Joint Staff	68,586	73,886		73,886	116,141		116,141
Washington Headquarters Services	827	827		827	29,594		29,594
Total Research, Development, Test & Evaluation	18,826,229	19,463,139		19,460,139	20,490,902	226,096	20,716,998

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17 May 2017

Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO	S e c
1	0601000BR	DTRA Basic Research	01	38,288	35,436	35,436					U
2	0601101E	Defense Research Sciences	01	317,207	362,297	362,297					U
3	0601110D8Z	Basic Research Initiatives	01	70,311	36,654	36,654					U
4	0601117E	Basic Operational Medical Research Science	01	52,736	57,791	57,791					U
5	0601120D8Z	National Defense Education Program	01	52,837	69,345	69,345					U
6	0601228D8Z	Historically Black Colleges and Universities/Minority Institutions	01	34,943	23,572	23,572					U
7	0601384BP	Chemical and Biological Defense Program	01	46,856	44,800	44,800					U
		Basic Research		613,178	629,895	629,895					
8	0602000D8Z	Joint Munitions Technology	02	18,993	17,745	17,745					U
9	0602115E	Biomedical Technology	02	120,512	115,213	115,213					U
10	0602230D8Z	Defense Technology Innovation	02		30,000	30,000					U
11	0602234D8Z	Lincoln Laboratory Research Program	02	53,517	48,269	48,269					U
12	0602251D8Z	Applied Research for the Advancement of S&T Priorities	02	46,750	42,206	42,206					U
13	0602303E	Information & Communications Technology	02	331,720	353,635	353,635					U
14	0602383E	Biological Warfare Defense	02	24,682	21,250	21,250					U
15	0602384BP	Chemical and Biological Defense Program	02	202,112	188,715	188,715					U
16	0602668D8Z	Cyber Security Research	02	15,378	12,183	12,183					U

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1	0601000BR	DTRA Basic Research	01	35,436	35,436		35,436	37,201		37,201	U
2	0601101E	Defense Research Sciences	01	362,297	362,297		362,297	432,347		432,347	U
3	0601110D8Z	Basic Research Initiatives	01	36,654	36,654		36,654	40,612		40,612	U
4	0601117E	Basic Operational Medical Research Science	01	57,791	57,791		57,791	43,126		43,126	U
5	0601120D8Z	National Defense Education Program	01	69,345	69,345		69,345	74,298		74,298	U
6	0601228D8Z	Historically Black Colleges and Universities/Minority Institutions	01	23,572	23,572		23,572	25,865		25,865	U
7	0601384BP	Chemical and Biological Defense Program	01	44,800	44,800		44,800	43,898		43,898	U
		Basic Research		629,895	629,895		629,895	697,347		697,347	
8	0602000D8Z	Joint Munitions Technology	02	17,745	17,745		17,745	19,111		19,111	U
9	0602115E	Biomedical Technology	02	115,213	115,213		115,213	109,360		109,360	U
10	0602230D8Z	Defense Technology Innovation	02	30,000	30,000		30,000				U
11	0602234D8Z	Lincoln Laboratory Research Program	02	48,269	48,269		48,269	49,748		49,748	U
12	0602251D8Z	Applied Research for the Advancement of S&T Priorities	02	42,206	42,206		42,206	49,226		49,226	U
13	0602303E	Information & Communications Technology	02	353,635	353,635		353,635	392,784		392,784	U
14	0602383E	Biological Warfare Defense	02	21,250	21,250		21,250	13,014		13,014	U
15	0602384BP	Chemical and Biological Defense Program	02	188,715	188,715		188,715	201,053		201,053	U
16	0602668D8Z	Cyber Security Research	02	12,183	12,183		12,183	14,775		14,775	U

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17	0602702E	Tactical Technology	02	289,371	313,843	313,843					U
18	0602715E	Materials and Biological Technology	02	193,471	220,456	220,456					U
19	0602716E	Electronics Technology	02	168,233	221,911	221,911					U
20	0602718BR	Counter Weapons of Mass Destruction Applied Research	02	149,302	154,857	154,857					U
21	0602751D8Z	Software Engineering Institute (SEI) Applied Research	02	7,945	8,420	8,420					U
22	1160401BB	SOF Technology Development	02	37,084	37,820	37,820					U
		Applied Research		1,659,070	1,786,523	1,786,523					
23	0603000D8Z	Joint Munitions Advanced Technology	03	25,452	23,902	23,902					U
24	0603122D8Z	Combating Terrorism Technology Support	03	146,115	73,002	73,002					U
25	0603133D8Z	Foreign Comparative Testing	03	24,406	19,343	19,343					U
26	0603160BR	Counter Weapons of Mass Destruction Advanced Technology Development	03	298,123	266,444	266,444					U
27	0603176C	Advanced Concepts and Performance Assessment	03	11,853	17,880	17,880					U
28	0603177C	Discrimination Sensor Technology	03	27,981							U
29	0603178C	Weapons Technology	03	50,263	71,843	71,843					U
30	0603179C	Advanced C4ISR	03	9,661	3,626	3,626					U
31	0603180C	Advanced Research	03	16,987	23,433	27,733					U
32	0603225D8Z	Joint DoD-DoE Munitions Technology Development	03	18,129	17,256	17,256					U

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17	0602702E	Tactical Technology	02	313,843	313,843		313,843	343,776		343,776	U
18	0602715E	Materials and Biological Technology	02	220,456	220,456		220,456	224,440		224,440	U
19	0602716E	Electronics Technology	02	221,911	221,911		221,911	295,447		295,447	U
20	0602718BR	Counter Weapons of Mass Destruction Applied Research	02	154,857	154,857		154,857	157,908		157,908	U
21	0602751D8Z	Software Engineering Institute (SEI) Applied Research	02	8,420	8,420		8,420	8,955		8,955	U
22	1160401BB	SOF Technology Development	02	37,820	37,820		37,820	34,493		34,493	U
		Applied Research		1,786,523	1,786,523		1,786,523	1,914,090		1,914,090	
23	0603000D8Z	Joint Munitions Advanced Technology	03	23,902	23,902		23,902	25,627		25,627	U
24	0603122D8Z	Combating Terrorism Technology Support	03	73,002	73,002		73,002	76,230	25,000	101,230	U
25	0603133D8Z	Foreign Comparative Testing	03	19,343	19,343		19,343	24,199		24,199	U
26	0603160BR	Counter Weapons of Mass Destruction Advanced Technology Development	03	266,444	266,444		266,444	268,607		268,607	U
27	0603176C	Advanced Concepts and Performance Assessment	03	17,880	17,880		17,880	12,996		12,996	U
28	0603177C	Discrimination Sensor Technology	03								U
29	0603178C	Weapons Technology	03	71,843	71,843		71,843	5,495		5,495	U
30	0603179C	Advanced C4ISR	03	3,626	3,626		3,626				U
31	0603180C	Advanced Research	03	23,433	27,733		27,733	20,184		20,184	U
32	0603225D8Z	Joint DoD-DoE Munitions Technology Development	03	17,256	17,256		17,256	18,662		18,662	U

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33	0603264S	Agile Transportation for the 21st Century (AT21) - Theater Capability	03	1,508							U
34	0603274C	Special Program - MDA Technology	03	9,650	83,745	83,745					U
35	0603286E	Advanced Aerospace Systems	03	165,764	182,327	182,327					U
36	0603287E	Space Programs and Technology	03	120,642	175,240	175,240					U
37	0603288D8Z	Analytic Assessments	03	14,145	12,048	12,048					U
38	0603289D8Z	Advanced Innovative Analysis and Concepts	03	48,873	57,020	57,020					U
39	0603291D8Z	Advanced Innovative Analysis and Concepts - MHA	03								U
40	0603294C	Common Kill Vehicle Technology	03	60,851							U
41	0603342D8W	Defense Innovation Unit Experimental (DIUx)	03								U
42	0603375D8Z	Technology Innovation	03	25,000	39,923	89,923					U
43	0603384BP	Chemical and Biological Defense Program - Advanced Development	03	134,070	127,941	127,941					U
44	0603527D8Z	RETRACT LARCH	03	105,243	181,977	181,977					U
45	0603618D8Z	Joint Electronic Advanced Technology	03	28,667	22,030	22,030					U
46	0603648D8Z	Joint Capability Technology Demonstrations	03	130,829	148,184	148,184					U
47	0603662D8Z	Networked Communications Capabilities	03	5,452	9,331	9,331					U
48	0603680D8Z	Defense-Wide Manufacturing Science and Technology Program	03	151,999	158,398	158,398					U

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33	0603264S	Agile Transportation for the 21st Century (AT21) - Theater Capability	03								U
34	0603274C	Special Program - MDA Technology	03	83,745	83,745		83,745				U
35	0603286E	Advanced Aerospace Systems	03	182,327	182,327		182,327	155,406		155,406	U
36	0603287E	Space Programs and Technology	03	175,240	175,240		175,240	247,435		247,435	U
37	0603288D8Z	Analytic Assessments	03	12,048	12,048		12,048	13,154		13,154	U
38	0603289D8Z	Advanced Innovative Analysis and Concepts	03	57,020	57,020		57,020	37,674		37,674	U
39	0603291D8Z	Advanced Innovative Analysis and Concepts - MHA	03					15,000		15,000	U
40	0603294C	Common Kill Vehicle Technology	03					252,879		252,879	U
41	0603342D8W	Defense Innovation Unit Experimental (DIUx)	03					29,594		29,594	U
42	0603375D8Z	Technology Innovation	03	39,923	89,923		89,923	59,863		59,863	U
43	0603384BP	Chemical and Biological Defense Program - Advanced Development	03	127,941	127,941		127,941	145,359		145,359	U
44	0603527D8Z	RETRACT LARCH	03	181,977	181,977		181,977	171,120		171,120	U
45	0603618D8Z	Joint Electronic Advanced Technology	03	22,030	22,030		22,030	14,389		14,389	U
46	0603648D8Z	Joint Capability Technology Demonstrations	03	148,184	148,184		148,184	105,871		105,871	U
47	0603662D8Z	Networked Communications Capabilities	03	9,331	9,331		9,331	12,661		12,661	U
48	0603680D8Z	Defense-Wide Manufacturing Science and Technology Program	03	158,398	158,398		158,398	136,159		136,159	U

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49	0603680S	Manufacturing Technology Program	03		31,259	31,259					U
50	0603699D8Z	Emerging Capabilities Technology Development	03	77,966	49,895	49,895					U
51	0603712S	Generic Logistics R&D Technology Demonstrations	03	15,093	11,011	11,011					U
52	0603713S	Deployment and Distribution Enterprise Technology	03	29,888							U
53	0603716D8Z	Strategic Environmental Research Program	03	54,261	65,078	65,078					U
54	0603720S	Microelectronics Technology Development and Support	03	86,832	97,826	97,826					U
55	0603727D8Z	Joint Warfighting Program	03	4,852	7,848	7,848					U
56	0603739E	Advanced Electronics Technologies	03	78,984	49,807	49,807					U
57	0603760E	Command, Control and Communications Systems	03	201,635	155,081	155,081					U
58	0603766E	Network-Centric Warfare Technology	03	411,060	428,894	428,894					U
59	0603767E	Sensor Technology	03	231,633	241,288	241,288					U
60	0603769D8Z	Distributed Learning Advanced Technology Development	03			10,384					U
61	0603769SE	Distributed Learning Advanced Technology Development	03	10,399							U
62	0603781D8Z	Software Engineering Institute	03	13,687	14,264	14,264					U
63	0603826D8Z	Quick Reaction Special Projects	03	69,506	74,943	74,943					U
64	0603833D8Z	Engineering Science & Technology	03	17,904	17,659	17,659					U

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49	0603680S	Manufacturing Technology Program	03	31,259	31,259		31,259	40,511		40,511	U
50	0603699D8Z	Emerging Capabilities Technology Development	03	49,895	49,895		49,895	57,876		57,876	U
51	0603712S	Generic Logistics R&D Technology Demonstrations	03	11,011	11,011		11,011	10,611		10,611	U
52	0603713S	Deployment and Distribution Enterprise Technology	03								U
53	0603716D8Z	Strategic Environmental Research Program	03	65,078	65,078		65,078	71,832		71,832	U
54	0603720S	Microelectronics Technology Development and Support	03	97,826	97,826		97,826	219,803		219,803	U
55	0603727D8Z	Joint Warfighting Program	03	7,848	7,848		7,848	6,349		6,349	U
56	0603739E	Advanced Electronics Technologies	03	49,807	49,807		49,807	79,173		79,173	U
57	0603760E	Command, Control and Communications Systems	03	155,081	155,081		155,081	106,787		106,787	U
58	0603766E	Network-Centric Warfare Technology	03	428,894	428,894		428,894	439,386		439,386	U
59	0603767E	Sensor Technology	03	241,288	241,288		241,288	210,123		210,123	U
60	0603769D8Z	Distributed Learning Advanced Technology Development	03		10,384		10,384	11,211		11,211	U
61	0603769SE	Distributed Learning Advanced Technology Development	03								U
62	0603781D8Z	Software Engineering Institute	03	14,264	14,264		14,264	15,047		15,047	U
63	0603826D8Z	Quick Reaction Special Projects	03	74,943	74,943		74,943	69,203		69,203	U
64	0603833D8Z	Engineering Science & Technology	03	17,659	17,659		17,659	25,395		25,395	U

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65	0603941D8Z	Test & Evaluation Science & Technology	03	89,317	87,135	87,135					U
66	0604055D8Z	Operational Energy Capability Improvement	03	40,387	37,329	37,329					U
67	0303310D8Z	CWMD Systems	03	40,938	44,836	44,836					U
68	1160402BB	SOF Advanced Technology Development	03	56,864	61,620	61,620					U
		Advanced Technology Development		3,162,869	3,190,666	3,255,350					
69	0603161D8Z	Nuclear and Conventional Physical Security Equipment RDT&E ADC&P	04	31,149	28,498	28,498					U
70	0603600D8Z	WALKOFF	04	88,031	89,643	98,143					U
71	0603714D8Z	Advanced Sensors Application Program	04	15,869							U
72	0603821D8Z	Acquisition Enterprise Data & Information Services	04		2,136	2,136					U
73	0603851D8Z	Environmental Security Technical Certification Program	04	51,380	52,491	52,491					U
74	0603881C	Ballistic Missile Defense Terminal Defense Segment	04	197,617	206,834	209,072					U
75	0603882C	Ballistic Missile Defense Midcourse Defense Segment	04	1,260,480	862,080	862,080					U
76	0603884BP	Chemical and Biological Defense Program - Dem/Val	04	171,117	138,187	138,187					U
77	0603884C	Ballistic Missile Defense Sensors	04	233,020	230,077	230,077					U
78	0603890C	BMD Enabling Programs	04	406,326	401,594	408,594					U
79	0603891C	Special Programs - MDA	04	390,264	321,607	323,607					U

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65	0603941D8Z	Test & Evaluation Science & Technology	03	87,135	87,135		87,135	89,586		89,586	U
66	0604055D8Z	Operational Energy Capability Improvement	03	37,329	37,329		37,329	38,403		38,403	U
67	0303310D8Z	CWMD Systems	03	44,836	44,836		44,836	33,382		33,382	U
68	1160402BB	SOF Advanced Technology Development	03	61,620	61,620		61,620	72,605		72,605	U
		Advanced Technology Development		3,190,666	3,255,350		3,255,350	3,445,847	25,000	3,470,847	
69	0603161D8Z	Nuclear and Conventional Physical Security Equipment RDT&E ADC&P	04	28,498	28,498		28,498	32,937		32,937	U
70	0603600D8Z	WALKOFF	04	89,643	98,143		98,143	101,714		101,714	U
71	0603714D8Z	Advanced Sensors Application Program	04								U
72	0603821D8Z	Acquisition Enterprise Data & Information Services	04	2,136	2,136		2,136	2,198		2,198	U
73	0603851D8Z	Environmental Security Technical Certification Program	04	52,491	52,491		52,491	54,583		54,583	U
74	0603881C	Ballistic Missile Defense Terminal Defense Segment	04	206,834	209,072		209,072	230,162		230,162	U
75	0603882C	Ballistic Missile Defense Midcourse Defense Segment	04	862,080	862,080		862,080	828,097		828,097	U
76	0603884BP	Chemical and Biological Defense Program - Dem/Val	04	138,187	138,187		138,187	148,518		148,518	U
77	0603884C	Ballistic Missile Defense Sensors	04	230,077	230,077		230,077	247,345		247,345	U
78	0603890C	BMD Enabling Programs	04	401,594	408,594		408,594	449,442		449,442	U
79	0603891C	Special Programs - MDA	04	321,607	323,607		323,607	320,190		320,190	U

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80	0603892C	AEGIS BMD	04	804,211	959,066	959,066					U
81	0603893C	Space Tracking & Surveillance System	04	27,262	32,129	32,129					U
82	0603895C	Ballistic Missile Defense System Space Programs	04	21,040	20,690	20,690					U
83	0603896C	Ballistic Missile Defense Command and Control, Battle Management and Communicati	04	425,996	439,617	456,267					U
84	0603898C	Ballistic Missile Defense Joint Warfighter Support	04	47,566	47,776	47,776					U
85	0603904C	Missile Defense Integration & Operations Center (MDIOC)	04	46,191	54,750	54,750					U
86	0603906C	Regarding Trench	04	8,918	8,785	8,785					U
87	0603907C	Sea Based X-Band Radar (SBX)	04	81,265	68,787	93,287					U
88	0603913C	Israeli Cooperative Programs	04	267,595	103,835	103,835					U
89	0603914C	Ballistic Missile Defense Test	04	290,267	293,441	293,441					U
90	0603915C	Ballistic Missile Defense Targets	04	517,589	563,576	563,576					U
91	0603920D8Z	Humanitarian Demining	04	9,858	10,007	10,007					U
92	0603923D8Z	Coalition Warfare	04	10,179	10,126	10,126					U
93	0604016D8Z	Department of Defense Corrosion Program	04	7,471	3,893	3,893					U
94	0604115C	Technology Maturation Initiatives	04	24,743	90,266	99,366					U
95	0604132D8Z	Missile Defeat Project	04		45,000	185,500					U
96	0604181C	Hypersonic Defense	04								U

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80	0603892C	AEGIS BMD	04	959,066	959,066		959,066	852,052		852,052	U
81	0603893C	Space Tracking & Surveillance System	04	32,129	32,129		32,129				U
82	0603895C	Ballistic Missile Defense System Space Programs	04	20,690	20,690		20,690				U
83	0603896C	Ballistic Missile Defense Command and Control, Battle Management and Communicati	04	439,617	456,267		456,267	430,115		430,115	U
84	0603898C	Ballistic Missile Defense Joint Warfighter Support	04	47,776	47,776		47,776	48,954		48,954	U
85	0603904C	Missile Defense Integration & Operations Center (MDIOC)	04	54,750	54,750		54,750	53,265		53,265	U
86	0603906C	Regarding Trench	04	8,785	8,785		8,785	9,113		9,113	U
87	0603907C	Sea Based X-Band Radar (SBX)	04	68,787	93,287		93,287	130,695		130,695	U
88	0603913C	Israeli Cooperative Programs	04	103,835	103,835		103,835	105,354		105,354	U
89	0603914C	Ballistic Missile Defense Test	04	293,441	293,441		293,441	305,791		305,791	U
90	0603915C	Ballistic Missile Defense Targets	04	563,576	563,576		563,576	410,425		410,425	U
91	0603920D8Z	Humanitarian Demining	04	10,007	10,007		10,007	10,837		10,837	U
92	0603923D8Z	Coalition Warfare	04	10,126	10,126		10,126	10,740		10,740	U
93	0604016D8Z	Department of Defense Corrosion Program	04	3,893	3,893		3,893	3,837		3,837	U
94	0604115C	Technology Maturation Initiatives	04	90,266	99,366		99,366	128,406		128,406	U
95	0604132D8Z	Missile Defeat Project	04	45,000	185,500		185,500	98,369		98,369	U
96	0604181C	Hypersonic Defense	04					75,300		75,300	U

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97	0604250D8Z	Advanced Innovative Technologies	04	459,966	844,870	846,470					U
98	0604294D8Z	Trusted & Assured Microelectronics	04								U
99	0604331D8Z	Rapid Prototyping Program	04								U
100	0604342D8Z	Defense Technology Offset	04	71,500							U
101	0604400D8Z	Department of Defense (DoD) Unmanned System Common Development	04	7,731	3,320	3,320					U
102	0604682D8Z	Wargaming and Support for Strategic Analysis (SSA)	04		4,000	4,000					U
103	0604775D8Z	Defense Rapid Innovation Program	04	250,000							U
104	0604826J	Joint C5 Capability Development, Integration and interoperability Assessments	04	21,700	23,642	23,642					U
105	0604873C	Long Range Discrimination Radar (LRDR)	04	132,278	162,012	173,162					U
106	0604874C	Improved Homeland Defense Interceptors	04	282,864	274,148	274,148					U
107	0604876C	Ballistic Missile Defense Terminal Defense Segment Test	04	20,980	63,444	63,444					U
108	0604878C	Aegis BMD Test	04	78,468	95,012	95,012					U
109	0604879C	Ballistic Missile Defense Sensor Test	04	83,597	83,250	83,250					U
110	0604880C	Land-Based SM-3 (LBSM3)	04	29,288	43,293	43,293					U
111	0604881C	AEGIS SM-3 Block IIA Co-Development	04	165,456	106,038	106,038					U
112	0604887C	Ballistic Missile Defense Midcourse Segment Test	04	54,619	56,481	56,481					U

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97	0604250D8Z	Advanced Innovative Technologies	04	844,870	846,470		846,470	1,175,832		1,175,832	U
98	0604294D8Z	Trusted & Assured Microelectronics	04					83,626		83,626	U
99	0604331D8Z	Rapid Prototyping Program	04					100,000		100,000	U
100	0604342D8Z	Defense Technology Offset	04								U
101	0604400D8Z	Department of Defense (DoD) Unmanned System Common Development	04	3,320	3,320		3,320	3,967		3,967	U
102	0604682D8Z	Wargaming and Support for Strategic Analysis (SSA)	04	4,000	4,000		4,000	3,833		3,833	U
103	0604775D8Z	Defense Rapid Innovation Program	04								U
104	0604826J	Joint C5 Capability Development, Integration and interoperability Assessments	04	23,642	23,642		23,642	23,638		23,638	U
105	0604873C	Long Range Discrimination Radar (LRDR)	04	162,012	173,162		173,162	357,659		357,659	U
106	0604874C	Improved Homeland Defense Interceptors	04	274,148	274,148		274,148	465,530		465,530	U
107	0604876C	Ballistic Missile Defense Terminal Defense Segment Test	04	63,444	63,444		63,444	36,239		36,239	U
108	0604878C	Aegis BMD Test	04	95,012	95,012		95,012	134,468		134,468	U
109	0604879C	Ballistic Missile Defense Sensor Test	04	83,250	83,250		83,250	84,239		84,239	U
110	0604880C	Land-Based SM-3 (LBSM3)	04	43,293	43,293		43,293	30,486		30,486	U
111	0604881C	AEGIS SM-3 Block IIA Co-Development	04	106,038	106,038		106,038	9,739		9,739	U
112	0604887C	Ballistic Missile Defense Midcourse Segment Test	04	56,481	56,481		56,481	76,757		76,757	U

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113	0604894C	Multi-Object Kill Vehicle	04		71,513	71,513					U
114	0303191D8Z	Joint Electromagnetic Technology (JET) Program	04	2,656	2,636	2,636					U
115	0305103C	Cyber Security Initiative	04	941	969	969					U
116	1206893C	Space Tracking & Surveillance System	04								U
117	1206895C	Ballistic Missile Defense System Space Programs	04								U
		Advanced Component Development And Prototypes		7,097,448	6,919,519	7,142,757					
118	0604161D8Z	Nuclear and Conventional Physical Security Equipment RDT&E SDD	05	8,590	10,324	10,324					U
119	0604165D8Z	Prompt Global Strike Capability Development	05	88,660	181,303	181,303					U
120	0604384BP	Chemical and Biological Defense Program - EMD	05	276,560	266,231	266,231					U
121	0604764K	Advanced IT Services Joint Program Office (AITS-JPO)	05	18,750							U
122	0604771D8Z	Joint Tactical Information Distribution System (JTIDS)	05	13,774	16,288	16,288					U
123	0605000BR	Counter Weapons of Mass Destruction Systems Development	05	7,156	4,568	4,568					U
124	0605013BL	Information Technology Development	05	12,042	11,505	11,505					U
125	0605021SE	Homeland Personnel Security Initiative	05		1,658	1,658					U
126	0605022D8Z	Defense Exportability Program	05	3,165	2,920	2,920					U
127	0605027D8Z	OUSD(C) IT Development Initiatives	05	13,457		16,524					U

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113	0604894C	Multi-Object Kill Vehicle	04	71,513	71,513		71,513	6,500		6,500	U
114	0303191D8Z	Joint Electromagnetic Technology (JET) Program	04	2,636	2,636		2,636	2,902		2,902	U
115	0305103C	Cyber Security Initiative	04	969	969		969	986		986	U
116	1206893C	Space Tracking & Surveillance System	04					34,907		34,907	U
117	1206895C	Ballistic Missile Defense System Space Programs	04					16,994		16,994	U
		Advanced Component Development And Prototypes		6,919,519	7,142,757		7,142,757	7,736,741		7,736,741	
118	0604161D8Z	Nuclear and Conventional Physical Security Equipment RDT&E SDD	05	10,324	10,324		10,324	12,536		12,536	U
119	0604165D8Z	Prompt Global Strike Capability Development	05	181,303	181,303		181,303	201,749		201,749	U
120	0604384BP	Chemical and Biological Defense Program - EMD	05	266,231	266,231		266,231	406,789		406,789	U
121	0604764K	Advanced IT Services Joint Program Office (AITS-JPO)	05								U
122	0604771D8Z	Joint Tactical Information Distribution System (JTIDS)	05	16,288	16,288		16,288	15,358		15,358	U
123	0605000BR	Counter Weapons of Mass Destruction Systems Development	05	4,568	4,568		4,568	6,241		6,241	U
124	0605013BL	Information Technology Development	05	11,505	11,505		11,505	12,322		12,322	U
125	0605021SE	Homeland Personnel Security Initiative	05	1,658	1,658		1,658	4,893		4,893	U
126	0605022D8Z	Defense Exportability Program	05	2,920	2,920		2,920	3,162		3,162	U
127	0605027D8Z	OUSD(C) IT Development Initiatives	05		16,524		16,524	21,353		21,353	U

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128	0605070S	DOD Enterprise Systems Development and Demonstration	05	11,501	12,631	5,660					U
129	0605075D8Z	DCMO Policy and Integration	05	2,217							U
130	0605080S	Defense Agency Initiatives (DAI) - Financial System	05	30,568	26,657	30,457					U
131	0605090S	Defense Retired and Annuitant Pay System (DRAS)	05	9,785	4,949	7,949					U
132	0605140D8Z	Trusted Foundry	05	7,000	69,000	69,000					U
133	0605210D8Z	Defense-Wide Electronic Procurement Capabilities	05	7,961	9,881	9,881					U
134	0605294D8Z	Trusted & Assured Microelectronics	05								U
135	0303141K	Global Combat Support System	05	13,674	7,600	7,600					U
136	0305304D8Z	DoD Enterprise Energy Information Management (EEIM)	05	4,289	2,703	2,703					U
137	0305310D8Z	CWMD Systems: System Development and Demonstration	05								U
		System Development And Demonstration		529,149	628,218	644,571					
138	0604774D8Z	Defense Readiness Reporting System (DRRS)	06	5,571	4,678	4,678					U
139	0604875D8Z	Joint Systems Architecture Development	06	3,007	4,499	4,499					U
140	0604940D8Z	Central Test and Evaluation Investment Development (CTEIP)	06	209,014	219,199	219,199					U
141	0604942D8Z	Assessments and Evaluations	06	127,827	28,706	132,106					U
142	0605001E	Mission Support	06		69,244	69,244					U

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128	0605070S	DOD Enterprise Systems Development and Demonstration	05	12,631	5,660		5,660	6,266		6,266	U
129	0605075D8Z	DCMO Policy and Integration	05					2,810		2,810	U
130	0605080S	Defense Agency Initiatives (DAI) - Financial System	05	26,657	30,457		30,457	24,436		24,436	U
131	0605090S	Defense Retired and Annuitant Pay System (DRAS)	05	4,949	7,949		7,949	13,475		13,475	U
132	0605140D8Z	Trusted Foundry	05	69,000	69,000		69,000				U
133	0605210D8Z	Defense-Wide Electronic Procurement Capabilities	05	9,881	9,881		9,881	11,870		11,870	U
134	0605294D8Z	Trusted & Assured Microelectronics	05					61,084		61,084	U
135	0303141K	Global Combat Support System	05	7,600	7,600		7,600	2,576		2,576	U
136	0305304D8Z	DoD Enterprise Energy Information Management (EEIM)	05	2,703	2,703		2,703	3,669		3,669	U
137	0305310D8Z	CWMD Systems: System Development and Demonstration	05					8,230		8,230	U
		System Development And Demonstration		628,218	644,571		644,571	818,819		818,819	
138	0604774D8Z	Defense Readiness Reporting System (DRRS)	06	4,678	4,678		4,678	6,941		6,941	U
139	0604875D8Z	Joint Systems Architecture Development	06	4,499	4,499		4,499	4,851		4,851	U
140	0604940D8Z	Central Test and Evaluation Investment Development (CTEIP)	06	219,199	219,199		219,199	211,325		211,325	U
141	0604942D8Z	Assessments and Evaluations	06	28,706	132,106		132,106	30,144		30,144	U
142	0605001E	Mission Support	06	69,244	69,244		69,244	63,769		63,769	U

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143	0605100D8Z	Joint Mission Environment Test Capability (JMETC)	06	39,549	87,080	87,080					U
144	0605104D8Z	Technical Studies, Support and Analysis	06	24,121	23,069	23,069					U
145	0605126J	Joint Integrated Air and Missile Defense Organization (JIAMDO)	06	34,139	32,759	38,059					U
146	0605128D8Z	Classified Program USD(P)	06	115,000							U
147	0605142D8Z	Systems Engineering	06	38,321	32,429	32,429					U
148	0605151D8Z	Studies and Analysis Support - OSD	06	2,696	3,797	3,797					U
149	0605161D8Z	Nuclear Matters-Physical Security	06	5,094	5,302	5,302					U
150	0605170D8Z	Support to Networks and Information Integration	06	5,113	7,246	7,246					U
151	0605200D8Z	General Support to USD (Intelligence)	06	1,686	1,874	10,374					U
152	0605384BP	Chemical and Biological Defense Program	06	100,269	85,754	85,754					U
153	0605502BP	Small Business Innovative Research - Chemical Biological Def	06	19,065							U
154	0605502BR	Small Business Innovation Research	06	10,473							U
155	0605502C	Small Business Innovation Research - MDA	06	88,694							U
156	0605502D8Z	Small Business Innovative Research	06	62,824							U
157	0605502E	Small Business Innovative Research	06	89,060							U
158	0605502K	Small Business Innovative Research	06	4,364							U

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143	0605100D8Z	Joint Mission Environment Test Capability (JMETC)	06	87,080	87,080		87,080	91,057		91,057	U
144	0605104D8Z	Technical Studies, Support and Analysis	06	23,069	23,069		23,069	22,386		22,386	U
145	0605126J	Joint Integrated Air and Missile Defense Organization (JIAMDO)	06	32,759	38,059		38,059	36,581		36,581	U
146	0605128D8Z	Classified Program USD(P)	06								U
147	0605142D8Z	Systems Engineering	06	32,429	32,429		32,429	37,622		37,622	U
148	0605151D8Z	Studies and Analysis Support - OSD	06	3,797	3,797		3,797	5,200		5,200	U
149	0605161D8Z	Nuclear Matters-Physical Security	06	5,302	5,302		5,302	5,232		5,232	U
150	0605170D8Z	Support to Networks and Information Integration	06	7,246	7,246		7,246	12,583		12,583	U
151	0605200D8Z	General Support to USD (Intelligence)	06	1,874	10,374		10,374	31,451		31,451	U
152	0605384BP	Chemical and Biological Defense Program	06	85,754	85,754		85,754	104,348		104,348	U
153	0605502BP	Small Business Innovative Research - Chemical Biological Def	06								U
154	0605502BR	Small Business Innovation Research	06								U
155	0605502C	Small Business Innovation Research - MDA	06								U
156	0605502D8Z	Small Business Innovative Research	06								U
157	0605502E	Small Business Innovative Research	06								U
158	0605502K	Small Business Innovative Research	06								U

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159	0605502S	Small Business Innovative Research	06	5,524							U
160	0605502T	Small Business Innovative Research	06	363							U
161	0605790D8Z	Small Business Innovation Research (SBIR)/ Small Business Technology Transfer	06	2,166	2,187	2,187					U
162	0605798D8Z	Defense Technology Analysis	06	15,538	22,650	22,650					U
163	0605801KA	Defense Technical Information Center (DTIC)	06	57,133	43,834	43,834					U
164	0605803SE	R&D in Support of DoD Enlistment, Testing and Evaluation	06	8,296	22,240	22,240					U
165	0605804D8Z	Development Test and Evaluation	06	20,749	19,541	19,541					U
166	0605898E	Management HQ - R&D	06	71,571	4,759	4,759					U
167	0605998KA	Management HQ - Defense Technical Information Center (DTIC)	06		4,400	4,400					U
168	0606100D8Z	Budget and Program Assessments	06	3,973	4,014	4,014					U
169	0606225D8Z	ODNA Technology and Resource Analysis	06	3,500		1,000					U
170	0203345D8Z	Defense Operations Security Initiative (DOSI)	06	1,888	2,072	2,072					U
171	0204571J	Joint Staff Analytical Support	06	5,983	7,464	7,464					U
174	0303166J	Support to Information Operations (IO) Capabilities	06	10,404	857	857					U
175	0303260D8Z	Defense Military Deception Program Office (DMDPO)	06	942	916	916					U
176	0303267K	Auctioned Spectrum Relocation Fund	06	4,364							U

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159	0605502S	Small Business Innovative Research	06								U
160	0605502T	Small Business Innovative Research	06								U
161	0605790D8Z	Small Business Innovation Research (SBIR)/ Small Business Technology Transfer	06	2,187	2,187		2,187	2,372		2,372	U
162	0605798D8Z	Defense Technology Analysis	06	22,650	22,650		22,650	24,365		24,365	U
163	0605801KA	Defense Technical Information Center (DTIC)	06	43,834	43,834		43,834	54,145		54,145	U
164	0605803SE	R&D in Support of DoD Enlistment, Testing and Evaluation	06	22,240	22,240		22,240	30,356		30,356	U
165	0605804D8Z	Development Test and Evaluation	06	19,541	19,541		19,541	20,571		20,571	U
166	0605898E	Management HQ - R&D	06	4,759	4,759		4,759	14,017		14,017	U
167	0605998KA	Management HQ - Defense Technical Information Center (DTIC)	06	4,400	4,400		4,400	4,187		4,187	U
168	0606100D8Z	Budget and Program Assessments	06	4,014	4,014		4,014	3,992		3,992	U
169	0606225D8Z	ODNA Technology and Resource Analysis	06		1,000		1,000	1,000		1,000	U
170	0203345D8Z	Defense Operations Security Initiative (DOSI)	06	2,072	2,072		2,072	2,551		2,551	U
171	0204571J	Joint Staff Analytical Support	06	7,464	7,464		7,464	7,712		7,712	U
174	0303166J	Support to Information Operations (IO) Capabilities	06	857	857		857	673		673	U
175	0303260D8Z	Defense Military Deception Program Office (DMDPO)	06	916	916		916	1,006		1,006	U
176	0303267K	Auctioned Spectrum Relocation Fund	06								U

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177	0305172K	Combined Advanced Applications	06		15,336	12,200					U
178	0305193D8Z	Cyber Intelligence	06	6,567	18,523	18,523					U
180	0305245D8Z	Intelligence Capabilities and Innovation Investments	06								U
181	0306310D8Z	CWMD Systems: RDT&E Management Support	06								U
182	0804767D8Z	COCOM Exercise Engagement and Training Transformation (CE2T2) - MHA	06	41,735	34,384	34,384					U
183	0804767J	COCOM Exercise Engagement and Training Transformation (CE2T2) - MHA	06								U
184	0901598C	Management HQ - MDA	06	35,871	31,160	31,160					U
185	0903230D8W	WHS - Mission Operations Support - IT	06	975							U
186	0903235D8W	Joint Service Provider (JSP)	06		827	827					U
187	0903235K	Joint Service Provider (JSP)	06								U
9999	9999999999	Classified Programs		49,500	56,799	58,399					U
		Management Support		1,332,929	897,599	1,014,263					
188	0604130V	Enterprise Security System (ESS)	07	5,929	4,241	7,141					U
189	0605127T	Regional International Outreach (RIO) and Partnership for Peace Information Mana	07	2,116	1,424	1,424					U
190	0605147T	Overseas Humanitarian Assistance Shared Information System (OHAISIS)	07	306	287	287					U

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177	0305172K	Combined Advanced Applications	06	15,336	12,200		12,200	16,998		16,998	U
178	0305193D8Z	Cyber Intelligence	06	18,523	18,523		18,523				U
180	0305245D8Z	Intelligence Capabilities and Innovation Investments	06					18,992		18,992	U
181	0306310D8Z	CWMD Systems: RDT&E Management Support	06					1,231		1,231	U
182	0804767D8Z	COCOM Exercise Engagement and Training Transformation (CE2T2) - MHA	06	34,384	34,384		34,384				U
183	0804767J	COCOM Exercise Engagement and Training Transformation (CE2T2) - MHA	06					44,500		44,500	U
184	0901598C	Management HQ - MDA	06	31,160	31,160		31,160	29,947		29,947	U
185	0903230D8W	WHS - Mission Operations Support - IT	06								U
186	0903235D8W	Joint Service Provider (JSP)	06	827	827		827				U
187	0903235K	Joint Service Provider (JSP)	06					5,113		5,113	U
9999	99999999999	Classified Programs		56,799	58,399		58,399	63,312		63,312	U
	Management Support			897,599	1,014,263		1,014,263	1,010,530		1,010,530	
188	0604130V	Enterprise Security System (ESS)	07	4,241	7,141		7,141	4,565		4,565	U
189	0605127T	Regional International Outreach (RIO) and Partnership for Peace Information Mana	07	1,424	1,424		1,424	1,871		1,871	U
190	0605147T	Overseas Humanitarian Assistance Shared Information System (OHASIS)	07	287	287		287	298		298	U

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Defense-Wide
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Line No	Program Element Number	Item	Act	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO	Req S e c
191	0607210D8Z	Industrial Base Analysis and Sustainment Support	07	21,792	16,195	16,195					U
192	0607310D8Z	CWMD Systems: Operational Systems Development	07	1,832	4,194	4,194					U
193	0607327T	Global Theater Security Cooperation Management Information Systems (G-TSCMIS)	07	7,725	7,861	7,861					U
194	0607384BP	Chemical and Biological Defense (Operational Systems Development)	07	28,278	33,361	33,361					U
195	0208043J	Planning and Decision Aid System (PDAS)	07	1,842	3,038	3,038					U
196	0208045K	C4I Interoperability	07	63,341	57,501	57,501					U
198	0301144K	Joint/Allied Coalition Information Sharing	07	1,735	5,935	5,935					U
202	0302016K	National Military Command System-Wide Support	07	938	575	575					U
203	0302019K	Defense Info Infrastructure Engineering and Integration	07	9,729	18,041	18,041					U
204	0303126K	Long-Haul Communications - DCS	07	36,884	13,994	13,994					U
205	0303131K	Minimum Essential Emergency Communications Network (MEECN)	07	13,384	12,206	12,206					U
206	0303135G	Public Key Infrastructure (PKI)	07	6,101	34,314	34,314					U
207	0303136G	Key Management Infrastructure (KMI)	07	43,867	36,602	36,602					U
208	0303140D8Z	Information Systems Security Program	07	8,649	8,876	8,876					U
209	0303140G	Information Systems Security Program	07	161,890	159,068	166,126					U

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191	0607210D8Z	Industrial Base Analysis and Sustainment Support	07	16,195	16,195		16,195	10,882		10,882	U
192	0607310D8Z	CWMD Systems: Operational Systems Development	07	4,194	4,194		4,194	7,222		7,222	U
193	0607327T	Global Theater Security Cooperation Management Information Systems (G-TSCMIS)	07	7,861	7,861		7,861	14,450		14,450	U
194	0607384BP	Chemical and Biological Defense (Operational Systems Development)	07	33,361	33,361		33,361	45,677		45,677	U
195	0208043J	Planning and Decision Aid System (PDAS)	07	3,038	3,038		3,038	3,037		3,037	U
196	0208045K	C4I Interoperability	07	57,501	57,501		57,501	59,490		59,490	U
198	0301144K	Joint/Allied Coalition Information Sharing	07	5,935	5,935		5,935	6,104		6,104	U
202	0302016K	National Military Command System-Wide Support	07	575	575		575	1,863		1,863	U
203	0302019K	Defense Info Infrastructure Engineering and Integration	07	18,041	18,041		18,041	21,564		21,564	U
204	0303126K	Long-Haul Communications - DCS	07	13,994	13,994		13,994	15,428		15,428	U
205	0303131K	Minimum Essential Emergency Communications Network (MEECN)	07	12,206	12,206		12,206	15,855		15,855	U
206	0303135G	Public Key Infrastructure (PKI)	07	34,314	34,314		34,314	4,811		4,811	U
207	0303136G	Key Management Infrastructure (KMI)	07	36,602	36,602		36,602	33,746		33,746	U
208	0303140D8Z	Information Systems Security Program	07	8,876	8,876		8,876	9,415		9,415	U
209	0303140G	Information Systems Security Program	07	159,068	166,126		166,126	227,652		227,652	U

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210	0303150K	Global Command and Control System	07	19,395	24,438	24,438					U
211	0303153K	Defense Spectrum Organization	07	19,307	13,197	13,197					U
212	0303167K	Pre-Auction Spectrum Relocation Fund	07	100							U
213	0303170K	Net-Centric Enterprise Services (NCES)	07	426							U
214	0303228K	Joint Information Environment (JIE)	07		2,789	2,789					U
215	0303267K	Auctioned Spectrum Relocation Fund	07	38,137							U
216	0303430K	Federal Investigative Services Information Technology	07		75,000	75,000					U
217	0303610K	Teleport Program	07	1,665	657	657					U
218	0304210BB	Special Applications for Contingencies	07	65,420							U
222	0305103K	Cyber Security Initiative	07	2,881	1,553	1,553					U
227	0305186D8Z	Policy R&D Programs	07	4,131	6,204	6,204					U
228	0305199D8Z	Net Centricity	07	17,532	17,971	17,971					U
230	0305208BB	Distributed Common Ground/Surface Systems	07	5,302	5,415	5,415					U
233	0305208K	Distributed Common Ground/Surface Systems	07	3,239	3,030	3,030					U
236	0305327V	Insider Threat	07	2,533	5,034	5,034					U
237	0305387D8Z	Homeland Defense Technology Transfer Program	07	2,116	2,037	2,037					U
243	0307577D8Z	Intelligence Mission Data (IMD)	07		13,800	13,800					U

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210	0303150K	Global Command and Control System	07	24,438	24,438		24,438	42,687		42,687	U
211	0303153K	Defense Spectrum Organization	07	13,197	13,197		13,197	8,750		8,750	U
212	0303167K	Pre-Auction Spectrum Relocation Fund	07								U
213	0303170K	Net-Centric Enterprise Services (NCES)	07								U
214	0303228K	Joint Information Environment (JIE)	07	2,789	2,789		2,789	4,689		4,689	U
215	0303267K	Auctioned Spectrum Relocation Fund	07								U
216	0303430K	Federal Investigative Services Information Technology	07	75,000	75,000		75,000	50,000		50,000	U
217	0303610K	Teleport Program	07	657	657		657				U
218	0304210BB	Special Applications for Contingencies	07								U
222	0305103K	Cyber Security Initiative	07	1,553	1,553		1,553	1,686		1,686	U
227	0305186D8Z	Policy R&D Programs	07	6,204	6,204		6,204	6,526		6,526	U
228	0305199D8Z	Net Centricity	07	17,971	17,971		17,971	18,455		18,455	U
230	0305208BB	Distributed Common Ground/Surface Systems	07	5,415	5,415		5,415	5,496		5,496	U
233	0305208K	Distributed Common Ground/Surface Systems	07	3,030	3,030		3,030	3,049		3,049	U
236	0305327V	Insider Threat	07	5,034	5,034		5,034	5,365		5,365	U
237	0305387D8Z	Homeland Defense Technology Transfer Program	07	2,037	2,037		2,037	2,071		2,071	U
243	0307577D8Z	Intelligence Mission Data (IMD)	07	13,800	13,800		13,800	13,111		13,111	U

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244	0708011S	Industrial Preparedness	07	21,843							U
245	0708012S	Pacific Disaster Centers	07	1,709	1,754	1,754					U
246	0708047S	Defense Property Accountability System	07		2,154	2,154					U
247	0902298J	Management HQ - OJCS	07	2,953	826	826					U
248	1105219BB	MQ-9 UAV	07	21,388	17,804	17,804					U
249	1105232BB	RQ-11 UAV	07	758							U
250	1160279BB	Small Business Innovative Research/ Small Bus Tech Transfer Pilot Prog	07	15,897							U
251	1160403BB	Aviation Systems	07	172,965	159,143	163,543					U
252	1160405BB	Intelligence Systems Development	07	6,466	7,958	9,858					U
253	1160408BB	Operational Enhancements	07	61,463	64,895	90,895					U
254	1160431BB	Warrior Systems	07	32,677	44,885	45,285					U
255	1160432BB	Special Programs	07	3,284	1,949	1,949					U
256	1160434BB	Unmanned ISR	07		22,117	22,117					U
257	1160480BB	SOF Tactical Vehicles	07	2,477	3,316	3,316					U
258	1160483BB	Maritime Systems	07	57,544	54,577	54,577					U
259	1160489BB	Global Video Surveillance Activities	07	3,933	3,841	3,841					U
260	1160490BB	Operational Enhancements Intelligence	07	10,623	11,834	11,834					U
261	1203610K	Teleport Program	07								U
9999	9999999999	Classified Programs		3,597,660	3,270,515	3,377,257	162,419	231,990	-3,000	228,990	U

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244	0708011S	Industrial Preparedness	07								U
245	0708012S	Pacific Disaster Centers	07	1,754	1,754		1,754	1,770		1,770	U
246	0708047S	Defense Property Accountability System	07	2,154	2,154		2,154	2,924		2,924	U
247	0902298J	Management HQ - OJCS	07	826	826		826				U
248	1105219BB	MQ-9 UAV	07	17,804	17,804		17,804	37,863		37,863	U
249	1105232BB	RQ-11 UAV	07								U
250	1160279BB	Small Business Innovative Research/ Small Bus Tech Transfer Pilot Prog	07								U
251	1160403BB	Aviation Systems	07	159,143	163,543		163,543	259,886		259,886	U
252	1160405BB	Intelligence Systems Development	07	7,958	9,858		9,858	8,245		8,245	U
253	1160408BB	Operational Enhancements	07	64,895	90,895		90,895	79,455	1,920	81,375	U
254	1160431BB	Warrior Systems	07	44,885	45,285		45,285	45,935		45,935	U
255	1160432BB	Special Programs	07	1,949	1,949		1,949	1,978		1,978	U
256	1160434BB	Unmanned ISR	07	22,117	22,117		22,117	31,766	3,000	34,766	U
257	1160480BB	SOF Tactical Vehicles	07	3,316	3,316		3,316	2,578		2,578	U
258	1160483BB	Maritime Systems	07	54,577	54,577		54,577	42,315		42,315	U
259	1160489BB	Global Video Surveillance Activities	07	3,841	3,841		3,841	4,661		4,661	U
260	1160490BB	Operational Enhancements Intelligence	07	11,834	11,834		11,834	12,049		12,049	U
261	1203610K	Teleport Program	07					642		642	U
9999	9999999999	Classified Programs		3,435,934	3,609,247	-3,000	3,606,247	3,689,646	196,176	3,885,822	U

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Line	Program Element No Number	Item	Act	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO	S e c
	Operational System Development			4,612,162	4,256,406	4,405,806					
262	0901560D	Continuing Resolution Programs	20		337,316	337,316	14,668	14,668		14,668	U
	Undistributed				337,316	337,316	14,668	14,668		14,668	
	Total Research, Development, Test & Eval, DW			19,006,805	18,646,142	19,216,481	177,087	246,658		243,658	

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	Operational System Development			4,421,825	4,637,796		4,634,796	4,867,528	201,096	5,068,624	
262	0901560D Continuing Resolution Programs	20		351,984	351,984		351,984				U
	Undistributed			351,984	351,984		351,984				
	Total Research, Development, Test & Eval, DW			18,826,229	19,463,139		19,460,139	20,490,902	226,096	20,716,998	

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Chemical and Biological Defense Program
FY 2018 President's Budget Request
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7	0601384BP	Chemical and Biological Defense Program	01	46,856	44,800	44,800					U
		Basic Research		46,856	44,800	44,800					
15	0602384BP	Chemical and Biological Defense Program	02	202,112	188,715	188,715					U
		Applied Research		202,112	188,715	188,715					
43	0603384BP	Chemical and Biological Defense Program - Advanced Development	03	134,070	127,941	127,941					U
		Advanced Technology Development		134,070	127,941	127,941					
76	0603884BP	Chemical and Biological Defense Program - Dem/Val	04	171,117	138,187	138,187					U
		Advanced Component Development And Prototypes		171,117	138,187	138,187					
120	0604384BP	Chemical and Biological Defense Program - EMD	05	276,560	266,231	266,231					U
		System Development And Demonstration		276,560	266,231	266,231					
152	0605384BP	Chemical and Biological Defense Program	06	100,269	85,754	85,754					U
153	0605502BP	Small Business Innovative Research - Chemical Biological Def	06	19,065							U
		Management Support		119,334	85,754	85,754					
194	0607384BP	Chemical and Biological Defense (Operational Systems Development)	07	28,278	33,361	33,361					U
		Operational System Development		28,278	33,361	33,361					
		Total Chemical and Biological Defense Program		978,327	884,989	884,989					

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Chemical and Biological Defense Program
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7	0601384BP	Chemical and Biological Defense Program	01	44,800	44,800		44,800	43,898		43,898	U
		Basic Research		44,800	44,800		44,800	43,898		43,898	
15	0602384BP	Chemical and Biological Defense Program	02	188,715	188,715		188,715	201,053		201,053	U
		Applied Research		188,715	188,715		188,715	201,053		201,053	
43	0603384BP	Chemical and Biological Defense Program - Advanced Development	03	127,941	127,941		127,941	145,359		145,359	U
		Advanced Technology Development		127,941	127,941		127,941	145,359		145,359	
76	0603884BP	Chemical and Biological Defense Program - Dem/Val	04	138,187	138,187		138,187	148,518		148,518	U
		Advanced Component Development And Prototypes		138,187	138,187		138,187	148,518		148,518	
120	0604384BP	Chemical and Biological Defense Program - EMD	05	266,231	266,231		266,231	406,789		406,789	U
		System Development And Demonstration		266,231	266,231		266,231	406,789		406,789	
152	0605384BP	Chemical and Biological Defense Program	06	85,754	85,754		85,754	104,348		104,348	U
153	0605502BP	Small Business Innovative Research - Chemical Biological Def	06								U
		Management Support		85,754	85,754		85,754	104,348		104,348	
194	0607384BP	Chemical and Biological Defense (Operational Systems Development)	07	33,361	33,361		33,361	45,677		45,677	U
		Operational System Development		33,361	33,361		33,361	45,677		45,677	
		Total Chemical and Biological Defense Program		884,989	884,989		884,989	1,095,642		1,095,642	

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Defense Advanced Research Projects Agency
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2	0601101E	Defense Research Sciences	01	317,207	362,297	362,297					U
4	0601117E	Basic Operational Medical Research Science	01	52,736	57,791	57,791					U
	Basic Research			369,943	420,088	420,088					
9	0602115E	Biomedical Technology	02	120,512	115,213	115,213					U
13	0602303E	Information & Communications Technology	02	331,720	353,635	353,635					U
14	0602383E	Biological Warfare Defense	02	24,682	21,250	21,250					U
17	0602702E	Tactical Technology	02	289,371	313,843	313,843					U
18	0602715E	Materials and Biological Technology	02	193,471	220,456	220,456					U
19	0602716E	Electronics Technology	02	168,233	221,911	221,911					U
	Applied Research			1,127,989	1,246,308	1,246,308					
35	0603286E	Advanced Aerospace Systems	03	165,764	182,327	182,327					U
36	0603287E	Space Programs and Technology	03	120,642	175,240	175,240					U
56	0603739E	Advanced Electronics Technologies	03	78,984	49,807	49,807					U
57	0603760E	Command, Control and Communications Systems	03	201,635	155,081	155,081					U
58	0603766E	Network-Centric Warfare Technology	03	411,060	428,894	428,894					U
59	0603767E	Sensor Technology	03	231,633	241,288	241,288					U
	Advanced Technology Development			1,209,718	1,232,637	1,232,637					
142	0605001E	Mission Support	06		69,244	69,244					U
157	0605502E	Small Business Innovative Research	06	89,060							U

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Line	Program Element No Number	Item	Act	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total	S e c
2	0601101E	Defense Research Sciences	01	362,297	362,297		362,297	432,347		432,347	U
4	0601117E	Basic Operational Medical Research Science	01	57,791	57,791		57,791	43,126		43,126	U
	Basic Research			420,088	420,088		420,088	475,473		475,473	
9	0602115E	Biomedical Technology	02	115,213	115,213		115,213	109,360		109,360	U
13	0602303E	Information & Communications Technology	02	353,635	353,635		353,635	392,784		392,784	U
14	0602383E	Biological Warfare Defense	02	21,250	21,250		21,250	13,014		13,014	U
17	0602702E	Tactical Technology	02	313,843	313,843		313,843	343,776		343,776	U
18	0602715E	Materials and Biological Technology	02	220,456	220,456		220,456	224,440		224,440	U
19	0602716E	Electronics Technology	02	221,911	221,911		221,911	295,447		295,447	U
	Applied Research			1,246,308	1,246,308		1,246,308	1,378,821		1,378,821	
35	0603286E	Advanced Aerospace Systems	03	182,327	182,327		182,327	155,406		155,406	U
36	0603287E	Space Programs and Technology	03	175,240	175,240		175,240	247,435		247,435	U
56	0603739E	Advanced Electronics Technologies	03	49,807	49,807		49,807	79,173		79,173	U
57	0603760E	Command, Control and Communications Systems	03	155,081	155,081		155,081	106,787		106,787	U
58	0603766E	Network-Centric Warfare Technology	03	428,894	428,894		428,894	439,386		439,386	U
59	0603767E	Sensor Technology	03	241,288	241,288		241,288	210,123		210,123	U
	Advanced Technology Development			1,232,637	1,232,637		1,232,637	1,238,310		1,238,310	
142	0605001E	Mission Support	06	69,244	69,244		69,244	63,769		63,769	U
157	0605502E	Small Business Innovative Research	06								U

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Defense Advanced Research Projects Agency
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

17 May 2017

Appropriation: 0400D Research, Development, Test & Eval, DW

Line	Program Element No Number	Item	Act	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req S with CR Adj OCO	e c -
166	0605898E	Management HQ - R&D	06	71,571	4,759	4,759					U
	Management Support			160,631	74,003	74,003					
Total Defense Advanced Research Projects Agency				2,868,281	2,973,036	2,973,036					

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Defense Advanced Research Projects Agency
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

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Line	Program Element No Number	Item	Act	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total	S e c
166	0605898E	Management HQ - R&D	06	4,759	4,759		4,759	14,017		14,017	U
		Management Support		74,003	74,003		74,003	77,786		77,786	
Total Defense Advanced Research Projects Agency				2,973,036	2,973,036		2,973,036	3,170,390		3,170,390	

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Defense Contract Management Agency
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

17 May 2017

Appropriation: 0400D Research, Development, Test & Eval, DW

Program					FY 2017	FY 2017	FY 2017	FY 2017	FY 2017		
Line	Element	Item	Act	FY 2016	PB Request	Total	PB Request	Total	Less Enacted	FY 2017	
No	Number			Base + OCO	with CR Adj	PB Requests*	with CR Adj	PB Requests*	P.L.114-254**	Remaining Req	S
--	-----	----	---	-----	Base	Base	OCO	OCO	OCO	OCO	e
--	-----	----	---	-----	-----	-----	-----	-----	-----	-----	-
124	0605013BL	Information Technology Development	05	12,042	11,505	11,505					U
		System Development And Demonstration		12,042	11,505	11,505					
				-----	-----	-----	-----	-----	-----	-----	
				12,042	11,505	11,505					
				-----	-----	-----	-----	-----	-----	-----	
		Total Defense Contract Management Agency		12,042	11,505	11,505					

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Defense Contract Management Agency
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
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Line	Program Element No Number	Item	Act	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total	S e c
---	-----	----	---	-----	-----	-----	-----	-----	-----	-----	-
124	0605013BL	Information Technology Development	05	11,505	11,505		11,505	12,322		12,322	U
		System Development And Demonstration		11,505	11,505		11,505	12,322		12,322	
		Total Defense Contract Management Agency		11,505	11,505		11,505	12,322		12,322	

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Defense-Wide
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 Total Obligational Authority
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Program Line Element No Number	Item	Act	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO	S e c
262 0901560D	Continuing Resolution Programs	20		337,316	337,316	14,668	14,668		14,668	U
	Undistributed			337,316	337,316	14,668	14,668		14,668	
Total Defense-Wide				337,316	337,316	14,668	14,668		14,668	

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Defense-Wide
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 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
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Line No	Program Element Number	Item	Act	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total	S e c
262	0901560D	Continuing Resolution Programs	20	351,984	351,984		351,984				U
	Undistributed			351,984	351,984		351,984				
Total Defense-Wide				351,984	351,984		351,984				

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Defense Human Resources Activity
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

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Line	Program Element No Number	Item	Act	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO	S e c
61	0603769SE	Distributed Learning Advanced Technology Development	03	10,399							U
		Advanced Technology Development		10,399							
125	0605021SE	Homeland Personnel Security Initiative	05		1,658	1,658					U
		System Development And Demonstration			1,658	1,658					
164	0605803SE	R&D in Support of DoD Enlistment, Testing and Evaluation	06	8,296	22,240	22,240					U
		Management Support		8,296	22,240	22,240					
		Total Defense Human Resources Activity		18,695	23,898	23,898					

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Defense Human Resources Activity
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

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Line	Program Element No Number	Item	Act	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total	S e c
61	0603769SE	Distributed Learning Advanced Technology Development	03								U
		Advanced Technology Development									
125	0605021SE	Homeland Personnel Security Initiative	05	1,658	1,658		1,658	4,893		4,893	U
		System Development And Demonstration		1,658	1,658		1,658	4,893		4,893	
164	0605803SE	R&D in Support of DoD Enlistment, Testing and Evaluation	06	22,240	22,240		22,240	30,356		30,356	U
		Management Support		22,240	22,240		22,240	30,356		30,356	
		Total Defense Human Resources Activity		23,898	23,898		23,898	35,249		35,249	

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Defense Information Systems Agency
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Line No	Program Element Number	Item	Act	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO	S e c
121	0604764K	Advanced IT Services Joint Program Office (AITS-JPO)	05	18,750							U
135	0303141K	Global Combat Support System	05	13,674	7,600	7,600					U
		System Development And Demonstration		32,424	7,600	7,600					
158	0605502K	Small Business Innovative Research	06	4,364							U
176	0303267K	Auctioned Spectrum Relocation Fund	06	4,364							U
177	0305172K	Combined Advanced Applications	06		15,336	12,200					U
187	0903235K	Joint Service Provider (JSP)	06								U
		Management Support		8,728	15,336	12,200					
196	0208045K	C4I Interoperability	07	63,341	57,501	57,501					U
198	0301144K	Joint/Allied Coalition Information Sharing	07	1,735	5,935	5,935					U
202	0302016K	National Military Command System-Wide Support	07	938	575	575					U
203	0302019K	Defense Info Infrastructure Engineering and Integration	07	9,729	18,041	18,041					U
204	0303126K	Long-Haul Communications - DCS	07	36,884	13,994	13,994					U
205	0303131K	Minimum Essential Emergency Communications Network (MEECN)	07	13,384	12,206	12,206					U
210	0303150K	Global Command and Control System	07	19,395	24,438	24,438					U
211	0303153K	Defense Spectrum Organization	07	19,307	13,197	13,197					U
212	0303167K	Pre-Auction Spectrum Relocation Fund	07	100							U

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Line No	Program Element Number	Item	Act	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total	S e c
121	0604764K	Advanced IT Services Joint Program Office (AITS-JPO)	05								U
135	0303141K	Global Combat Support System	05	7,600	7,600		7,600	2,576		2,576	U
		System Development And Demonstration		7,600	7,600		7,600	2,576		2,576	U
158	0605502K	Small Business Innovative Research	06								U
176	0303267K	Auctioned Spectrum Relocation Fund	06								U
177	0305172K	Combined Advanced Applications	06	15,336	12,200		12,200	16,998		16,998	U
187	0903235K	Joint Service Provider (JSP)	06					5,113		5,113	U
		Management Support		15,336	12,200		12,200	22,111		22,111	U
196	0208045K	C4I Interoperability	07	57,501	57,501		57,501	59,490		59,490	U
198	0301144K	Joint/Allied Coalition Information Sharing	07	5,935	5,935		5,935	6,104		6,104	U
202	0302016K	National Military Command System-Wide Support	07	575	575		575	1,863		1,863	U
203	0302019K	Defense Info Infrastructure Engineering and Integration	07	18,041	18,041		18,041	21,564		21,564	U
204	0303126K	Long-Haul Communications - DCS	07	13,994	13,994		13,994	15,428		15,428	U
205	0303131K	Minimum Essential Emergency Communications Network (MEECN)	07	12,206	12,206		12,206	15,855		15,855	U
210	0303150K	Global Command and Control System	07	24,438	24,438		24,438	42,687		42,687	U
211	0303153K	Defense Spectrum Organization	07	13,197	13,197		13,197	8,750		8,750	U
212	0303167K	Pre-Auction Spectrum Relocation Fund	07								U

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Defense Information Systems Agency
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Line	Program Element No Number	Item	Act	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO	S e c
213	0303170K	Net-Centric Enterprise Services (NCES)	07	426							U
214	0303228K	Joint Information Environment (JIE)	07		2,789	2,789					U
215	0303267K	Auctioned Spectrum Relocation Fund	07	38,137							U
216	0303430K	Federal Investigative Services Information Technology	07		75,000	75,000					U
217	0303610K	Teleport Program	07	1,665	657	657					U
222	0305103K	Cyber Security Initiative	07	2,881	1,553	1,553					U
233	0305208K	Distributed Common Ground/Surface Systems	07	3,239	3,030	3,030					U
261	1203610K	Teleport Program	07								U
	Operational System Development			211,161	228,916	228,916					
	Total Defense Information Systems Agency			252,313	251,852	248,716					

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Defense Information Systems Agency
 FY 2018 President's Budget Request
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 (Dollars in Thousands)

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Line	Program Element No Number	Item	Act	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total	S e c
213	0303170K	Net-Centric Enterprise Services (NCES)	07								U
214	0303228K	Joint Information Environment (JIE)	07	2,789	2,789		2,789	4,689		4,689	U
215	0303267K	Auctioned Spectrum Relocation Fund	07								U
216	0303430K	Federal Investigative Services Information Technology	07	75,000	75,000		75,000	50,000		50,000	U
217	0303610K	Teleport Program	07	657	657		657				U
222	0305103K	Cyber Security Initiative	07	1,553	1,553		1,553	1,686		1,686	U
233	0305208K	Distributed Common Ground/Surface Systems	07	3,030	3,030		3,030	3,049		3,049	U
261	1203610K	Teleport Program	07					642		642	U
	Operational System Development			228,916	228,916		228,916	231,807		231,807	
	Total Defense Information Systems Agency			251,852	248,716		248,716	256,494		256,494	

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Defense Logistics Agency
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 (Dollars in Thousands)

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Line	Program Element No Number	Item	Act	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO	S e c
33	0603264S	Agile Transportation for the 21st Century (AT21) - Theater Capability	03	1,508							U
49	0603680S	Manufacturing Technology Program	03		31,259	31,259					U
51	0603712S	Generic Logistics R&D Technology Demonstrations	03	15,093	11,011	11,011					U
52	0603713S	Deployment and Distribution Enterprise Technology	03	29,888							U
54	0603720S	Microelectronics Technology Development and Support	03	86,832	97,826	97,826					U
		Advanced Technology Development		133,321	140,096	140,096					
128	0605070S	DOD Enterprise Systems Development and Demonstration	05	11,501	12,631	5,660					U
130	0605080S	Defense Agency Initiatives (DAI) - Financial System	05	30,568	26,657	30,457					U
131	0605090S	Defense Retired and Annuitant Pay System (DRAS)	05	9,785	4,949	7,949					U
		System Development And Demonstration		51,854	44,237	44,066					
159	0605502S	Small Business Innovative Research	06	5,524							U
		Management Support		5,524							
244	0708011S	Industrial Preparedness	07	21,843							U
245	0708012S	Pacific Disaster Centers	07	1,709	1,754	1,754					U
246	0708047S	Defense Property Accountability System	07		2,154	2,154					U
		Operational System Development		23,552	3,908	3,908					

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Defense Logistics Agency
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Program Line Element No Number	Item ----	Act	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total	S e c
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33 0603264S	Agile Transportation for the 21st Century (AT21) - Theater Capability	03								U
49 0603680S	Manufacturing Technology Program	03	31,259	31,259		31,259	40,511		40,511	U
51 0603712S	Generic Logistics R&D Technology Demonstrations	03	11,011	11,011		11,011	10,611		10,611	U
52 0603713S	Deployment and Distribution Enterprise Technology	03								U
54 0603720S	Microelectronics Technology Development and Support	03	97,826	97,826		97,826	219,803		219,803	U
	Advanced Technology Development		140,096	140,096		140,096	270,925		270,925	
128 0605070S	DOD Enterprise Systems Development and Demonstration	05	12,631	5,660		5,660	6,266		6,266	U
130 0605080S	Defense Agency Initiatives (DAI) - Financial System	05	26,657	30,457		30,457	24,436		24,436	U
131 0605090S	Defense Retired and Annuitant Pay System (DRAS)	05	4,949	7,949		7,949	13,475		13,475	U
	System Development And Demonstration		44,237	44,066		44,066	44,177		44,177	
159 0605502S	Small Business Innovative Research	06								U
	Management Support									
244 0708011S	Industrial Preparedness	07								U
245 0708012S	Pacific Disaster Centers	07	1,754	1,754		1,754	1,770		1,770	U
246 0708047S	Defense Property Accountability System	07	2,154	2,154		2,154	2,924		2,924	U
	Operational System Development		3,908	3,908		3,908	4,694		4,694	

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Defense Logistics Agency
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Line	Program Element	Item	Act	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total	S e c
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Total Defense Logistics Agency				188,241	188,070		188,070	319,796		319,796	

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Defense Security Cooperative Agency
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

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Line No	Program Element Number	Item	Act	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO	S e c
160	0605502T	Small Business Innovative Research	06	363							
		Management Support		363							U
189	0605127T	Regional International Outreach (RIO) and Partnership for Peace Information Mana	07	2,116	1,424	1,424					U
190	0605147T	Overseas Humanitarian Assistance Shared Information System (OHAIS)	07	306	287	287					U
193	0607327T	Global Theater Security Cooperation Management Information Systems (G-TSCMIS)	07	7,725	7,861	7,861					U
		Operational System Development		10,147	9,572	9,572					
		Total Defense Security Cooperative Agency		10,510	9,572	9,572					

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Defense Security Cooperative Agency
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Line No	Program Element Number	Item	Act	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Sec
160	0605502T	Small Business Innovative Research	06								U
		Management Support									
189	0605127T	Regional International Outreach (RIO) and Partnership for Peace Information Mana	07	1,424	1,424		1,424	1,871		1,871	U
190	0605147T	Overseas Humanitarian Assistance Shared Information System (OHAISIS)	07	287	287		287	298		298	U
193	0607327T	Global Theater Security Cooperation Management Information Systems (G-TSCMIS)	07	7,861	7,861		7,861	14,450		14,450	U
		Operational System Development		9,572	9,572		9,572	16,619		16,619	
Total Defense Security Cooperative Agency				9,572	9,572		9,572	16,619		16,619	

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Defense Security Service
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Defense Security Service
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Line	Program Element No Number	Item	Act	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total	S e c
188	0604130V	Enterprise Security System (ESS)	07	4,241	7,141		7,141	4,565		4,565	U
236	0305327V	Insider Threat	07	5,034	5,034		5,034	5,365		5,365	U
	Operational System Development			9,275	12,175		12,175	9,930		9,930	
Total Defense Security Service				9,275	12,175		12,175	9,930		9,930	

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Defense Technical Information Center
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163	0605801KA	Defense Technical Information Center (DTIC)	06	57,133	43,834	43,834					U
167	0605998KA	Management HQ - Defense Technical Information Center (DTIC)	06		4,400	4,400					U
		Management Support		57,133	48,234	48,234					
Total Defense Technical Information Center				57,133	48,234	48,234					

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Defense Technical Information Center
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Line	Program Element No Number	Item	Act	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total	S e c
163	0605801KA	Defense Technical Information Center (DTIC)	06	43,834	43,834		43,834	54,145		54,145	U
167	0605998KA	Management HQ - Defense Technical Information Center (DTIC)	06	4,400	4,400		4,400	4,187		4,187	U
		Management Support		48,234	48,234		48,234	58,332		58,332	
		Total Defense Technical Information Center		48,234	48,234		48,234	58,332		58,332	

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Defense Threat Reduction Agency
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Program Line Element No Number	Item ----	Act ---	FY 2016 Base + OCO -----	FY 2017 PB Request with CR Adj Base -----	FY 2017 Total PB Requests* with CR Adj Base -----	FY 2017 PB Request with CR Adj OCO -----	FY 2017 Total PB Requests* with CR Adj OCO -----	FY 2017 Less Enacted Div B P.L.114-254** OCO -----	FY 2017 Remaining Req with CR Adj OCO -----	S e c -
1 0601000BR	DTRA Basic Research	01	38,288	35,436	35,436					U
	Basic Research		38,288	35,436	35,436					
20 0602718BR	Counter Weapons of Mass Destruction Applied Research	02	149,302	154,857	154,857					U
	Applied Research		149,302	154,857	154,857					
26 0603160BR	Counter Weapons of Mass Destruction Advanced Technology Development	03	298,123	266,444	266,444					U
	Advanced Technology Development		298,123	266,444	266,444					
123 0605000BR	Counter Weapons of Mass Destruction Systems Development	05	7,156	4,568	4,568					U
	System Development And Demonstration		7,156	4,568	4,568					
154 0605502BR	Small Business Innovation Research	06	10,473							U
	Management Support		10,473							
Total Defense Threat Reduction Agency			503,342	461,305	461,305					

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Defense Threat Reduction Agency
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Line No	Program Element Number	Item	Act	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total	S e c
1	0601000BR	DTRA Basic Research	01	35,436	35,436		35,436	37,201		37,201	U
	Basic Research			35,436	35,436		35,436	37,201		37,201	
20	0602718BR	Counter Weapons of Mass Destruction Applied Research	02	154,857	154,857		154,857	157,908		157,908	U
	Applied Research			154,857	154,857		154,857	157,908		157,908	
26	0603160BR	Counter Weapons of Mass Destruction Advanced Technology Development	03	266,444	266,444		266,444	268,607		268,607	U
	Advanced Technology Development			266,444	266,444		266,444	268,607		268,607	
123	0605000BR	Counter Weapons of Mass Destruction Systems Development	05	4,568	4,568		4,568	6,241		6,241	U
	System Development And Demonstration			4,568	4,568		4,568	6,241		6,241	
154	0605502BR	Small Business Innovation Research	06								U
	Management Support										
Total Defense Threat Reduction Agency				461,305	461,305		461,305	469,957		469,957	

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Missile Defense Agency
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27	0603176C	Advanced Concepts and Performance Assessment	03	11,853	17,880	17,880					U
28	0603177C	Discrimination Sensor Technology	03	27,981							U
29	0603178C	Weapons Technology	03	50,263	71,843	71,843					U
30	0603179C	Advanced C4ISR	03	9,661	3,626	3,626					U
31	0603180C	Advanced Research	03	16,987	23,433	27,733					U
34	0603274C	Special Program - MDA Technology	03	9,650	83,745	83,745					U
40	0603294C	Common Kill Vehicle Technology	03	60,851							U
	Advanced Technology Development			187,246	200,527	204,827					
74	0603881C	Ballistic Missile Defense Terminal Defense Segment	04	197,617	206,834	209,072					U
75	0603882C	Ballistic Missile Defense Midcourse Defense Segment	04	1,260,480	862,080	862,080					U
77	0603884C	Ballistic Missile Defense Sensors	04	233,020	230,077	230,077					U
78	0603890C	BMD Enabling Programs	04	406,326	401,594	408,594					U
79	0603891C	Special Programs - MDA	04	390,264	321,607	323,607					U
80	0603892C	AEGIS BMD	04	804,211	959,066	959,066					U
81	0603893C	Space Tracking & Surveillance System	04	27,262	32,129	32,129					U
82	0603895C	Ballistic Missile Defense System Space Programs	04	21,040	20,690	20,690					U
83	0603896C	Ballistic Missile Defense Command and Control, Battle Management and Communicati	04	425,996	439,617	456,267					U

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Line No	Program Element Number	Item	Act	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Sec
27	0603176C	Advanced Concepts and Performance Assessment	03	17,880	17,880		17,880	12,996		12,996	U
28	0603177C	Discrimination Sensor Technology	03								U
29	0603178C	Weapons Technology	03	71,843	71,843		71,843	5,495		5,495	U
30	0603179C	Advanced C4ISR	03	3,626	3,626		3,626				U
31	0603180C	Advanced Research	03	23,433	27,733		27,733	20,184		20,184	U
34	0603274C	Special Program - MDA Technology	03	83,745	83,745		83,745				U
40	0603294C	Common Kill Vehicle Technology	03					252,879		252,879	U
		Advanced Technology Development		200,527	204,827		204,827	291,554		291,554	
74	0603881C	Ballistic Missile Defense Terminal Defense Segment	04	206,834	209,072		209,072	230,162		230,162	U
75	0603882C	Ballistic Missile Defense Midcourse Defense Segment	04	862,080	862,080		862,080	828,097		828,097	U
77	0603884C	Ballistic Missile Defense Sensors	04	230,077	230,077		230,077	247,345		247,345	U
78	0603890C	BMD Enabling Programs	04	401,594	408,594		408,594	449,442		449,442	U
79	0603891C	Special Programs - MDA	04	321,607	323,607		323,607	320,190		320,190	U
80	0603892C	AEGIS BMD	04	959,066	959,066		959,066	852,052		852,052	U
81	0603893C	Space Tracking & Surveillance System	04	32,129	32,129		32,129				U
82	0603895C	Ballistic Missile Defense System Space Programs	04	20,690	20,690		20,690				U
83	0603896C	Ballistic Missile Defense Command and Control, Battle Management and Communicati	04	439,617	456,267		456,267	430,115		430,115	U

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84	0603898C	Ballistic Missile Defense Joint Warfighter Support	04	47,566	47,776	47,776					U
85	0603904C	Missile Defense Integration & Operations Center (MDIOC)	04	46,191	54,750	54,750					U
86	0603906C	Regarding Trench	04	8,918	8,785	8,785					U
87	0603907C	Sea Based X-Band Radar (SBX)	04	81,265	68,787	93,287					U
88	0603913C	Israeli Cooperative Programs	04	267,595	103,835	103,835					U
89	0603914C	Ballistic Missile Defense Test	04	290,267	293,441	293,441					U
90	0603915C	Ballistic Missile Defense Targets	04	517,589	563,576	563,576					U
94	0604115C	Technology Maturation Initiatives	04	24,743	90,266	99,366					U
96	0604181C	Hypersonic Defense	04								U
105	0604873C	Long Range Discrimination Radar (LRDR)	04	132,278	162,012	173,162					U
106	0604874C	Improved Homeland Defense Interceptors	04	282,864	274,148	274,148					U
107	0604876C	Ballistic Missile Defense Terminal Defense Segment Test	04	20,980	63,444	63,444					U
108	0604878C	Aegis BMD Test	04	78,468	95,012	95,012					U
109	0604879C	Ballistic Missile Defense Sensor Test	04	83,597	83,250	83,250					U
110	0604880C	Land-Based SM-3 (LBSM3)	04	29,288	43,293	43,293					U
111	0604881C	AEGIS SM-3 Block IIA Co-Development	04	165,456	106,038	106,038					U
112	0604887C	Ballistic Missile Defense Midcourse Segment Test	04	54,619	56,481	56,481					U

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Program Line Element No Number	Item ----	Act	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total	S e c
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84 0603898C	Ballistic Missile Defense Joint Warfighter Support	04	47,776	47,776		47,776	48,954		48,954	U
85 0603904C	Missile Defense Integration & Operations Center (MDIOC)	04	54,750	54,750		54,750	53,265		53,265	U
86 0603906C	Regarding Trench	04	8,785	8,785		8,785	9,113		9,113	U
87 0603907C	Sea Based X-Band Radar (SBX)	04	68,787	93,287		93,287	130,695		130,695	U
88 0603913C	Israeli Cooperative Programs	04	103,835	103,835		103,835	105,354		105,354	U
89 0603914C	Ballistic Missile Defense Test	04	293,441	293,441		293,441	305,791		305,791	U
90 0603915C	Ballistic Missile Defense Targets	04	563,576	563,576		563,576	410,425		410,425	U
94 0604115C	Technology Maturation Initiatives	04	90,266	99,366		99,366	128,406		128,406	U
96 0604181C	Hypersonic Defense	04					75,300		75,300	U
105 0604873C	Long Range Discrimination Radar (LRDR)	04	162,012	173,162		173,162	357,659		357,659	U
106 0604874C	Improved Homeland Defense Interceptors	04	274,148	274,148		274,148	465,530		465,530	U
107 0604876C	Ballistic Missile Defense Terminal Defense Segment Test	04	63,444	63,444		63,444	36,239		36,239	U
108 0604878C	Aegis BMD Test	04	95,012	95,012		95,012	134,468		134,468	U
109 0604879C	Ballistic Missile Defense Sensor Test	04	83,250	83,250		83,250	84,239		84,239	U
110 0604880C	Land-Based SM-3 (LBSM3)	04	43,293	43,293		43,293	30,486		30,486	U
111 0604881C	AEGIS SM-3 Block IIA Co-Development	04	106,038	106,038		106,038	9,739		9,739	U
112 0604887C	Ballistic Missile Defense Midcourse Segment Test	04	56,481	56,481		56,481	76,757		76,757	U

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113	0604894C	Multi-Object Kill Vehicle	04		71,513	71,513					U
115	0305103C	Cyber Security Initiative	04	941	969	969					U
116	1206893C	Space Tracking & Surveillance System	04								U
117	1206895C	Ballistic Missile Defense System Space Programs	04								U
		Advanced Component Development And Prototypes		5,898,841	5,661,070	5,733,708					
155	0605502C	Small Business Innovation Research - MDA	06	88,694							U
184	0901598C	Management HQ - MDA	06	35,871	31,160	31,160					U
		Management Support		124,565	31,160	31,160					
		Total Missile Defense Agency		6,210,652	5,892,757	5,969,695					

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113	0604894C	Multi-Object Kill Vehicle	04	71,513	71,513		71,513	6,500		6,500	U
115	0305103C	Cyber Security Initiative	04	969	969		969	986		986	U
116	1206893C	Space Tracking & Surveillance System	04					34,907		34,907	U
117	1206895C	Ballistic Missile Defense System Space Programs	04					16,994		16,994	U
		Advanced Component Development And Prototypes		5,661,070	5,733,708		5,733,708	5,879,210		5,879,210	
155	0605502C	Small Business Innovation Research - MDA	06								U
184	0901598C	Management HQ - MDA	06	31,160	31,160		31,160	29,947		29,947	U
		Management Support		31,160	31,160		31,160	29,947		29,947	
		Total Missile Defense Agency		5,892,757	5,969,695		5,969,695	6,200,711		6,200,711	

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206	0303135G	Public Key Infrastructure (PKI)	07	6,101	34,314	34,314					U
207	0303136G	Key Management Infrastructure (KMI)	07	43,867	36,602	36,602					U
209	0303140G	Information Systems Security Program	07	161,890	159,068	166,126					U
		Operational System Development									
Total National Security Agency											

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206	0303135G	Public Key Infrastructure (PKI)	07	34,314	34,314		34,314	4,811		4,811	U
207	0303136G	Key Management Infrastructure (KMI)	07	36,602	36,602		36,602	33,746		33,746	U
209	0303140G	Information Systems Security Program	07	159,068	166,126		166,126	227,652		227,652	U
		Operational System Development									
Total National Security Agency											

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3	0601110D8Z	Basic Research Initiatives	01	70,311	36,654	36,654					U
5	0601120D8Z	National Defense Education Program	01	52,837	69,345	69,345					U
6	0601228D8Z	Historically Black Colleges and Universities/Minority Institutions	01	34,943	23,572	23,572					U
	Basic Research			158,091	129,571	129,571					
8	0602000D8Z	Joint Munitions Technology	02	18,993	17,745	17,745					U
10	0602230D8Z	Defense Technology Innovation	02		30,000	30,000					U
11	0602234D8Z	Lincoln Laboratory Research Program	02	53,517	48,269	48,269					U
12	0602251D8Z	Applied Research for the Advancement of S&T Priorities	02	46,750	42,206	42,206					U
16	0602668D8Z	Cyber Security Research	02	15,378	12,183	12,183					U
21	0602751D8Z	Software Engineering Institute (SEI) Applied Research	02	7,945	8,420	8,420					U
	Applied Research			142,583	158,823	158,823					
23	0603000D8Z	Joint Munitions Advanced Technology	03	25,452	23,902	23,902					U
24	0603122D8Z	Combating Terrorism Technology Support	03	146,115	73,002	73,002					U
25	0603133D8Z	Foreign Comparative Testing	03	24,406	19,343	19,343					U
32	0603225D8Z	Joint DoD-DoE Munitions Technology Development	03	18,129	17,256	17,256					U
37	0603288D8Z	Analytic Assessments	03	14,145	12,048	12,048					U
38	0603289D8Z	Advanced Innovative Analysis and Concepts	03	48,873	57,020	57,020					U

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3	0601110D8Z	Basic Research Initiatives	01	36,654	36,654		36,654	40,612		40,612	U
5	0601120D8Z	National Defense Education Program	01	69,345	69,345		69,345	74,298		74,298	U
6	0601228D8Z	Historically Black Colleges and Universities/Minority Institutions	01	23,572	23,572		23,572	25,865		25,865	U
		Basic Research		129,571	129,571		129,571	140,775		140,775	
8	0602000D8Z	Joint Munitions Technology	02	17,745	17,745		17,745	19,111		19,111	U
10	0602230D8Z	Defense Technology Innovation	02	30,000	30,000		30,000				U
11	0602234D8Z	Lincoln Laboratory Research Program	02	48,269	48,269		48,269	49,748		49,748	U
12	0602251D8Z	Applied Research for the Advancement of S&T Priorities	02	42,206	42,206		42,206	49,226		49,226	U
16	0602668D8Z	Cyber Security Research	02	12,183	12,183		12,183	14,775		14,775	U
21	0602751D8Z	Software Engineering Institute (SEI) Applied Research	02	8,420	8,420		8,420	8,955		8,955	U
		Applied Research		158,823	158,823		158,823	141,815		141,815	
23	0603000D8Z	Joint Munitions Advanced Technology	03	23,902	23,902		23,902	25,627		25,627	U
24	0603122D8Z	Combating Terrorism Technology Support	03	73,002	73,002		73,002	76,230	25,000	101,230	U
25	0603133D8Z	Foreign Comparative Testing	03	19,343	19,343		19,343	24,199		24,199	U
32	0603225D8Z	Joint DoD-DoE Munitions Technology Development	03	17,256	17,256		17,256	18,662		18,662	U
37	0603288D8Z	Analytic Assessments	03	12,048	12,048		12,048	13,154		13,154	U
38	0603289D8Z	Advanced Innovative Analysis and Concepts	03	57,020	57,020		57,020	37,674		37,674	U

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39	0603291D8Z	Advanced Innovative Analysis and Concepts - MHA	03								U
42	0603375D8Z	Technology Innovation	03	25,000	39,923	89,923					U
44	0603527D8Z	RETRACT LARCH	03	105,243	181,977	181,977					U
45	0603618D8Z	Joint Electronic Advanced Technology	03	28,667	22,030	22,030					U
46	0603648D8Z	Joint Capability Technology Demonstrations	03	130,829	148,184	148,184					U
47	0603662D8Z	Networked Communications Capabilities	03	5,452	9,331	9,331					U
48	0603680D8Z	Defense-Wide Manufacturing Science and Technology Program	03	151,999	158,398	158,398					U
50	0603699D8Z	Emerging Capabilities Technology Development	03	77,966	49,895	49,895					U
53	0603716D8Z	Strategic Environmental Research Program	03	54,261	65,078	65,078					U
55	0603727D8Z	Joint Warfighting Program	03	4,852	7,848	7,848					U
60	0603769D8Z	Distributed Learning Advanced Technology Development	03			10,384					U
62	0603781D8Z	Software Engineering Institute	03	13,687	14,264	14,264					U
63	0603826D8Z	Quick Reaction Special Projects	03	69,506	74,943	74,943					U
64	0603833D8Z	Engineering Science & Technology	03	17,904	17,659	17,659					U
65	0603941D8Z	Test & Evaluation Science & Technology	03	89,317	87,135	87,135					U
66	0604055D8Z	Operational Energy Capability Improvement	03	40,387	37,329	37,329					U

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39	0603291D8Z	Advanced Innovative Analysis and Concepts - MHA	03					15,000		15,000	U
42	0603375D8Z	Technology Innovation	03	39,923	89,923		89,923	59,863		59,863	U
44	0603527D8Z	RETRACT LARCH	03	181,977	181,977		181,977	171,120		171,120	U
45	0603618D8Z	Joint Electronic Advanced Technology	03	22,030	22,030		22,030	14,389		14,389	U
46	0603648D8Z	Joint Capability Technology Demonstrations	03	148,184	148,184		148,184	105,871		105,871	U
47	0603662D8Z	Networked Communications Capabilities	03	9,331	9,331		9,331	12,661		12,661	U
48	0603680D8Z	Defense-Wide Manufacturing Science and Technology Program	03	158,398	158,398		158,398	136,159		136,159	U
50	0603699D8Z	Emerging Capabilities Technology Development	03	49,895	49,895		49,895	57,876		57,876	U
53	0603716D8Z	Strategic Environmental Research Program	03	65,078	65,078		65,078	71,832		71,832	U
55	0603727D8Z	Joint Warfighting Program	03	7,848	7,848		7,848	6,349		6,349	U
60	0603769D8Z	Distributed Learning Advanced Technology Development	03		10,384		10,384	11,211		11,211	U
62	0603781D8Z	Software Engineering Institute	03	14,264	14,264		14,264	15,047		15,047	U
63	0603826D8Z	Quick Reaction Special Projects	03	74,943	74,943		74,943	69,203		69,203	U
64	0603833D8Z	Engineering Science & Technology	03	17,659	17,659		17,659	25,395		25,395	U
65	0603941D8Z	Test & Evaluation Science & Technology	03	87,135	87,135		87,135	89,586		89,586	U
66	0604055D8Z	Operational Energy Capability Improvement	03	37,329	37,329		37,329	38,403		38,403	U

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67	0303310D8Z	CWMD Systems	03	40,938	44,836	44,836					U
		Advanced Technology Development		1,133,128	1,161,401	1,221,785					
69	0603161D8Z	Nuclear and Conventional Physical Security Equipment RDT&E ADC&P	04	31,149	28,498	28,498					U
70	0603600D8Z	WALKOFF	04	88,031	89,643	98,143					U
71	0603714D8Z	Advanced Sensors Application Program	04	15,869							U
72	0603821D8Z	Acquisition Enterprise Data & Information Services	04		2,136	2,136					U
73	0603851D8Z	Environmental Security Technical Certification Program	04	51,380	52,491	52,491					U
91	0603920D8Z	Humanitarian Demining	04	9,858	10,007	10,007					U
92	0603923D8Z	Coalition Warfare	04	10,179	10,126	10,126					U
93	0604016D8Z	Department of Defense Corrosion Program	04	7,471	3,893	3,893					U
95	0604132D8Z	Missile Defeat Project	04		45,000	185,500					U
97	0604250D8Z	Advanced Innovative Technologies	04	459,966	844,870	846,470					U
98	0604294D8Z	Trusted & Assured Microelectronics	04								U
99	0604331D8Z	Rapid Prototyping Program	04								U
100	0604342D8Z	Defense Technology Offset	04	71,500							U
101	0604400D8Z	Department of Defense (DoD) Unmanned System Common Development	04	7,731	3,320	3,320					U
102	0604682D8Z	Wargaming and Support for Strategic Analysis (SSA)	04		4,000	4,000					U

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67	0303310D8Z	CWMD Systems	03	44,836	44,836		44,836	33,382		33,382	U
		Advanced Technology Development		1,161,401	1,221,785		1,221,785	1,128,893	25,000	1,153,893	
69	0603161D8Z	Nuclear and Conventional Physical Security Equipment RDT&E ADC&P	04	28,498	28,498		28,498	32,937		32,937	U
70	0603600D8Z	WALKOFF	04	89,643	98,143		98,143	101,714		101,714	U
71	0603714D8Z	Advanced Sensors Application Program	04								U
72	0603821D8Z	Acquisition Enterprise Data & Information Services	04	2,136	2,136		2,136	2,198		2,198	U
73	0603851D8Z	Environmental Security Technical Certification Program	04	52,491	52,491		52,491	54,583		54,583	U
91	0603920D8Z	Humanitarian Demining	04	10,007	10,007		10,007	10,837		10,837	U
92	0603923D8Z	Coalition Warfare	04	10,126	10,126		10,126	10,740		10,740	U
93	0604016D8Z	Department of Defense Corrosion Program	04	3,893	3,893		3,893	3,837		3,837	U
95	0604132D8Z	Missile Defeat Project	04	45,000	185,500		185,500	98,369		98,369	U
97	0604250D8Z	Advanced Innovative Technologies	04	844,870	846,470		846,470	1,175,832		1,175,832	U
98	0604294D8Z	Trusted & Assured Microelectronics	04					83,626		83,626	U
99	0604331D8Z	Rapid Prototyping Program	04					100,000		100,000	U
100	0604342D8Z	Defense Technology Offset	04								U
101	0604400D8Z	Department of Defense (DoD) Unmanned System Common Development	04	3,320	3,320		3,320	3,967		3,967	U
102	0604682D8Z	Wargaming and Support for Strategic Analysis (SSA)	04	4,000	4,000		4,000	3,833		3,833	U

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103	0604775D8Z	Defense Rapid Innovation Program	04	250,000							U
114	0303191D8Z	Joint Electromagnetic Technology (JET) Program	04	2,656	2,636	2,636					U
		Advanced Component Development And Prototypes		1,005,790	1,096,620	1,247,220					
118	0604161D8Z	Nuclear and Conventional Physical Security Equipment RDT&E SDD	05	8,590	10,324	10,324					U
119	0604165D8Z	Prompt Global Strike Capability Development	05	88,660	181,303	181,303					U
122	0604771D8Z	Joint Tactical Information Distribution System (JTIDS)	05	13,774	16,288	16,288					U
126	0605022D8Z	Defense Exportability Program	05	3,165	2,920	2,920					U
127	0605027D8Z	OUSD(C) IT Development Initiatives	05	13,457		16,524					U
129	0605075D8Z	DCMO Policy and Integration	05	2,217							U
132	0605140D8Z	Trusted Foundry	05	7,000	69,000	69,000					U
133	0605210D8Z	Defense-Wide Electronic Procurement Capabilities	05	7,961	9,881	9,881					U
134	0605294D8Z	Trusted & Assured Microelectronics	05								U
136	0305304D8Z	DoD Enterprise Energy Information Management (EEIM)	05	4,289	2,703	2,703					U
137	0305310D8Z	CWMD Systems: System Development and Demonstration	05								U
		System Development And Demonstration		149,113	292,419	308,943					
138	0604774D8Z	Defense Readiness Reporting System (DRRS)	06	5,571	4,678	4,678					U

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103	0604775D8Z	Defense Rapid Innovation Program	04								U
114	0303191D8Z	Joint Electromagnetic Technology (JET) Program	04	2,636	2,636		2,636	2,902		2,902	U
		Advanced Component Development And Prototypes		1,096,620	1,247,220		1,247,220	1,685,375		1,685,375	
118	0604161D8Z	Nuclear and Conventional Physical Security Equipment RDT&E SDD	05	10,324	10,324		10,324	12,536		12,536	U
119	0604165D8Z	Prompt Global Strike Capability Development	05	181,303	181,303		181,303	201,749		201,749	U
122	0604771D8Z	Joint Tactical Information Distribution System (JTIDS)	05	16,288	16,288		16,288	15,358		15,358	U
126	0605022D8Z	Defense Exportability Program	05	2,920	2,920		2,920	3,162		3,162	U
127	0605027D8Z	OUSD(C) IT Development Initiatives	05		16,524		16,524	21,353		21,353	U
129	0605075D8Z	DCMO Policy and Integration	05					2,810		2,810	U
132	0605140D8Z	Trusted Foundry	05	69,000	69,000		69,000				U
133	0605210D8Z	Defense-Wide Electronic Procurement Capabilities	05	9,881	9,881		9,881	11,870		11,870	U
134	0605294D8Z	Trusted & Assured Microelectronics	05					61,084		61,084	U
136	0305304D8Z	DoD Enterprise Energy Information Management (EEIM)	05	2,703	2,703		2,703	3,669		3,669	U
137	0305310D8Z	CWMD Systems: System Development and Demonstration	05					8,230		8,230	U
		System Development And Demonstration		292,419	308,943		308,943	341,821		341,821	
138	0604774D8Z	Defense Readiness Reporting System (DRRS)	06	4,678	4,678		4,678	6,941		6,941	U

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139	0604875D8Z	Joint Systems Architecture Development	06	3,007	4,499	4,499					U
140	0604940D8Z	Central Test and Evaluation Investment Development (CTEIP)	06	209,014	219,199	219,199					U
141	0604942D8Z	Assessments and Evaluations	06	127,827	28,706	132,106					U
143	0605100D8Z	Joint Mission Environment Test Capability (JMETC)	06	39,549	87,080	87,080					U
144	0605104D8Z	Technical Studies, Support and Analysis	06	24,121	23,069	23,069					U
146	0605128D8Z	Classified Program USD(P)	06	115,000							U
147	0605142D8Z	Systems Engineering	06	38,321	32,429	32,429					U
148	0605151D8Z	Studies and Analysis Support - OSD	06	2,696	3,797	3,797					U
149	0605161D8Z	Nuclear Matters-Physical Security	06	5,094	5,302	5,302					U
150	0605170D8Z	Support to Networks and Information Integration	06	5,113	7,246	7,246					U
151	0605200D8Z	General Support to USD (Intelligence)	06	1,686	1,874	10,374					U
156	0605502D8Z	Small Business Innovative Research	06	62,824							U
161	0605790D8Z	Small Business Innovation Research (SBIR)/ Small Business Technology Transfer	06	2,166	2,187	2,187					U
162	0605798D8Z	Defense Technology Analysis	06	15,538	22,650	22,650					U
165	0605804D8Z	Development Test and Evaluation	06	20,749	19,541	19,541					U
168	0606100D8Z	Budget and Program Assessments	06	3,973	4,014	4,014					U

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139	0604875D8Z	Joint Systems Architecture Development	06	4,499	4,499		4,499	4,851		4,851	U
140	0604940D8Z	Central Test and Evaluation Investment Development (CTEIP)	06	219,199	219,199		219,199	211,325		211,325	U
141	0604942D8Z	Assessments and Evaluations	06	28,706	132,106		132,106	30,144		30,144	U
143	0605100D8Z	Joint Mission Environment Test Capability (JMETC)	06	87,080	87,080		87,080	91,057		91,057	U
144	0605104D8Z	Technical Studies, Support and Analysis	06	23,069	23,069		23,069	22,386		22,386	U
146	0605128D8Z	Classified Program USD(P)	06								U
147	0605142D8Z	Systems Engineering	06	32,429	32,429		32,429	37,622		37,622	U
148	0605151D8Z	Studies and Analysis Support - OSD	06	3,797	3,797		3,797	5,200		5,200	U
149	0605161D8Z	Nuclear Matters-Physical Security	06	5,302	5,302		5,302	5,232		5,232	U
150	0605170D8Z	Support to Networks and Information Integration	06	7,246	7,246		7,246	12,583		12,583	U
151	0605200D8Z	General Support to USD (Intelligence)	06	1,874	10,374		10,374	31,451		31,451	U
156	0605502D8Z	Small Business Innovative Research	06								U
161	0605790D8Z	Small Business Innovation Research (SBIR)/ Small Business Technology Transfer	06	2,187	2,187		2,187	2,372		2,372	U
162	0605798D8Z	Defense Technology Analysis	06	22,650	22,650		22,650	24,365		24,365	U
165	0605804D8Z	Development Test and Evaluation	06	19,541	19,541		19,541	20,571		20,571	U
168	0606100D8Z	Budget and Program Assessments	06	4,014	4,014		4,014	3,992		3,992	U

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169	0606225D8Z	ODNA Technology and Resource Analysis	06	3,500		1,000					U
170	0203345D8Z	Defense Operations Security Initiative (DOSI)	06	1,888	2,072	2,072					U
175	0303260D8Z	Defense Military Deception Program Office (DMDPO)	06	942	916	916					U
178	0305193D8Z	Cyber Intelligence	06	6,567	18,523	18,523					U
180	0305245D8Z	Intelligence Capabilities and Innovation Investments	06								U
181	0306310D8Z	CWMD Systems: RDT&E Management Support	06								U
182	0804767D8Z	COCOM Exercise Engagement and Training Transformation (CE2T2) - MHA	06	41,735	34,384	34,384					U
		Management Support		736,881	522,166	635,066					
191	0607210D8Z	Industrial Base Analysis and Sustainment Support	07	21,792	16,195	16,195					U
192	0607310D8Z	CWMD Systems: Operational Systems Development	07	1,832	4,194	4,194					U
208	0303140D8Z	Information Systems Security Program	07	8,649	8,876	8,876					U
227	0305186D8Z	Policy R&D Programs	07	4,131	6,204	6,204					U
228	0305199D8Z	Net Centricity	07	17,532	17,971	17,971					U
237	0305387D8Z	Homeland Defense Technology Transfer Program	07	2,116	2,037	2,037					U
243	0307577D8Z	Intelligence Mission Data (IMD)	07		13,800	13,800					U

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Line No	Program Element Number	Item	Act	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total	S e c
169	0606225D8Z	ODNA Technology and Resource Analysis	06		1,000		1,000	1,000		1,000	U
170	0203345D8Z	Defense Operations Security Initiative (DOSI)	06	2,072	2,072		2,072	2,551		2,551	U
175	0303260D8Z	Defense Military Deception Program Office (DMDPO)	06	916	916		916	1,006		1,006	U
178	0305193D8Z	Cyber Intelligence	06	18,523	18,523		18,523				U
180	0305245D8Z	Intelligence Capabilities and Innovation Investments	06					18,992		18,992	U
181	0306310D8Z	CWMD Systems: RDT&E Management Support	06					1,231		1,231	U
182	0804767D8Z	COCOM Exercise Engagement and Training Transformation (CE2T2) - MHA	06	34,384	34,384		34,384				U
		Management Support		522,166	635,066		635,066	534,872		534,872	
191	0607210D8Z	Industrial Base Analysis and Sustainment Support	07	16,195	16,195		16,195	10,882		10,882	U
192	0607310D8Z	CWMD Systems: Operational Systems Development	07	4,194	4,194		4,194	7,222		7,222	U
208	0303140D8Z	Information Systems Security Program	07	8,876	8,876		8,876	9,415		9,415	U
227	0305186D8Z	Policy R&D Programs	07	6,204	6,204		6,204	6,526		6,526	U
228	0305199D8Z	Net Centricity	07	17,971	17,971		17,971	18,455		18,455	U
237	0305387D8Z	Homeland Defense Technology Transfer Program	07	2,037	2,037		2,037	2,071		2,071	U
243	0307577D8Z	Intelligence Mission Data (IMD)	07	13,800	13,800		13,800	13,111		13,111	U

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Office of Secretary of Defense
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Program										
Line Element										
No	Number	Item	Act	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO
--	-----	----	---	-----	-----	-----	-----	-----	-----	-----
		Operational System Development		56,052	69,277	69,277				
		Total Office of Secretary of Defense		3,381,638	3,430,277	3,770,685				

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Line	Program Element No Number	Item	Act	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total	S e c
	Operational System Development			69,277	69,277		69,277	67,682		67,682	
	Total Office of Secretary of Defense			3,430,277	3,770,685		3,770,685	4,041,233	25,000	4,066,233	

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U.S., Special Operations Command
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Line No	Program Element Number	Item	Act	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO	S e c
22	1160401BB	SOF Technology Development	02	37,084	37,820	37,820					U
		Applied Research		37,084	37,820	37,820					
68	1160402BB	SOF Advanced Technology Development	03	56,864	61,620	61,620					U
		Advanced Technology Development		56,864	61,620	61,620					
218	0304210BB	Special Applications for Contingencies	07	65,420							U
230	0305208BB	Distributed Common Ground/Surface Systems	07	5,302	5,415	5,415					U
248	1105219BB	MQ-9 UAV	07	21,388	17,804	17,804					U
249	1105232BB	RQ-11 UAV	07	758							U
250	1160279BB	Small Business Innovative Research/ Small Bus Tech Transfer Pilot Prog	07	15,897							U
251	1160403BB	Aviation Systems	07	172,965	159,143	163,543					U
252	1160405BB	Intelligence Systems Development	07	6,466	7,958	9,858					U
253	1160408BB	Operational Enhancements	07	61,463	64,895	90,895					U
254	1160431BB	Warrior Systems	07	32,677	44,885	45,285					U
255	1160432BB	Special Programs	07	3,284	1,949	1,949					U
256	1160434BB	Unmanned ISR	07		22,117	22,117					U
257	1160480BB	SOF Tactical Vehicles	07	2,477	3,316	3,316					U
258	1160483BB	Maritime Systems	07	57,544	54,577	54,577					U
259	1160489BB	Global Video Surveillance Activities	07	3,933	3,841	3,841					U

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Line	Program Element No Number	Item	Act	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total	S e c
22	1160401BB	SOF Technology Development	02	37,820	37,820		37,820	34,493		34,493	U
	Applied Research			37,820	37,820		37,820	34,493		34,493	
68	1160402BB	SOF Advanced Technology Development	03	61,620	61,620		61,620	72,605		72,605	U
	Advanced Technology Development			61,620	61,620		61,620	72,605		72,605	
218	0304210BB	Special Applications for Contingencies	07								U
230	0305208BB	Distributed Common Ground/Surface Systems	07	5,415	5,415		5,415	5,496		5,496	U
248	1105219BB	MQ-9 UAV	07	17,804	17,804		17,804	37,863		37,863	U
249	1105232BB	RQ-11 UAV	07								U
250	1160279BB	Small Business Innovative Research/ Small Bus Tech Transfer Pilot Prog	07								U
251	1160403BB	Aviation Systems	07	159,143	163,543		163,543	259,886		259,886	U
252	1160405BB	Intelligence Systems Development	07	7,958	9,858		9,858	8,245		8,245	U
253	1160408BB	Operational Enhancements	07	64,895	90,895		90,895	79,455	1,920	81,375	U
254	1160431BB	Warrior Systems	07	44,885	45,285		45,285	45,935		45,935	U
255	1160432BB	Special Programs	07	1,949	1,949		1,949	1,978		1,978	U
256	1160434BB	Unmanned ISR	07	22,117	22,117		22,117	31,766	3,000	34,766	U
257	1160480BB	SOF Tactical Vehicles	07	3,316	3,316		3,316	2,578		2,578	U
258	1160483BB	Maritime Systems	07	54,577	54,577		54,577	42,315		42,315	U
259	1160489BB	Global Video Surveillance Activities	07	3,841	3,841		3,841	4,661		4,661	U

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Line No	Program Element Number	Item	Act	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total	S e c
260	1160490BB	Operational Enhancements Intelligence	07	11,834	11,834		11,834	12,049		12,049	U
		Operational System Development		397,734	430,434		430,434	532,227	4,920	537,147	
		Total U.S., Special Operations Command		497,174	529,874		529,874	639,325	4,920	644,245	

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The Joint Staff
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Line No	Program Element Number	Item	Act	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO	S e c
104	0604826J	Joint C5 Capability Development, Integration and interoperability Assessments	04	21,700	23,642	23,642					U
		Advanced Component Development And Prototypes		21,700	23,642	23,642					
145	0605126J	Joint Integrated Air and Missile Defense Organization (JIAMDO)	06	34,139	32,759	38,059					U
171	0204571J	Joint Staff Analytical Support	06	5,983	7,464	7,464					U
174	0303166J	Support to Information Operations (IO) Capabilities	06	10,404	857	857					U
183	0804767J	COCOM Exercise Engagement and Training Transformation (CE2T2) - MHA	06								U
		Management Support		50,526	41,080	46,380					
195	0208043J	Planning and Decision Aid System (PDAS)	07	1,842	3,038	3,038					U
247	0902298J	Management HQ - OJCS	07	2,953	826	826					U
		Operational System Development		4,795	3,864	3,864					
Total	The Joint Staff			77,021	68,586	73,886					

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The Joint Staff
 FY 2018 President's Budget Request
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Line	Program Element No Number	Item	Act	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total	S e c
104	0604826J	Joint C5 Capability Development, Integration and interoperability Assessments	04	23,642	23,642		23,642	23,638		23,638	U
		Advanced Component Development And Prototypes		23,642	23,642		23,642	23,638		23,638	
145	0605126J	Joint Integrated Air and Missile Defense Organization (JIAMDO)	06	32,759	38,059		38,059	36,581		36,581	U
171	0204571J	Joint Staff Analytical Support	06	7,464	7,464		7,464	7,712		7,712	U
174	0303166J	Support to Information Operations (IO) Capabilities	06	857	857		857	673		673	U
183	0804767J	COCOM Exercise Engagement and Training Transformation (CE2T2) - MHA	06					44,500		44,500	U
		Management Support		41,080	46,380		46,380	89,466		89,466	
195	0208043J	Planning and Decision Aid System (PDAS)	07	3,038	3,038		3,038	3,037		3,037	U
247	0902298J	Management HQ - OJCS	07	826	826		826				U
		Operational System Development		3,864	3,864		3,864	3,037		3,037	
Total The Joint Staff				68,586	73,886		73,886	116,141		116,141	

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Washington Headquarters Services
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Line	Program Element No Number	Item	Act	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO	S e c
41	0603342D8W	Defense Innovation Unit Experimental (DIUx)	03								U
		Advanced Technology Development									
185	0903230D8W	WHS - Mission Operations Support - IT	06	975							U
186	0903235D8W	Joint Service Provider (JSP)	06		827	827					U
		Management Support		975	827	827					
		Total Washington Headquarters Services		975	827	827					

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Washington Headquarters Services
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Line	Program Element No Number	Item	Act	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total	S e c
41	0603342D8W	Defense Innovation Unit Experimental (DIUx)	03					29,594		29,594	U
		Advanced Technology Development						29,594		29,594	
185	0903230D8W	WHS - Mission Operations Support - IT	06								U
186	0903235D8W	Joint Service Provider (JSP)	06	827	827		827				U
		Management Support		827	827		827				
		Total Washington Headquarters Services		827	827		827	29,594		29,594	

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Department of Defense
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Appropriation	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO
Operational Test & Eval, Defense	187,483	187,127	189,852				
Total Research, Development, Test & Evaluation	187,483	187,127	189,852				

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Appropriation	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Operational Test & Eval, Defense	187,127	189,852		189,852	210,900		210,900
Total Research, Development, Test & Evaluation	187,127	189,852		189,852	210,900		210,900

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	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO
Summary Recap of Budget Activities							
Management Support	187,483	178,994	181,719				
Undistributed		8,133	8,133				
Total Research, Development, Test & Evaluation	187,483	187,127	189,852				
Summary Recap of FYDP Programs							
Research and Development	187,483	178,994	181,719				
Administration and Associated Activities		8,133	8,133				
Total Research, Development, Test & Evaluation	187,483	187,127	189,852				

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	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Summary Recap of Budget Activities -----							
Management Support	178,994	181,719		181,719	210,900		210,900
Undistributed	8,133	8,133		8,133			
Total Research, Development, Test & Evaluation	187,127	189,852		189,852	210,900		210,900
Summary Recap of FYDP Programs -----							
Research and Development	178,994	181,719		181,719	210,900		210,900
Administration and Associated Activities	8,133	8,133		8,133			
Total Research, Development, Test & Evaluation	187,127	189,852		189,852	210,900		210,900

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Defense-Wide
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	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO
Summary Recap of Budget Activities -----							
Management Support	187,483	178,994	181,719				
Undistributed		8,133	8,133				
Total Research, Development, Test & Evaluation	187,483	187,127	189,852				
Summary Recap of FYDP Programs -----							
Research and Development	187,483	178,994	181,719				
Administration and Associated Activities		8,133	8,133				
Total Research, Development, Test & Evaluation	187,483	187,127	189,852				

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	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Summary Recap of Budget Activities							

Management Support	178,994	181,719		181,719	210,900		210,900
Undistributed	8,133	8,133		8,133			
Total Research, Development, Test & Evaluation	187,127	189,852		189,852	210,900		210,900
Summary Recap of FYDP Programs							

Research and Development	178,994	181,719		181,719	210,900		210,900
Administration and Associated Activities	8,133	8,133		8,133			
Total Research, Development, Test & Evaluation	187,127	189,852		189,852	210,900		210,900

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Appropriation: 0460D Operational Test & Eval, Defense

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1	0605118	OTE Operational Test and Evaluation	06	76,838	78,047	80,772					U
2	0605131	OTE Live Fire Test and Evaluation	06	46,882	48,316	48,316					U
3	0605814	OTE Operational Test Activities and Analyses	06	63,763	52,631	52,631					U
		Management Support		187,483	178,994	181,719					
4	0901560	OTE Continuing Resolution Programs	20		8,133	8,133					U
		Undistributed			8,133	8,133					
		Total Operational Test & Eval, Defense		187,483	187,127	189,852					

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Appropriation: 0460D Operational Test & Eval, Defense

Line No	Program Element Number	Item	Act	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Se c
1	0605118	OTE Operational Test and Evaluation	06	78,047	80,772		80,772	83,503		83,503	U
2	0605131	OTE Live Fire Test and Evaluation	06	48,316	48,316		48,316	59,500		59,500	U
3	0605814	OTE Operational Test Activities and Analyses	06	52,631	52,631		52,631	67,897		67,897	U
		Management Support		178,994	181,719		181,719	210,900		210,900	
4	0901560	OTE Continuing Resolution Programs	20	8,133	8,133		8,133				U
		Undistributed		8,133	8,133		8,133				
Total Operational Test & Eval, Defense				187,127	189,852		189,852	210,900		210,900	

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Defense-Wide • Budget Estimates FY 2018 • RDT&E Program

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52	03	0603713S	Deployment and Distribution Enterprise Technology.....	Volume 5 - 321
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61	03	0603769SE	Distributed Learning Advanced Technology Development (ADL).....	Volume 5 - 55
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171	06	0204571J	Joint Staff Analytical Support.....	Volume 5 - 689
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**Department of Defense
Fiscal Year (FY) 2018 Budget Estimates**

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Defense Contract Management Agency

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 FY 2018 President's Budget Request
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 Total Obligational Authority
 (Dollars in Thousands)

26 Apr 2017

Appropriation	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO
Research, Development, Test & Eval, DW	12,042	11,505	11,505				
Total Research, Development, Test & Evaluation	12,042	11,505	11,505				

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Department of Defense
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

26 Apr 2017

Appropriation	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Research, Development, Test & Eval, DW	11,505	11,505		11,505	12,322		12,322
Total Research, Development, Test & Evaluation	11,505	11,505		11,505	12,322		12,322

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Department of Defense
 FY 2018 President's Budget Request
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 Total Obligational Authority
 (Dollars in Thousands)

26 Apr 2017

	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO
Summary Recap of Budget Activities							

System Development And Demonstration	12,042	11,505	11,505				
Total Research, Development, Test & Evaluation	12,042	11,505	11,505				
Summary Recap of FYDP Programs							

Research and Development	12,042	11,505	11,505				
Total Research, Development, Test & Evaluation	12,042	11,505	11,505				

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Department of Defense
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

26 Apr 2017

	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Summary Recap of Budget Activities -----							
System Development And Demonstration	11,505	11,505		11,505	12,322		12,322
Total Research, Development, Test & Evaluation	11,505	11,505		11,505	12,322		12,322
Summary Recap of FYDP Programs -----							
Research and Development	11,505	11,505		11,505	12,322		12,322
Total Research, Development, Test & Evaluation	11,505	11,505		11,505	12,322		12,322

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 Total Obligational Authority
 (Dollars in Thousands)

26 Apr 2017

	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO
Summary Recap of Budget Activities							

System Development And Demonstration	12,042	11,505	11,505				
Total Research, Development, Test & Evaluation	12,042	11,505	11,505				
Summary Recap of FYDP Programs							

Research and Development	12,042	11,505	11,505				
Total Research, Development, Test & Evaluation	12,042	11,505	11,505				

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	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Summary Recap of Budget Activities							

System Development And Demonstration	11,505	11,505		11,505	12,322		12,322
Total Research, Development, Test & Evaluation	11,505	11,505		11,505	12,322		12,322
Summary Recap of FYDP Programs							

Research and Development	11,505	11,505		11,505	12,322		12,322
Total Research, Development, Test & Evaluation	11,505	11,505		11,505	12,322		12,322

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 Total Obligational Authority
 (Dollars in Thousands)

26 Apr 2017

Appropriation	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO
Defense Contract Management Agency	12,042	11,505	11,505				
Total Research, Development, Test & Evaluation	12,042	11,505	11,505				

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 (Dollars in Thousands)

26 Apr 2017

Appropriation	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total
-----	-----	-----	-----	-----	-----	-----	-----
Defense Contract Management Agency	11,505	11,505		11,505	12,322		12,322
Total Research, Development, Test & Evaluation	11,505	11,505		11,505	12,322		12,322

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 (Dollars in Thousands)

26 Apr 2017

Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element	Item	Act	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO	S e c
124	0605013BL	Information Technology Development	05	12,042	11,505	11,505					U
		System Development And Demonstration		12,042	11,505	11,505					
Total Research, Development, Test & Eval, DW				12,042	11,505	11,505					

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 (Dollars in Thousands)

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124	0605013BL	Information Technology Development	05	11,505	11,505		11,505	12,322		12,322	U
		System Development And Demonstration		11,505	11,505		11,505	12,322		12,322	
Total Research, Development, Test & Eval, DW				11,505	11,505		11,505	12,322		12,322	

Defense Contract Management Agency
FY 2018 President's Budget Request
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(Dollars in Thousands)

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 FY 2018 President's Budget Request
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 Total Obligational Authority
 (Dollars in Thousands)

26 Apr 2017

Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Se
124	0605013BL	Information Technology Development	05	11,505	11,505		11,505	12,322		12,322	U
		System Development And Demonstration		11,505	11,505		11,505	12,322		12,322	
		Total Defense Contract Management Agency		11,505	11,505		11,505	12,322		12,322	

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Defense Contract Management Agency	Date: May 2017
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Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 5: System Development & Demonstration (SDD)</i>					R-1 Program Element (Number/Name) PE 0605013BL / <i>Information Technology Development</i>							
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	146.301	12.042	11.505	12.322	-	12.322	12.089	12.230	12.339	12.500	Continuing	Continuing
01: <i>Systems Modifications and Development</i>	146.301	12.042	11.505	12.322	-	12.322	12.089	12.230	12.339	12.500	Continuing	Continuing

A. Mission Description and Budget Item Justification

The DCMA utilizes an agile incremental approach for system development, modernization, and sustainment allowing the DCMA to deploy needed systems and major business process changes. Through major initiatives like the Mechanization of Contract Administration Services (MOCAS) modernization, Integrated Workflow Management System (IWMS), and Talent Management System (TMS) the DCMA will reduce risk, improve performance, and enhance the competency of the acquisition workforce. These systems support the DCMA congressionally-mandated emerging missions focused on mission assurance and commercial item pricing. Furthermore, we are invigorating our efforts to adjust to the changing environment by achieving and sustaining audit readiness, creating an agile and flexible learning organization/ culture, and optimizing mission execution to support the acquisition enterprise through agile business practices.

B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	12.042	11.505	12.322	-	12.322
Current President's Budget	12.042	11.505	12.322	-	12.322
Total Adjustments	0.000	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Contract Management Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 5					R-1 Program Element (Number/Name) PE 0605013BL / Information Technology Development				Project (Number/Name) 01 / Systems Modifications and Development			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
01: Systems Modifications and Development	146.301	12.042	11.505	12.322	-	12.322	12.089	12.230	12.339	12.500	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The DCMA utilizes an agile incremental approach for system development, modernization, and sustainment allowing the DCMA to deploy needed systems and major business process changes. Through major initiatives like the Mechanization of Contract Administration Services (MOCAS) modernization, Integrated Workflow Management System (IWMS), and Talent Management System (TMS) the DCMA will reduce risk, improve performance, and enhance the competency of the acquisition workforce. These systems support the DCMA congressionally-mandated emerging missions focused on mission assurance and commercial item pricing. Furthermore, we are invigorating our efforts to adjust to the changing environment by achieving and sustaining audit readiness, creating an agile and flexible learning organization/ culture, and optimizing mission execution to support the acquisition enterprise through agile business practices.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2016	FY 2017	FY 2018
Title: System Modifications and Development	12.042	11.505	12.322
Articles:	-	-	-
<p>FY 2016 Accomplishments: MOCAS MOCAS is a hardware & software computing platform used by DCMA & DFAS to administer and pay contracts issued to Defense contractors. As an integrated contract administration and payment system, MOCAS is designed to provide DCMA and DFAS with the electronic information necessary to accomplish their mission of contract and payment administration. In order to implement the MOCAS technical architecture modernization, DCMA will procure the necessary servers, storage, software, networking, and hardware.</p> <p>In FY 2016 a Joint Program Management Office (JPMO) was established between the DCMA and DFAS to drive efficiencies in how these Agencies manage the MOCAS system. As a result of these efficiencies, the JPMO was able for the first time to schedule/work the design of several complex MOCAS System Change Requests (SCRs) in parallel to address multiple DoD initiatives: Standard Line of Accounting (SLOA) compliance; Procurement Instrument Identifiers (PIID) compliance; enterprise implementation/integration of the Procurement Data Standard (PDS); improved automated/electronic Contract Orders and Modifications (EDI 850/860); and improved Treasury reporting/disbursement processing. These efforts increased the interoperability of contract administration and contract pay activities data across the DoD enterprise, significantly reducing costs related to the Department's Procure-2-Pay mission.</p>			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Contract Management Agency			Date: May 2017		
Appropriation/Budget Activity 0400 / 5		R-1 Program Element (Number/Name) PE 0605013BL / <i>Information Technology Development</i>		Project (Number/Name) 01 / <i>Systems Modifications and Development</i>	
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)			FY 2016	FY 2017	FY 2018
<p>IWMS Integrated Workflow Management System (IWMS) deployed a new capability to safeguard documents from destruction by systematically placing them in a legal hold status within an electronic document and records management system (eDRMS). This capability will enable DCMA to automatically purge contract documents that have exceeded their retention periods in the Agency's National Archives & Records Administration (NARA)- approved file plan, thus maintaining system performance and reducing future document storage costs. In FY 2016 the DCMA developed automated contract review, contract termination, and semi-automated contract data integrity screening capabilities, which will reduce backlog in the contract close out process.</p> <p>TMS In FY 2016, the DCMA Talent Management System completed development on Increment 1.1 and 2a. Increment 1.1 provided additional capabilities on training management and 2a provided DCMA with the capabilities of Quota Management for courses and classes by fiscal year which improved planning and forecasting. Increment 2a deployment also provided feedback surveys creation, management, and survey taking. This capability assisted in better decision making for the Agency. Redesigned TMS to be a self-contained system, which allows the back end of TMS to be less intertwined with the DCMA database and allows for more streamlined, simplified data integration. TMS also deployed a new developer administration tool which provides additional capabilities for developers to support the system without deploying new code. Increment 2a was fully tested and achieved operational readiness in late FY 2016.</p> <p>EVAS (Earned Value Analysis System) In partnership with industry, the DCMA hosted the Earned Value Analysis (EVA) Data Pilot effort which completed the baseline of standardizing Earned Value Metrics (EV math) ensuring consistent application across all DoD contracts with Earned Value requirements. The intent of the Pilot effort is to develop a standard, transparent approach to automate test metrics and protocols, using data generated by the contractor EVAS and integrated sub-systems. Automation of these metrics is required to facilitate a risk-based surveillance approach allowing movement from a calendar driven "one size fits all" approach to one that is focused on system health based upon results of data and trend analysis.</p> <p>Based on these metrics and protocols the DCMA developed/authored software requirements necessary to procure/award a COTS software solution which will be the engine that powers EVAS. EVAS COTS software completed the rigorous IT security accreditation process which met and/or exceeded all DoD and DCMA security requirements receiving full authority to operate approval on DCMA's information system network.</p> <p>Asset and Service Management The DCMA modernized its IT Asset and Service Management capabilities to fall in line with recent NDAA software asset and assurance changes. In addition, this effort began to align DCMA's Information Technology processes with systems that can</p>					

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Contract Management Agency		Date: May 2017	
Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0605013BL / <i>Information Technology Development</i>	Project (Number/Name) 01 / <i>Systems Modifications and Development</i>	
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2016	FY 2017
<p>execute Information Technology Infrastructure Library (ITIL) best practices. This included the development of configuration management capabilities which increased DCMA's cyber security posture.</p> <p>Supply Chain Risk Assessment System DCMA made additional modifications to provide industrial base analysis capability to DCMA and DoD.</p> <p>Modifications & Delivery Orders Modifications and Delivery Orders (MDO) modernization development and capability releases supported several critical DoD initiatives and Federal Acquisition Regulation/Defense Federal Acquisition Regulation (FAR/DFAR) changes, including the implementation of Procurement Instrument Identifiers (PIID). The system modifications further addressed needs and requirements, such as improved efficiency in mass modification and related contract action reports functionality, to problems that slowed down or hindered optimal performance-based contract management for DCMA and other DoD support components.</p> <p>Other Programs DCMA's other programs supports Wide Area Workflow (WAWF) modifications for industry and mainly the infrastructure backbone that supports all of DCMA's web based capabilities.</p> <p>FY 2017 Plans: MOCAS In FY17 the Mechanization of Contract Administration Services (MOCAS) Joint Program Management Office (JPMO) will focus on the conceptual design of a modernized MOCAS Technical Architecture to further drive efficiencies in how the Agencies perform their Contract Administration and Contract Pay missions. The current MOCAS technical environment aligns with 1960s techniques and is limiting our development choices while stifling innovation. While some of the underlying MOCAS system technology has been upgraded (most recently in the 1980s), the fundamental architecture has not been updated. The approach for performing architecture and technology upgrades for the MOCAS system is complicated and will require multiple initiatives (Business Process Reengineering (BPR), Organizational Change Management (OCM) , prototyping and technical evaluations) working together to maintain business functionality as we enhance the system. These initiatives include upgrading the user interface to a modern interactive web experience, establishing configurable workflows and business rules in the system, updating the persistent data storage technologies in use, and augmenting the reporting and system interfaces to enhance interoperability within the DoD. Additionally and in parallel, the MOCAS JPMO will move from design to development on three major/complex System Change Requests (SCRs), Electronic Data Interchange (EDI) 850/860 recycle, Procurement Instrument Identifier (PIID), and Single Line of Accounting (SLOA) with projected implementation late FY 2017/ mid FY 2018 and late FY 2018 respectively. The need for these system changes is driven not only by our internal stakeholders and customers, but also by directives and policies received from various regulatory sources such as the Under Secretary of Defense (Comptroller); Deputy Chief Management Officer (DCMO);</p>			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Contract Management Agency		Date: May 2017		
Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0605013BL / Information Technology Development	Project (Number/Name) 01 / Systems Modifications and Development		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2016	FY 2017	FY 2018
Acquisition, Technology and Logistics (AT&L); Defense Procurement Acquisition Policy (DPAP); and Defense Federal Acquisition Regulation Supplement (DFARS)/FAR. Appropriate investment is required to implement these changes that will help the DoD move closer to achieving key goals for improving financial controls and audit trails that promote end-to-end funds traceability, compliance with data standards, and adoption of modern technologies to improve interoperability across the DoDs Procure-to Pay mission.				
IWMS Phase 2 and 3 to develop and deploy automated and semi-automated enterprise-wide contract close-out and process review capabilities though out DCMA.				
TMS In FY 2017, TMS Increment 2B will be deployed to 12,000 plus DCMA users and begin development of Increment 3. DCMA is currently finalizing Increment 2B development and beginning testing of the system. This Increment addresses needed production updates, simplifies workflows, develops Tag libraries to reduce html clutter, and provides vendor management and travel management capabilities. TMS will be intergraded with the Acquisition Workforce Qualification Initiative (AWQI) with the expected value for DCMA; Acquisition focused on-the-job development for individuals’ needs and the ability to view skill gaps at an organization level to allow for development of mitigation plans for systemic gaps. AWQI will provide DCMA’s employees with the competency standard needed for each Job position. This will be the beginning of DCMA’s competency assessments of its workforce. Increment 2B is scheduled to deploy the middle of 2017. DCMA IT will also position TMS in a stand-alone infrastructure that will better support DCMA’s 12000 plus employees to improve accessibility and performance for DCMA’s training system.				
EVAS EVAS will continue its partnership with industry to maintain standardize EV metrics and protocols. EVAS plans to execute a COTS software configuration and deployment utilizing baseline EV metrics while performing and completing Increments 1, 2, 3, & 4 of configuration and testing. Initial Operational Capability (IOC) is scheduled for fourth quarter FY 2017. IOC consists of the COTS software solution fully configured, tested, and deployed on a DCMA EV Data Analysis laptop with EV automated metrics and protocols available to DCMA EVM specialists. EVAS also plans to begin the second phase of the EVAS solution specifically the build out of the network infrastructure necessary to support the centralization of EV software and all supplier provided EV cost & schedule data. Centralization is necessary in order to deploy the EV Common Operation Picture allowing for automated real-time visibility across all EV programs, suppliers, and contracts.				
Asset and Service Management				

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Contract Management Agency			Date: May 2017		
Appropriation/Budget Activity 0400 / 5		R-1 Program Element (Number/Name) PE 0605013BL / <i>Information Technology Development</i>		Project (Number/Name) 01 / <i>Systems Modifications and Development</i>	
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)			FY 2016	FY 2017	FY 2018
<p>The DCMA will continue to modernize its IT Asset and Service Management capabilities to fall in line with the NDAA software asset and assurance mandates. In addition, the effort continues to align DCMA's Information Technology processes with systems that can execute Information Technology Infrastructure Library (ITIL) best practices.</p> <p>Supply Chain risk Assessment System DCMA is developing capabilities to redeploy the Contract Business Analysis Repository (CBAR) program with upgrades under the Supply Chain Risk Assessment System</p> <p>Modifications & Delivery Orders (MDO) MDO modernization efforts will continue to improve mass modification further reducing manual contract intervention. The system will also provide the capability to pull pertinent data directly from an Electronic Document Access (EDA) interface, edit additional data fields, cancel and recall actions, and perform additional data validations. Furthermore, DCMA is currently migrating MDO modernization development from a waterfall to agile incremental approach to align with DCMA's system development approach which consistently enables the deployment of needed capability in a faster and more efficient manner, resulting in overall Contract Administration Services (CAS) cost savings.</p> <p>Other Programs The DCMA's other programs supports WAWF modifications for industry and mainly the infrastructure backbone that supports all of DCMA's web capabilities.</p> <p>FY 2018 Plans: MOCAS In FY 2018 the Mechanization of Contract Administration Services (MOCAS) Joint Program Management Office (JPMO) will focus on implementing the conceptual design for a modernized MOCAS technical architecture developed in FY 2017. Enhanced User Environment (EUE) efforts augmented over three primary areas; updated user interface, updated reporting interface, and event subscription. Standard Line of Accounting (SLOA) and Procurement Defense Standards (PDS) coding and testing will be complete and productized and Procurement Instrument Identifiers (PIID) standards will be fully implemented. Additionally the MOCAS JPMO, working closely with the above mentioned stakeholders through a recently establish enterprise governance model, will finalize, select, and implement workflows from Business Process Reengineering (BPR) and Organizational Change Management (OCM) which began in FY 2017. Lastly, the JPMO intends to establish a prototyping and testing lab consisting of servers, storage, displays and networking hardware to evaluate and begin building the improved MOCAS architecture.</p> <p>IWMS</p>					

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Contract Management Agency			Date: May 2017	
Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0605013BL / Information Technology Development	Project (Number/Name) 01 / Systems Modifications and Development		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2016	FY 2017	FY 2018
Phase 4 is to integrate IWMS with The Defense Contract Audit Agency (DCAA) and DCMA's Contract Business Analysis Repository to provide a one stop shop for DOD contract integration and close out capabilities.				
TMS In FY 2018 TMS will deploy Increment 3A to DCMA workforce and begin development of Increment 3B. Increment 3A will focus on needed production updates, budgeting, and training certification while deploying to production 2QTR FY 2018. Increment 3B will focus on competency assessment, career development maps, Individual Development Plan (eIDP) management, On the Job Training (OJT) management, fulfillment checklist, certification management and remaining items in the Tag library. Increment 3B is scheduled to be deploy 4QTR FY 2018.				
EVAS EVAS will engineer, procure, and construct all network infrastructure necessary to centralize EV software and all supplier provided EV cost & schedule data on the DCMA network/cloud. EVAS intends to complete Phase II in the 4th quarter of FY 2018 and begin the third and final phase of the effort which allows for internal and external EV stakeholder access to EVAS. This access will improve efficiency by allowing stakeholders to insert their own supplier data directly into the system as well as view real-time the same results and conclusions as DCMA via customized dashboards and views. Full Operational Capability (FOC) is scheduled for 3rd quarter 2019.				
Asset and Service Management DCMA will continue to modernize its IT Asset and Service Management capabilities to fall in line with the NDAA software asset and assurance mandates. In addition, the effort continues to align DCMA's Information Technology processes with systems that can execute Information Technology Infrastructure Library (ITIL) best practices.				
Supply Chain risk Assessment System DCMA will continue development on capabilities to upgrade the Supply Chain Risk Assessment System				
Modifications & Delivery Orders (MDO) MDO modernization efforts will continue to improve mass modification and related CARs efficiency, further reducing manual contract intervention. Among the planned objectives are Accounting Classification Reference Number (ACRN) functionality improvements, elevated ACO privileges and controls, and Federal Procurement Data System (FPDS) CAR data feed improvements.				
Other Programs				

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Contract Management Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 5				R-1 Program Element (Number/Name) PE 0605013BL / Information Technology Development				Project (Number/Name) 01 / Systems Modifications and Development				
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)										FY 2016	FY 2017	FY 2018
DCMA's other programs support WAWF modifications for industry and mainly the infrastructure backbone that supports all of DCMA's web capabilities.												
Accomplishments/Planned Programs Subtotals										12.042	11.505	12.322
C. Other Program Funding Summary (\$ in Millions)												
Line Item	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost	
• 0701113BL: PDW: Procurement Operations*	2.394	2.439	4.297	-	4.297	3.857	2.892	2.921	2.950	Continuing	Continuing	
• 0701113 BL: Operations & Maintenance	134.727	129.499	168.639	-	168.639	171.638	170.135	173.888	177.968	Continuing	Continuing	
Remarks												
* Procurement amounts do not include Passenger Carrying Vehicle only includes IT related procurement												
**Only O&M IT specific direct funding reflected above, reimbursable not included												
D. Acquisition Strategy												
The DCMA is invigorating efforts to adjust to the changing environment through achieving and sustaining audit readiness, creating an agile and flexible learning organization/culture to support future customer programs, initiating and strengthening acquisition processes and optimizing mission execution to support the acquisition enterprise through agile business practices. In pursuing these business practices, we are continuing to utilize both government full time equivalents and contractors to perform specialized functions such as software development, testing, and process automation.												
E. Performance Metrics												
To deliver on our mission and vision, the Agency is focused on four primary goals: 1) inform and contribute to cost control and affordability decisions; 2) develop agile business practices which optimize mission execution and support to the acquisition enterprise; 3) create and maintain an agile learning organization and culture that strives to exceed customer expectations; and 4) expect of ourselves what we expect of our contractors: good fiscal stewardship. All four of the strategic goals go directly to the heart of the DCMA mission. The Agency helps our partners spend their finite dollars wisely, ultimately ensuring the front line Warfighters get the equipment and services they need when they need them. Adherence to executing and ultimately attaining these goals will posture DCMA to positively support current and future BBP initiatives, QDR priorities, SECDEF's six focus areas, and the PMA including initiatives in services acquisition, innovative science and technology, and efforts to ensure greater acquisition affordability and better cost control throughout the acquisition life cycle. Agency focus will not solely rest on qualitative contract administration functions, but will also focus on quantitative factors as well – those factors that will clearly emphasize the Agency's return on investment (ROI) to the Department and to our other customers and the taxpayers at large.												

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Exhibit R-3, RDT&E Project Cost Analysis: FY 2018 Defense Contract Management Agency												Date: May 2017			
Appropriation/Budget Activity 0400 / 5						R-1 Program Element (Number/Name) PE 0605013BL / Information Technology Development				Project (Number/Name) 01 / Systems Modifications and Development					
Product Development (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
MOCAS	C/IDIQ	Various : Various	0.448	1.644	Apr 2016	4.494	Apr 2017	5.081	Apr 2018	-		5.081	Continuing	Continuing	Continuing
IWMS	Option/ IDIQ	Various : Various	1.586	1.677	Oct 2016	0.500	Oct 2017	0.594	Oct 2018	-		0.594	Continuing	Continuing	Continuing
TMS	Option/ IDIQ	Various : Various	2.486	1.116	Oct 2016	0.999	Oct 2017	0.594	Oct 2018	-		0.594	Continuing	Continuing	Continuing
EVAS	Option/ IDIQ	Various : Various	0.201	1.116	Apr 2016	0.999	Apr 2017	0.832	Apr 2018	-		0.832	Continuing	Continuing	Continuing
Asset and Service Mgmt	C/BPA	Various : Various	0.083	0.223	Apr 2016	0.999	Apr 2017	1.189	Apr 2018	-		1.189	Continuing	Continuing	Continuing
Supply Chain Risk Assessment	Option/ IDIQ	Various : Various	0.879	0.447	Nov 2015	0.500	Nov 2016	0.594	Nov 2017	-		0.594	Continuing	Continuing	Continuing
Modification and Delivery Orders	C/IDIQ	Various : Various	0.491	0.223	Nov 2015	0.799	Nov 2016	1.070	Nov 2017	-		1.070	Continuing	Continuing	Continuing
Other Programs	Option/ IDIQ	Various : Various	140.127	5.596	Dec 2015	2.215	Nov 2016	2.368	Nov 2017	-		2.368	Continuing	Continuing	Continuing
Subtotal			146.301	12.042		11.505		12.322		-		12.322	-	-	-
			Prior Years	FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			146.301	12.042		11.505		12.322		-		12.322	-	-	-
Remarks															
The DCMA Information Technology supports the Agency's CAS mission by capitalizing on IT investment innovations that leverage technology to achieve an agile enterprise architecture that improves its contract management workforce's productivity, efficiency, and effectiveness.															

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Exhibit R-4, RDT&E Schedule Profile: FY 2018 Defense Contract Management Agency

Date: May 2017

Appropriation/Budget Activity

0400 / 5

R-1 Program Element (Number/Name)

PE 0605013BL / Information Technology Development

Project (Number/Name)

01 / Systems Modifications and Development

	FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
MOCAS																												
Requirements																												
Development																												
Testing																												
Deployment																												
IWMS																												
Requirements																												
Development																												
Testing																												
Deployment																												
TMS																												
Requirements																												
Development																												
Testing																												
Deployment																												
EVAS																												
Requirements																												
Development																												
Testing																												
Deployment																												
Asset and Service Mgmt																												
Requirements																												
Development																												
Testing																												

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Exhibit R-4, RDT&E Schedule Profile: FY 2018 Defense Contract Management Agency

Date: May 2017

Appropriation/Budget Activity

0400 / 5

R-1 Program Element (Number/Name)

PE 0605013BL / Information Technology Development

Project (Number/Name)

01 / Systems Modifications and Development

	FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Deployment																												
Supply Chain Risk Assessment																												
Requirements																												
Development																												
Testing																												
Deployment																												
Modifications and Delivery Orders																												
Requirements																												
Development																												
Testing																												
Deployment																												
Other Programs																												
Requirements																												
Development																												
Testing																												
Deployment																												

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Exhibit R-4A, RDT&E Schedule Details: FY 2018 Defense Contract Management Agency

Date: May 2017

Appropriation/Budget Activity

0400 / 5

R-1 Program Element (Number/Name)

PE 0605013BL / Information Technology
Development

Project (Number/Name)

01 / Systems Modifications and
Development

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
MOCAS				
Requirements	3	2016	4	2020
Development	2	2017	4	2022
Testing	3	2017	4	2022
Deployment	4	2017	4	2022
IWMS				
Requirements	1	2016	4	2019
Development	1	2016	2	2021
Testing	2	2016	2	2022
Deployment	3	2017	3	2022
TMS				
Requirements	1	2016	4	2018
Development	1	2016	4	2020
Testing	1	2016	1	2021
Deployment	2	2016	2	2022
EVAS				
Requirements	3	2016	4	2017
Development	4	2016	3	2018
Testing	4	2016	4	2018
Deployment	1	2017	1	2019
Asset and Service Mgmt				
Requirements	3	2017	4	2019

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Exhibit R-4A, RDT&E Schedule Details: FY 2018 Defense Contract Management Agency

Date: May 2017

Appropriation/Budget Activity

0400 / 5

R-1 Program Element (Number/Name)

PE 0605013BL / Information Technology Development

Project (Number/Name)

01 / Systems Modifications and Development

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Development	1	2018	2	2020
Testing	3	2018	3	2020
Deployment	4	2018	4	2020
Supply Chain Risk Assessment				
Requirements	1	2016	4	2018
Development	1	2016	2	2019
Testing	1	2016	3	2019
Deployment	1	2016	4	2019
Modifications and Delivery Orders				
Requirements	1	2016	4	2019
Development	1	2016	4	2020
Testing	1	2016	4	2022
Deployment	1	2016	4	2022
Other Programs				
Requirements	1	2016	4	2019
Development	1	2016	4	2020
Testing	1	2016	2	2022
Deployment	1	2016	4	2022

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**Department of Defense
Fiscal Year (FY) 2018 Budget Estimates**

May 2017



DoD Human Resources Activity

Defense-Wide Justification Book Volume 5 of 5

Research, Development, Test & Evaluation, Defense-Wide

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DoD Human Resources Activity • Budget Estimates FY 2018 • RDT&E Program

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Department of Defense
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

25 Apr 2017

Appropriation	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO
Research, Development, Test & Eval, DW	18,695	23,898	23,898				
Total Research, Development, Test & Evaluation	18,695	23,898	23,898				

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Department of Defense
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

25 Apr 2017

Appropriation	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Research, Development, Test & Eval, DW	23,898	23,898		23,898	35,249		35,249
Total Research, Development, Test & Evaluation	23,898	23,898		23,898	35,249		35,249

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Department of Defense
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

25 Apr 2017

	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO
Summary Recap of Budget Activities							
Advanced Technology Development	10,399						
System Development And Demonstration		1,658	1,658				
Management Support	8,296	22,240	22,240				
Total Research, Development, Test & Evaluation	18,695	23,898	23,898				
Summary Recap of FYDP Programs							
Research and Development	18,695	23,898	23,898				
Total Research, Development, Test & Evaluation	18,695	23,898	23,898				

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Department of Defense
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

25 Apr 2017

	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Summary Recap of Budget Activities							
Advanced Technology Development							
System Development And Demonstration	1,658	1,658		1,658	4,893		4,893
Management Support	22,240	22,240		22,240	30,356		30,356
Total Research, Development, Test & Evaluation	23,898	23,898		23,898	35,249		35,249
Summary Recap of FYDP Programs							
Research and Development	23,898	23,898		23,898	35,249		35,249
Total Research, Development, Test & Evaluation	23,898	23,898		23,898	35,249		35,249

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Defense-Wide
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

25 Apr 2017

	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO
Summary Recap of Budget Activities							
Advanced Technology Development	10,399						
System Development And Demonstration		1,658	1,658				
Management Support	8,296	22,240	22,240				
Total Research, Development, Test & Evaluation	18,695	23,898	23,898				
Summary Recap of FYDP Programs							
Research and Development	18,695	23,898	23,898				
Total Research, Development, Test & Evaluation	18,695	23,898	23,898				

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Defense-Wide
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

25 Apr 2017

	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Summary Recap of Budget Activities							

Advanced Technology Development							
System Development And Demonstration	1,658	1,658		1,658	4,893		4,893
Management Support	22,240	22,240		22,240	30,356		30,356
Total Research, Development, Test & Evaluation	23,898	23,898		23,898	35,249		35,249
Summary Recap of FYDP Programs							

Research and Development	23,898	23,898		23,898	35,249		35,249
Total Research, Development, Test & Evaluation	23,898	23,898		23,898	35,249		35,249

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Defense-Wide
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

25 Apr 2017

Appropriation	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO
-----	-----	-----	-----	-----	-----	-----	-----
Defense Human Resources Activity	18,695	23,898	23,898				
Total Research, Development, Test & Evaluation	18,695	23,898	23,898				

UNCLASSIFIED

Defense-Wide
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

25 Apr 2017

Appropriation	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total
-----			-----				
Defense Human Resources Activity	23,898	23,898		23,898	35,249		35,249
Total Research, Development, Test & Evaluation	23,898	23,898		23,898	35,249		35,249

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Defense-Wide
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

25 Apr 2017

Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req S with CR Adj OCO	
61	0603769SE	Distributed Learning Advanced Technology Development	03	10,399							U
		Advanced Technology Development		10,399							
125	0605021SE	Homeland Personnel Security Initiative	05		1,658	1,658					U
		System Development And Demonstration			1,658	1,658					
164	0605803SE	R&D in Support of DoD Enlistment, Testing and Evaluation	06	8,296	22,240	22,240					U
		Management Support		8,296	22,240	22,240					
Total Research, Development, Test & Eval, DW				18,695	23,898	23,898					

R-1C1F: FY 2018 President's Budget Request (Published Version), as of April 25, 2017 at 10:12:57

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Defense-Wide
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

25 Apr 2017

Appropriation: 0400D Research, Development, Test & Eval, DW

Program Line Element No Number	Item	Act	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total	S e c
61 0603769SE	Distributed Learning Advanced Technology Development	03								U
	Advanced Technology Development									
125 0605021SE	Homeland Personnel Security Initiative	05	1,658	1,658		1,658	4,893		4,893	U
	System Development And Demonstration		1,658	1,658		1,658	4,893		4,893	
164 0605803SE	R&D in Support of DoD Enlistment, Testing and Evaluation	06	22,240	22,240		22,240	30,356		30,356	U
	Management Support		22,240	22,240		22,240	30,356		30,356	
Total Research, Development, Test & Eval, DW			23,898	23,898		23,898	35,249		35,249	

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Defense Human Resources Activity
FY 2018 President's Budget Request
Exhibit R-1 FY 2018 President's Budget Request
Total Obligational Authority
(Dollars in Thousands)

25 Apr 2017

Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element	Item	Act	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO	S e c
61	0603769SE	Distributed Learning Advanced Technology Development	03	10,399							U
		Advanced Technology Development		10,399							
125	0605021SE	Homeland Personnel Security Initiative	05		1,658	1,658					U
		System Development And Demonstration			1,658	1,658					
164	0605803SE	R&D in Support of DoD Enlistment, Testing and Evaluation	06	8,296	22,240	22,240					U
		Management Support		8,296	22,240	22,240					
Total Defense Human Resources Activity				18,695	23,898	23,898					

R-1C1F: FY 2018 President's Budget Request (Published Version), as of April 25, 2017 at 10:12:57

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Defense Human Resources Activity
FY 2018 President's Budget Request
Exhibit R-1 FY 2018 President's Budget Request
Total Obligational Authority
(Dollars in Thousands)

25 Apr 2017

Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total	S e c
61	0603769SE	Distributed Learning Advanced Technology Development	03								U
		Advanced Technology Development									
125	0605021SE	Homeland Personnel Security Initiative	05	1,658	1,658		1,658	4,893		4,893	U
		System Development And Demonstration		1,658	1,658		1,658	4,893		4,893	
164	0605803SE	R&D in Support of DoD Enlistment, Testing and Evaluation	06	22,240	22,240		22,240	30,356		30,356	U
		Management Support		22,240	22,240		22,240	30,356		30,356	
Total Defense Human Resources Activity				23,898	23,898		23,898	35,249		35,249	

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DoD Human Resources Activity • Budget Estimates FY 2018 • RDT&E Program

Program Element Table of Contents (by Budget Activity then Line Item Number)

Appropriation 0400: Research, Development, Test & Evaluation, Defense-Wide

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Appropriation 0400: Research, Development, Test & Evaluation, Defense-Wide

Line #	Budget Activity	Program Element Number	Program Element Title	Page
125	05	0605021SE	Homeland Security Presidential Directive (HSPD-12) Initiative.....	Volume 5 - 59

Appropriation 0400: Research, Development, Test & Evaluation, Defense-Wide

Line #	Budget Activity	Program Element Number	Program Element Title	Page
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DoD Human Resources Activity • Budget Estimates FY 2018 • RDT&E Program

Program Element Table of Contents (Alphabetically by Program Element Title)

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Homeland Security Presidential Directive (HSPD-12) Initiative	0605021SE	125	05.....	Volume 5 - 59
R&D in Support of DOD Enlistment, Testing and Evaluation	0605803SE	164	06.....	Volume 5 - 63

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 DoD Human Resources Activity	Date: May 2017
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Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 3: Advanced Technology Development (ATD)</i>					R-1 Program Element (Number/Name) PE 0603769SE / <i>Distributed Learning Advanced Technology Development (ADL)</i>							
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	60.812	10.399	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Project 1: <i>Advanced Distributed Learning</i>	60.812	10.399	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

A. Mission Description and Budget Item Justification

This program has transferred to OSD P&R in FY 2017.

The ADL Initiative collaborates with the DoD, the Federal government, Industry, and Academia partners to shape the way people learn, grow, and perform. The ADL Program provides DoD, other Federal agencies, and international partners with innovative: (1) standards for training and education software, systems, and associated Web services that demonstrate the “art of the possible;” (2) prototypes and proofs of concept that harness the power of learning technologies, such as computer/Web-based training, serious games, virtual worlds, mobile technology, intelligent tutors, and other emerging learning technologies; (3) technologies and learning methods that empower learners; and (4) high-quality, easily accessible, adaptable, and cost-effective education and training.

The ADL Initiative’s R&D efforts improve efficiencies and reduce costs by (1) reducing the need for face-to-face instruction; (2) increasing interoperability--which enables discovery, retrieval, and reuse of distributed learning content; and (3) researching and prototyping methods of distributed learning with superior motivational and learning outcomes.

ADL’s research efforts resulted in the development of a Sharable Content Object Reference Model (SCORM), the current de facto internationally accepted standard for distributed learning interoperability. ADL is working in collaboration with our partners to develop the next generation training learning architecture (TLA). The TLA will modernize the way we learn by facilitating learning experiences that take advantage of current and emerging technologies based on new standards built on web services. ADL is conducting research on intelligent tutoring technologies that support the creation of a personal assistant for learning (PAL). The PAL will further empower learners with effective learning content that is more personalized and context sensitive. ADL was established by Executive Order 13111, with policy oversight by the Office of the Deputy Assistant Secretary of Defense (Readiness) (Training Readiness and Strategy).

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 DoD Human Resources Activity	Date: May 2017
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Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 3: Advanced Technology Development (ATD)</i>	R-1 Program Element (Number/Name) PE 0603769SE / <i>Distributed Learning Advanced Technology Development (ADL)</i>
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B. Program Change Summary (\$ in Millions)	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018 Base</u>	<u>FY 2018 OCO</u>	<u>FY 2018 Total</u>
Previous President's Budget	10.399	0.000	0.000	-	0.000
Current President's Budget	10.399	0.000	0.000	-	0.000
Total Adjustments	0.000	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			

Change Summary Explanation

This program has transferred to OSD P&R in FY 2017.

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Exhibit R-2A, RDT&E Project Justification: FY 2018 DoD Human Resources Activity										Date: May 2017		
Appropriation/Budget Activity 0400 / 3					R-1 Program Element (Number/Name) PE 0603769SE / <i>Distributed Learning Advanced Technology Development (ADL)</i>				Project (Number/Name) Project 1 / <i>Advanced Distributed Learning</i>			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Project 1: <i>Advanced Distributed Learning</i>	60.812	10.399	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
A. Mission Description and Budget Item Justification This program transferred to OSD P&R in FY 2017. The ADL Initiative collaborates with the DoD, the Federal government, Industry, and Academia partners to shape the way people learn, grow, and perform. The ADL Program provides DoD, other Federal agencies, and international partners with innovative: (1) standards for training and education software, systems, and associated Web services that demonstrate the “art of the possible;” (2) prototypes and proofs of concept that harness the power of learning technologies, such as computer/Web-based training, serious games, The ADL Initiative collaborates with the DoD, the Federal government, Industry, and Academia partners to shape the way people learn, grow, and perform. The ADL Program provides DoD, other Federal agencies, and international partners with innovative: (1) standards for training and education software, systems, and associated Web services that demonstrate the “art of the possible;” (2) prototypes and proofs of concept that harness the power of learning technologies, such as computer/Web-based training, serious games,												
B. Accomplishments/Planned Programs (\$ in Millions)									FY 2016	FY 2017	FY 2018	
Title: Advanced Distributed Learning Description: ADL serves as the thought-leader for the DoD and other government agencies for learning science and learning technologies, enabling innovation, finding efficiencies, guiding customers into the future, and creating a shared vision and strategy for ADL’s partners. FY 2016 Accomplishments: <ul style="list-style-type: none">• Gained efficiencies in Learning Science and Technology (LS&T) through publication of a research strategy and roadmap for future LS&T topics;• Published articles in leading professional journals on the integration of emerging learning technologies to enhance training;• Identified emerging concepts and showcase the art-of-the-possible through the integration of emerging learning technologies and learning science to enhance training and education;• Established the next generation LS&T research and development (R&D) program by expanding research into Human dimension, Learner-centric technology-enabled training and education, Human performance assessment (data-driven learning), Learning organizations, and social computing and social learning;• Continued work with the DoD training community to increase sharing of DL resources, standardization of DL terminology, and best practices for developing and implementing efficient and effective DL technologies across DoD;• Partnered across DoD and other government agencies to support LS&T, enable knowledge sharing and coordinated investment of resources to reduce cost of training;									10.399	-	-	

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Exhibit R-2A, RDT&E Project Justification: FY 2018 DoD Human Resources Activity		Date: May 2017	
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603769SE / <i>Distributed Learning Advanced Technology Development (ADL)</i>	Project (Number/Name) Project 1 / <i>Advanced Distributed Learning</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
<ul style="list-style-type: none"> • Led policy and standards discussions to improve development, dissemination, and use of DL methodologies; • Facilitated transition, acceptance and adoption of new LS&T by DoD and other agencies via policy, communication and transition support; • Supported the White House educational initiatives as the DoD representative to the Learning Registry and Federal Game Guild; • Participated in NATO Training Group to influence global standardization of training. • Continued to support the Services investment in developing/maintaining SCORM content. • Continued to increase sharing of learning content among DoD and other Federal Agencies by making educational resources more discoverable and retrievable • Provided best practices and lessons learned in the use of mobile devices and cloud services in support of training and education within DoD; • Continued to advocate open source initiatives by increasing awareness of open source and licensing policies. 			
Accomplishments/Planned Programs Subtotals		10.399	-
C. Other Program Funding Summary (\$ in Millions)			
N/A			
Remarks			
D. Acquisition Strategy			
Not Required.			
E. Performance Metrics			
In FY 2016, ADL has:			
<ol style="list-style-type: none"> 1. Delivered the next version of the xAPI, which is the first component of the TLA. 2. Published results on initial field testing of a life-long learning assistant. 3. Influenced key Service and International ADL meetings and conference reference the discovery, sharing and delivery of interoperable training content; 4. Increased the sharing of data among DoD, other Federal Agencies and state and local education departments throughout the U.S., by making educational resources discoverable and retrievable and also through the open source initiative. 5. Evaluated an Intelligent Tutor with the intent to determine the utilization of this technology for DoDEA. 			

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 DoD Human Resources Activity	Date: May 2017
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Appropriation/Budget Activity					R-1 Program Element (Number/Name)							
0400: Research, Development, Test & Evaluation, Defense-Wide / BA 5: System Development & Demonstration (SDD)					PE 0605021SE / Homeland Security Presidential Directive (HSPD-12) Initiative							
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	1.754	0.000	1.658	4.893	-	4.893	0.298	0.298	0.298	0.304	Continuing	Continuing
Project 1: Homeland Security Presidential Directive (HSPD-12) Initiative	1.754	0.000	0.158	0.393	-	0.393	0.298	0.298	0.298	0.304	Continuing	Continuing
Project 2: Recruiting Databases	0.000	0.000	1.500	4.500	-	4.500	0.000	0.000	0.000	0.000	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Department of Defense Human Resources Activity (DHRA) is a DoD-wide Field Activity chartered to support the Under Secretary of Defense for Personnel and Readiness (USD (P&R)). RDTE funding in FY18 will be applied to the start-up costs for expanding the recruiting database provided to all Military Services for use with officer and enlisted recruiting and to explore the merits of expanding use to civilian recruiting as proposed in a Force of the Future initiative. Specifically, the funds will provide contractor support for the development of a pilot expanded database, procurement of additional directory lists, and the purchase of IT hardware and software for the development of a user- friendly interface for accessing the data. FY18 RDTE funds in HSPD-12 will be applied to the DoD NextGen USID and will allow the Department to replace the existing Teslin ID cards which are highly susceptible to counterfeiting due to an outdated design and lack of newer anti-counterfeiting technology, by completing the design of the new card form factor utilizing the latest technical and printing techniques on a plastic substrate which will undergo extensive quality.

B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	0.191	1.658	4.893	-	4.893
Current President's Budget	0.000	1.658	4.893	-	4.893
Total Adjustments	-0.191	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-0.191	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 DoD Human Resources Activity										Date: May 2017		
Appropriation/Budget Activity 0400 / 5					R-1 Program Element (Number/Name) PE 0605021SE / <i>Homeland Security Presidential Directive (HSPD-12) Initiative</i>				Project (Number/Name) Project 1 / <i>Homeland Security Presidential Directive (HSPD-12) Initiative</i>			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Project 1: <i>Homeland Security Presidential Directive (HSPD-12) Initiative</i>	1.754	0.000	0.158	0.393	-	0.393	0.298	0.298	0.298	0.304	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Department of Defense Human Resources Activity (DHRA) is a DoD-wide Field Activity chartered to support the Under Secretary of Defense for Personnel and Readiness (USD (P&R)). HSPD-12 requires rapid electronic authentication for all Government employees, uniformed individuals and contractors. Real Time Automated Personnel Identification System (RAPIDS) is the infrastructure that supports the Uniformed Services identification card, provides on-line updates to DEERS and issues the CAC to Service members, civilian employees, and eligible contractors, thus providing an enterprise-wide credential for both physical and logical access to DoD facilities and networks. CAC uses the DEERS database for authentication and personnel information.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018
Title: Defense Enrollment Eligibility Reporting System/HSPD-12	0.000	0.158	0.393
Description: The Department of Defense Human Resources Activity (DHRA) is a DoD-wide Field Activity chartered to support the Under Secretary of Defense for Personnel and Readiness (USD (P&R)). HSPD-12 requires rapid electronic authentication for all Government employees, uniformed individuals and contractors.			
FY 2016 Accomplishments: Implemented CAC updates making us more compliant with FIPS 201-2 regulations, including Affiliation Color Code (for visually impaired), Name display, replace expired fingerprints.			
FY 2017 Plans: To support HSDP-12, FY17 RDTE funds will be expended to implement probabilistic search to prevent the duplication of identities and reduce help desk calls and manual record corrections. Performing a probabilistic search before adding a person to the PDR promotes better data quality and improves identity assurance.			
FY 2018 Plans: Funds in HSPD-12 will be applied to the DoD NextGen USID which will allow the Department to replace the existing Teslin ID cards that are highly susceptible to counterfeiting due to an outdated design and lack newer anti-counterfeiting technology. This project was deferred from FY 2017 to accommodate higher priority identity management task for probabilistic search. Completing			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 DoD Human Resources Activity		Date: May 2017	
Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0605021SE / <i>Homeland Security Presidential Directive (HSPD-12) Initiative</i>	Project (Number/Name) Project 1 / <i>Homeland Security Presidential Directive (HSPD-12) Initiative</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
the USID redesign utilizing the latest technical and printing techniques on a plastic substrate will significantly improve card quality and reduce fraud.			
Accomplishments/Planned Programs Subtotals		0.000	0.158
C. Other Program Funding Summary (\$ in Millions) N/A			
Remarks			
D. Acquisition Strategy Existing contract vehicles in place/General Services Administration for Commercial Off The Shelf.			
E. Performance Metrics None			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 DoD Human Resources Activity										Date: May 2017		
Appropriation/Budget Activity 0400 / 5					R-1 Program Element (Number/Name) PE 0605021SE / <i>Homeland Security Presidential Directive (HSPD-12) Initiative</i>				Project (Number/Name) Project 2 / <i>Recruiting Databases</i>			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Project 2: <i>Recruiting Databases</i>	0.000	0.000	1.500	4.500	-	4.500	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

FY18 funds will go towards completing the expansion of recruiting database from the pilot started in FY17. It will be provided to all Military Services for use with officer and enlisted recruiting and to explore the merits of expanding use to civilian recruiting as proposed in a Force of the Future initiative. Specifically, the funds will provide contractor support to research efforts on expanding the JAMRS Recruiting database for more precise direct messaging and run micro-targeting pilots with third party data buys.

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2016	FY 2017	FY 2018
<p>Title: STAR Program Recruiting Database</p> <p>Description: Recruiting database provided to all Military Services</p> <p>FY 2017 Plans: FY 2017 funds went towards the start-up costs for expanding the recruiting database.</p> <p>FY 2018 Plans:</p> <ul style="list-style-type: none"> Research efforts on expanding the JAMRS Recruiting database for more precise direct messaging. Run micro-targeting pilots with third party data buys. 	-	1.500	4.500
Accomplishments/Planned Programs Subtotals	-	1.500	4.500

C. Other Program Funding Summary (\$ in Millions)
N/A

Remarks

D. Acquisition Strategy
N/A

E. Performance Metrics
Various

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 DoD Human Resources Activity										Date: May 2017		
Appropriation/Budget Activity 0400: Research, Development, Test & Evaluation, Defense-Wide / BA 6: RDT&E Management Support					R-1 Program Element (Number/Name) PE 0605803SE / R&D in Support of DOD Enlistment, Testing and Evaluation							
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	48.650	8.296	22.240	30.356	-	30.356	21.326	17.373	16.830	17.151	Continuing	Continuing
Project 1: DoD Enlistment Processing & Testing	7.487	2.553	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	-	-
Project 2: Human Resources Automation Enhancements	24.747	3.570	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	-	-
Project 3: NEO Tracking System	2.053	0.616	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	-	-
Project 4: Synchronized Pre-deployment & Operational Tracker Enterprise Suite	6.876	1.057	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	-	-
Project 5: Employer Support of the Guard and Reserves (ESGR) Awards and Activity Tracking & Reporting (AATR) Tool	0.000	0.500	0.000	0.900	-	0.900	0.000	0.000	0.000	0.000	Continuing	Continuing
Project 6: Enterprise Data Services	0.000	0.000	4.037	0.134	-	0.134	0.114	1.165	0.619	0.631	Continuing	Continuing
Project 7: DSAID	0.000	0.000	3.590	4.916	-	4.916	0.000	0.000	0.000	0.000	Continuing	Continuing
Project 8: CAP	0.000	0.000	0.000	1.780	-	1.780	1.303	0.000	0.000	0.000	Continuing	Continuing
Project 9: Surveys, Testing, Research and Assessment (STAR)	0.000	0.000	3.680	3.640	-	3.640	4.061	4.161	4.161	4.244	Continuing	Continuing
Project 10: Enterprise Human Resource Infor System(EHRIS)	0.000	0.000	4.585	8.093	-	8.093	4.320	4.419	4.422	4.511	Continuing	Continuing
Project 11: Personnel Accountability (PA)	0.000	0.000	2.091	5.742	-	5.742	6.188	2.193	2.193	2.237	Continuing	Continuing
Project 12: Personnel Security Assurance (PSA)	0.000	0.000	4.257	4.351	-	4.351	4.540	4.635	4.635	4.728	Continuing	Continuing
Project 13: Federal Voting Assistance Program	7.487	0.000	0.000	0.800	-	0.800	0.800	0.800	0.800	0.800	Continuing	Continuing

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 DoD Human Resources Activity		Date: May 2017
Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 6: RDT&E Management Support</i>		R-1 Program Element (Number/Name) PE 0605803SE / <i>R&D in Support of DOD Enlistment, Testing and Evaluation</i>
A. Mission Description and Budget Item Justification <p>A. Mission Description and Budget Item Justification</p> <p>The Department of Defense Human Resources Activity (DHRA) is a DoD-wide Field Activity chartered to support the Under Secretary of Defense for Personnel and Readiness (USD (P&R)). This PE includes application of R&D to expedite prototype development and mission support efforts to sustain and/or modernize operations required for general RDT&E.</p> <p>For FY 2017, as a result of a Business Process and Systems Review, DHRA has implemented a major reorganization that will impact the DHRA RDT&E budget. The most significant aspect of this reorganization, from a RDT&E perspective, was the integration of the Enterprise Human Resources Information System (EHRIS) into the Defense Manpower Data Center's (DMDC) portfolio of information technology (IT) initiatives. Additionally, DHRA has implemented a major reorganization of the DMDC programs to more accurately align budget program lines with the DHRA Information Technology (IT) data reported in the DHRA IT Budget. The Defense Eligibility and Enrollment System (DEERS); Data Governance; Real Time Automated Personnel Identification System (RAPIDS); Common Access Card (CAC); Cyber Security program has been decomposed into a DEERS program and a RAPIDS program, with CAC being retained as part of the RAPIDS program. Synchronized Pre-deployment and Operational Tracker (SPOT) has been integrated into a Personnel Accountability (PA) program, that also includes Joint Personnel Accountability Reconciliation and Reporting (JPARR), and the Noncombatant Evacuation Operations (NEO) Tracking System (NTS).</p> <p>Project 1: DoD Enlistment Processing and Testing. The project administers testing programs, which enable the Armed Services to select highly qualified military recruits. The DoD uses a single test, the Armed Services Vocational Aptitude Battery (ASVAB), to determine eligibility of military applicants and to report recruit quality data to Congress. High quality recruits are obtained from administering the ASVAB annually to approximately 600,000 applicants for Military Service as part of the DoD Enlistment Testing program, and to 1 million students in the DoD Student Testing program. Each Service also uses ASVAB test forms developed in this program as part of their in-service testing programs. New ASVAB test forms and related support materials are implemented approximately every four years. This allows DoD to make measurement improvements as well as decrease the likelihood of test compromise. Ongoing RDT&E efforts include development and evaluation of procedures which (1) reduce or eliminate threats to the validity of the ASVAB test scores generated; (2) improve the efficiency of the test development, calibration, and validation process; and (3) improve selection and classification decisions made by each Service through more effective use of test score information. In addition, periodic assessments are required to provide DoD manpower planners and Congress with information on aptitude trends in the population from which recruits are drawn. This program realigned to STAR as project #9 in FY 2017.</p> <p>Project 2: Human Resources Automation Enhancements. The Defense Civilian Personnel Advisory Service (DCPAS), a DHRA component, manages and operates a number of major DoD programs, including the Defense Civilian Personnel Data System (DCPDS). DCPDS is the Department's enterprise civilian human resources information system. It ensures a coherent, standardized, and cost-effective system for the entire Department. DCPDS is built using a commercial off-the-shelf product customized for Federal and Defense requirements. The system is web-enabled and provides flexibility to respond to changes in the Department's civilian human resources (HR) operational requirements.</p> <p>DCPDS supports HR operations and improved business processes with continuous implementation of improved technology, meeting cost, schedule, and performance goals. Network and system operations span worldwide, with 24/7 operations that support 19 Regional Service Centers and over 300 Customer Support Units. Other DCPAS programs supporting the civilian workforce include minimizing involuntary separations, assisting laid-off workers, maintaining workforce balance, and reducing the costs of DoD's workers and unemployment compensation. DHRA/DCPAS supports the development, issuance and maintenance of uniform DoD-wide civilian</p>		

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 DoD Human Resources Activity		Date: May 2017
Appropriation/Budget Activity 0400: Research, Development, Test & Evaluation, Defense-Wide / BA 6: RDT&E Management Support	R-1 Program Element (Number/Name) PE 0605803SE / R&D in Support of DOD Enlistment, Testing and Evaluation	
<p>personnel policy; provides program guidance and technical interpretation for both appropriated and non-appropriated funded civilian HR programs; manages DoD's Civilian Assistance and Re-Employment (CARE) program, including the Priority Placement Program (PPP); investigates and mediates discrimination complaints; conducts grievance investigations; and manages the operation of the enterprise civilian HR information system, DCPDS. These programs are supported by an aggressive data automation program, to include a communications capability, computing equipment, and an automation software link to standardize these divergent functions. These funds continue to support these processes. This project realigned to EHRIS as project #10 in FY 2017.</p> <p>Project 3: NEO Tracking System. The Non-Combatant Evacuation Operations (NEO)Tracking System (NTS) / Emergency Tracking Accountability System (ETAS) is a certified and accredited DoD automated system that accounts for, and sustains visibility of noncombatant evacuees during a NEO under the authority of DODD 1000.25, DoD Personnel Identity Protection (PIP) Program. NTS is currently being used in the USAFRICOM, USCENTCOM, USEUCOM, USSOUTHCOM, and USPACOM Area of Responsibility. The ETAS component is the CONUS domestic version of NTS and is for use by USNORTHCOM during disasters in the CONUS whether natural, accidental, or acts of terrorism. The primary purpose of the NTS/ETAS is to provide individual accountability of the evacuee by creating and maintaining a database of evacuees assembled during an evacuation operation and subsequently tracking the evacuees' movement throughout the evacuation process. This project realigned to PA as project #11 in FY 2017.</p> <p>Project 4: Synchronized Pre-deployment & Operational Tracker Enterprise Suite. The Synchronized Pre-deployment and Operational Tracker Enterprise Suite (SPOT-ES) is the Department of Defense (DoD) system of record for accountability and visibility of contracts and contractor personnel authorized to operate in a contingency operation. SPOT-ES provides web based tracking and visibility into contract services, personnel and equipment locations; provides a common operational picture for Combatant Commanders; enhances the analytical tools to accurately plan for the quantity of contracted support required for future contingency operations; and collects accurate data for the Office of Management and Budget- directed quarterly census of all contractors supporting contingency operations. This project realigned under PA, as project #11 in FY 2017.</p> <p>Project 5: ESGR Awards & Activity Tracking (AATR) Tool. Employer Support of the Guard and Reserve (ESGR) requires a comprehensive web-based application (Awards and Activity Tracking and Reporting) to track ESGR Activities to include briefings and recognition of civilian employers and briefings of National Guard and Reserve that will track against organizational goals vs. costs and the hours donated by Volunteers. The application will replace several manual processes that use Microsoft Excel spreadsheets across 54 State Committees and through contractor support. This will also place all critical data in a DoD Data Center. Development of a web-based application would immensely improve data collection and analysis while allowing field staff and volunteers to better focus on operations and mission accomplishment. The application would be an addition to ESGR's current Portal that contains ESGR's member management, inquiry and case management, and freedom award nomination systems. In FY 2016, funding will support the design and efforts will carry over into FY 2017. In FY 2018, funds required to build and implement design changes.</p> <p>Project 6: Enterprise Data Services. Cybersecurity deals with the unauthorized exposure of classified data to WikiLeaks raised awareness on the need for improved data security management and access control measures across DoD IT enterprise. In PBR-12 one issue was critically linked to this risk and fully funded - Cross Domain Information Sharing (CDS). CDS provides for protected, automated transfer of data across networks of different security classifications reducing the need for removable media while better safe guarding the transport of information from one network to another. DMDC is developing the Enterprise Identity Attribute Service (EIAS)/Access Based Access Control technology in the classified environment as an immediate deterrent to allow/deny access to classified information giving the DoD the ability to</p>		

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 DoD Human Resources Activity		Date: May 2017
Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 6: RDT&E Management Support</i>		R-1 Program Element (Number/Name) PE 0605803SE <i>I R&D in Support of DOD Enlistment, Testing and Evaluation</i>
<p>control and monitor pre-provisioned user access in a manner that cannot be repudiated (e.g., using CAC-enabled PKE Authentication). Further, DOD will have the ability to enable, monitor and control the authorized transfer of information between SIPRNET and other DOD Networks as required via globally available and operationally effective cross domain enterprise service solutions. This was a new start in FY17.</p> <p>Project 7: Defense Sexual Assault Incidents Database. The Defense Sexual Assault Incidents Database (DSAD) is the integrated DoD SAPR Data Collection and Reporting System that accommodates a variety of uses, including the tracking of sexual assault victim support services, support Sexual Assault Prevention and Response (SAPR) program administration, program reporting requirements, and data analysis. In order to facilitate analysis at the OSD level, the System will be able to easily export data for analysis in computerized statistical applications, such as Statistical Package for the Social Sciences (SPSS). Service field-level users use the system to track support to victims of sexual assault throughout the lifecycle of that support requirement and to facilitate sexual assault case transfer between SARCs and Services. Service headquarters-level users use the system to support program planning, analysis, and management. DoD SAPR Office (SAPRO) users and Service headquarters-level users access the system to produce mandated and requested reports, monitor program effectiveness and support cohort and trend analysis.</p> <p>Project 8. Computer/Electronic Accommodations Program. The Computer/Electronic Accommodations Program (CAP) mission is to provide assistive technology and accommodations to support individuals with disabilities and wounded, ill, and injured Service members throughout the Federal Government in accessing information and communication technology. CAP currently has partnerships with 69 federal agencies. CAP's wounded, ill, and injured Service member's initiative is designed to cover active duty Service members, to include Guard or Reserve who are on active duty orders, including Title 10 orders. Since its inception, the program has provided over 150,000 accommodations for Department of Defense (DoD) and non-DoD employees with disabilities and wounded, ill, and injured Service members. In Fiscal Year (FY) 2014 alone, CAP filled 12,789 accommodations – the most ever in a single year.</p> <p>Currently CAP utilizes a Government-Off-The-Shelf (GOTS) product designed to support the program's robust mission. This product, CAP Portal, is used primarily to process DoD and other government agencies requests for hardware, software, training, and other miscellaneous accommodation services. CAP Portal also processes information pertaining to developing and tracking requirements packages, market research, events and outreach to include proposals, presentations, materials, and assistive technology. The CAP Portal allows staff and contract support personnel to utilize all aspects of its functionality to facilitate the provision of reasonable accommodations, and run various reports to make financial forecasts with the data that is contained within the system.</p> <p>Project 9: STAR project administers testing programs, which enable the Armed Services to select highly qualified military recruits. The DoD uses a single test, the Armed Services Vocational Aptitude Battery (ASVAB), to determine eligibility of military applicants and to report recruit quality data to Congress. High quality recruits are obtained from administering the ASVAB annually to approximately 600,000 applicants for Military Service as part of the DoD Enlistment Testing program, and to 1 million students in the DoD Student Testing program. Each Service also uses ASVAB test forms developed in this program as part of their in-service testing programs. New ASVAB test forms and related support materials are implemented approximately every four years. This allows DoD to make measurement improvements as well as decrease the likelihood of test compromise. Ongoing RDT&E efforts include development and evaluation of procedures which (1) reduce or eliminate threats to the validity of the ASVAB test scores generated; (2) improve the efficiency of the test development, calibration, and validation process; and (3) improve selection and classification decisions made by each Service through more effective use of test score information. In addition, periodic assessments are required to provide DoD manpower planners and Congress with information on aptitude trends in the population from which recruits are drawn. This is a new project but not a new start. This project realigned from Project 1 in FY 2017.</p>		

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 DoD Human Resources Activity		Date: May 2017		
<table><tr><td>Appropriation/Budget Activity 0400: Research, Development, Test & Evaluation, Defense-Wide / BA 6: RDT&E Management Support</td><td>R-1 Program Element (Number/Name) PE 0605803SE / R&D in Support of DOD Enlistment, Testing and Evaluation</td></tr></table>			Appropriation/Budget Activity 0400: Research, Development, Test & Evaluation, Defense-Wide / BA 6: RDT&E Management Support	R-1 Program Element (Number/Name) PE 0605803SE / R&D in Support of DOD Enlistment, Testing and Evaluation
Appropriation/Budget Activity 0400: Research, Development, Test & Evaluation, Defense-Wide / BA 6: RDT&E Management Support	R-1 Program Element (Number/Name) PE 0605803SE / R&D in Support of DOD Enlistment, Testing and Evaluation			
<p>Project 10: (EHRIS) is the Department’s enterprise civilian human resources (HR) transactional system supporting 800,000 employees, representing approximately one-third of the federal government’s civilian work force. DCPDS has proven its business case, avoiding costs for the Department of over \$200M/year when compared to the multiple DoD Component operational costs prior to establishment of the enterprise system.</p> <p>Network and system operations span worldwide, with 24/7 operations that support 19 Regional Service Centers and over 300 Customer Support Units. The current focus of DCPDS is the expansion of these efficiencies through the consolidation of DCPDS operations to a single database and expansion of capabilities to support integrated benefits processing and data management supporting the Department’s Force of the Future initiative.</p> <p>Other DCPAS programs supporting the civilian workforce include minimizing involuntary separations, assisting laid-off workers, maintaining workforce balance, and reducing the costs of DoD's workers and unemployment compensation via the Defense Injury and Unemployment Compensation System (DIUCS). DHRA/DCPAS supports the development, issuance and maintenance of uniform DoD-wide civilian personnel policy; provides program guidance and technical interpretation for both appropriated and non-appropriated funded civilian HR programs ; manages DoD's Civilian Assistance and Re-Employment (CARE) program, including the Priority Placement Program (PPP); investigates and mediates discrimination complaints; conducts grievance investigations; and manages the operation of the enterprise civilian HR information system, DCPDS. These programs are supported by an aggressive data automation program, to include a communications capability, computing equipment, and an automation software link to standardize these divergent functions. These funds continue to support these processes. This was a new project for FY 2017 but not a new start. This project realigned from Project 2 in FY 2017.</p> <p>Project 11: Personnel Accountability program is comprised of several systems, including: Synchronized Pre-deployment Operational Tracker Enterprise Suite (SPOT-ES), Joint Personnel Accountability Reconciliation and Reporting (JPARR), Defense Travel System (DTS)/Defense Travel System Modernization and Noncombatant Evacuation Operations (NEO) Tracking System (NTS). This family of systems represents end-to-end tracking, reconciliation and reporting of DoD personnel location and movements, to include military, DoD affiliated civilian, contractor and U.S. citizens. This includes DoD travel, contracts, and contractor personnel tracking in support of contingencies, military readiness, reporting of locations at the unit and person level, accountability of DoD personnel during (and after) natural or man-made disasters and accountability and visibility of noncombatant evacuees. This was a new project for FY 2017 but not a new start. This project realigned from project #3 and project #4.</p> <p>Project 12: Personnel Security Assurance (PSA) provides comprehensive capabilities to perform processing and verification of security clearances for all DoD military personnel, civilians and contractors including the technology and processes that need to be addressed in order to implement Continuous Evaluation. Planning funds within this program will support the Defense Information System for Security (DISS) which transferred to DHRA/DMDC from DLA in FY 2017. The DISS mission is to consolidate the DoD personnel security mission into an enterprise adjudicative case management system that will automate the implementation of improved national investigative and adjudicative standards to eliminate costly and inefficient work processes and increase information collaboration across the community. This was a new start for FY 2017.</p> <p>Project 13: The Federal Voting Assistance Program (FVAP) administers many of the federal responsibilities of the Uniformed and Overseas Citizens Absentee Voting Act (UOCAVA) of 1986 and other federal military voter registration and assistance laws. FVAP works to ensure Service members, their eligible family members and overseas citizens are aware of their right to vote and have the tools and resources to successfully do so – from anywhere in the world. FVAP works to Increase the likelihood of interested Active Duty Members to use available FVAP resources to increase their level of awareness of available DoD voting assistance resources, which</p>				

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 DoD Human Resources Activity	Date: May 2017
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Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> / BA 6: <i>RDT&E Management Support</i>	R-1 Program Element (Number/Name) PE 0605803SE / <i>R&D in Support of DOD Enlistment, Testing and Evaluation</i>
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will increase the likelihood of returning their absentee ballot. FVAP conducts voting research projects with States, local election jurisdictions and private entities to assist UOCAVA voters to register to vote and submit their absentee ballot and improve federal, State and local election processes and procedures.

B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	9.905	22.240	30.356	-	30.356
Current President's Budget	8.296	22.240	30.356	-	30.356
Total Adjustments	-1.609	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-1.609	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			

Change Summary Explanation

Congress reduced DHRA by -\$1.609M in FY 16.

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Exhibit R-2A, RDT&E Project Justification: FY 2018 DoD Human Resources Activity										Date: May 2017		
Appropriation/Budget Activity 0400 / 6					R-1 Program Element (Number/Name) PE 0605803SE / R&D in Support of DOD Enlistment, Testing and Evaluation				Project (Number/Name) Project 1 / DoD Enlistment Processing & Testing			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Project 1: DoD Enlistment Processing & Testing	7.487	2.553	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
A. Mission Description and Budget Item Justification The primary mission of DoD Enlistment Processing and Testing is to test and implement more accurate methods of assessing aptitudes required for military enlistment, success in training, and performance on the job. Also, it includes implementing methods that are useful in the identification of persons with the high aptitudes required by today's smaller and technically more demanding military. This project realigned to Project #9 STAR, and Project #12 PSA, in FY 2017.												
B. Accomplishments/Planned Programs (\$ in Millions)										FY 2016	FY 2017	FY 2018
Title: DoD Enlistment Processing & Testing										2.553	-	-
Description: DoD Enlistment Processing & Testing												
FY 2016 Accomplishments: <ul style="list-style-type: none"> • Implemented unproctored Internet testing • Continue to research on revisions to ASVAB content • Evaluate methods to convert all STP to Computer Adaptive Test (CAT) • Continue to evaluate the use of internet-based CAT-ASVAB in the Career Exploration Program (CEP) • Continue to reduce the frequency and impact of ASVAB test compromise, ensuring applicants are qualified to perform the military duties and responsibilities 												
Accomplishments/Planned Programs Subtotals										2.553	-	-
C. Other Program Funding Summary (\$ in Millions) N/A Remarks D. Acquisition Strategy N/A E. Performance Metrics N/A												

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Exhibit R-2A, RDT&E Project Justification: FY 2018 DoD Human Resources Activity										Date: May 2017		
Appropriation/Budget Activity 0400 / 6					R-1 Program Element (Number/Name) PE 0605803SE / R&D in Support of DOD Enlistment, Testing and Evaluation				Project (Number/Name) Project 2 / Human Resources Automation Enhancements			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Project 2: Human Resources Automation Enhancements	24.747	3.570	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Civilian HR automation enhancements planned for are focused on software development to support the Department's civilian workforce, including a DoD-Wide performance management system; enhancement of employee competency assessment capability; modernization of injury and unemployment compensation case management; and EEO investigations case management. In addition, changes to DCPDS are required for mandates for the Office of Personnel Management (OPM), HR Line of Business (LoB), electronic Official Personnel Folder, and Retirement Systems Modernization implementation. DoD is one of five designated Shared Service Centers in the federal government focused on providing standard services across agency lines, gaining potential significant business and cost-saving benefits. DoD is considered a leader in this initiative.

DCPDS is the Department's enterprise civilian HR system that has provided the savings originally projected in the achievement of full operational capability in 2002 and which has continued to operate as the DoD system serving over 800,000 employee records. Additional initiatives to sustain the Department's lead in automated systems include expansion of employee self-service functionality, and support for data warehouse improvements, engineering plans for consolidation and migration to a federal data center, an employee-manager portal, and information assurance initiatives to comply with DoD-mandated DMZ requirements. DCPDS enhancements will support the Department's focus on the further consolidation of civilian HR operations to a single operational site, with linkage to Component operations worldwide. This project realigned to Project #10 EHRIS, in FY 2017.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018
Title: Human Resources Automation Enhancements	3.570	-	-
FY 2016 Accomplishments:			
<ul style="list-style-type: none"> • Implement initial cloud computing, data warehouse improvements and continued expansion of web services (15) • Enhance information assurance requirements, including DMZ extension mandates (15) • Consolidate DCPAS supported applications to enterprise data center (15) • Maximize the Departments' systems to (1) manage injury and unemployment compensation cases; (2) assess executive (and equivalent) performance; (3) move all HRIT Enterprise systems to a common data center, which is managed under the same controls and inherits common security protocols; (4) enhance the DoD capability to assess competencies and plan for workforce development. (15) • Plan modernization and integration of legacy applications (15) • Implement mobility access to DCPDS (Employment Verification and Leave Balance) within the Joint Information Environment (JIE) (15) 			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 DoD Human Resources Activity		Date: May 2017	
Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0605803SE / <i>R&D in Support of DOD Enlistment, Testing and Evaluation</i>	Project (Number/Name) Project 2 / <i>Human Resources Automation Enhancements</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
<ul style="list-style-type: none"> Enhance warm site disaster recovery capabilities (15) Develop enhancements to comply with HR legislative and DoD regulatory requirements (Ongoing) Support required changes for HR LoB interfaces and other OPM/OMB mandates (Ongoing) Implement continuous auditing and monitoring to improve compliance with FIAR (Ongoing) 			
Accomplishments/Planned Programs Subtotals		3.570	-
C. Other Program Funding Summary (\$ in Millions)			
N/A			
Remarks			
D. Acquisition Strategy			
N/A			
E. Performance Metrics			
N/A			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 DoD Human Resources Activity										Date: May 2017		
Appropriation/Budget Activity 0400 / 6					R-1 Program Element (Number/Name) PE 0605803SE / R&D in Support of DOD Enlistment, Testing and Evaluation				Project (Number/Name) Project 3 / NEO Tracking System			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Project 3: NEO Tracking System	2.053	0.616	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
A. Mission Description and Budget Item Justification												
The Neo Tracking System (NTS) / Electronic Tracking Accountability System (ETAS) is a certified and accredited DoD automated system that accounts for, and sustains visibility of noncombatant evacuees during a NEO under the authority of DODD 1000.25, DoD Personnel Identity Protection (PIP) Program. NTS is currently being used in the USAFRICOM, USCENTCOM, USEUCOM, USSOUTHCOM, and USPACOM AORs. The ETAS component is the CONUS domestic version of NTS and is for use by USNORTHCOM during disasters in the CONUS whether natural, accidental, or acts of terrorism. The primary purpose of the NTS/ETAS is to provide individual accountability of the evacuee by creating and maintaining a database of evacuees assembled during an evacuation operation and subsequently tracking the evacuees' movement through the evacuation process. This project realigned to Project #11 PA, in FY 2017.												
B. Accomplishments/Planned Programs (\$ in Millions)									FY 2016	FY 2017	FY 2018	
Title: NEO Tracking System (NTS)									0.616	-	-	
FY 2016 Accomplishments: <ul style="list-style-type: none">Continued upgrade of system software and hardware drivers for Windows 7, 64-bit compatibilityContinued with hardware implementationProvided automate distribution of system updatesProvided immediate authentication of emergency essential personnelProvided web services to support development of Enterprise organizations attribute service for DoD which supports the Secure Data Access.												
Accomplishments/Planned Programs Subtotals									0.616	-	-	
C. Other Program Funding Summary (\$ in Millions)												
N/A												
Remarks												
D. Acquisition Strategy												
Existing contract vehicles in place/General Services Administration for Commercial Off The Shelf.												
E. Performance Metrics												
N/A												

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Exhibit R-2A, RDT&E Project Justification: FY 2018 DoD Human Resources Activity										Date: May 2017		
Appropriation/Budget Activity 0400 / 6					R-1 Program Element (Number/Name) PE 0605803SE / R&D in Support of DOD Enlistment, Testing and Evaluation				Project (Number/Name) Project 4 / Synchronized Pre-deployment & Operational Tracker Enterprise Suite			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Project 4: Synchronized Pre-deployment & Operational Tracker Enterprise Suite	6.876	1.057	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The PA program is comprised of three sub-programs: Synchronized Pre-deployment and Operational Tracker (SPOT), Joint Personnel Accountability Reconciliation and Reporting (JPARR), and Noncombatant Evacuation Operations (NEO) Tracking System (NTS). This family of systems represents end-to-end tracking, reconciliation and reporting of DoD personnel location and movements, to include military, DoD affiliated civilians, contractors, and U.S. citizens. This includes DoD travel, contracts, and contractor personnel tracking in support of contingencies, military readiness, reporting of locations at the unit and person level, accountability of DoD personnel during (and after) natural or man-made disasters, and accountability and visibility of noncombatant evacuees. SPOT is the DoD system of record for accountability and visibility of contracts and contractor personnel authorized to operate in a contingency operation. JPARR is a "public" SIPR only application that provides daily person-level location reporting. JPARR receives feeds for Service and Agency deployment systems, reconciles the data, and provides various reports at unit level detail. NTS is a certified and accredited DoD automated system that accounts for, and sustains visibility of noncombatant evacuees during a NEO.

This project realigned to Project #11, PA, starting in FY 2017.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018
Title: Synchronized Pre-deployment & Operational Tracker Enterprise Suite	1.057	-	-
FY 2016 Accomplishments: <ul style="list-style-type: none"> Continued to be the system of record for accountability and visibility of contracts and contractor personnel in support of the CENTCOM Area of Responsibility and other contingencies, humanitarian assistance, peacekeeping operations, and other missions and exercises as designated by the Combatant Commanders around the world. Continued to provide the only DoS, DoD, and USAID sanctioned Letter of Authorization (LOA) which provides the Authorized Government Services to contractor personnel. Provided the information on contractor personnel supporting Iraq and Afghanistan to the Office of the Secretary of Defense for reports to Congress. Provided the number of contractor personnel and contract capability to Combatant Commands for operational planning purposes and to aid in their decision making processes. Modified SPOT and TOPSS to accommodate the emerging requirement to account for contractors supporting Operation United Assistance in Liberia and Senegal. Deployed three JAMMS workstations for that mission. Modified the Letter of Authorization format to accommodate changing requirements. 			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 DoD Human Resources Activity		Date: May 2017	
Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0605803SE / <i>R&D in Support of DOD Enlistment, Testing and Evaluation</i>	Project (Number/Name) Project 4 / <i>Synchronized Pre-deployment & Operational Tracker Enterprise Suite</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
<ul style="list-style-type: none"> Upgraded to SQL Server 2012. Modified SPOT/TOPSS to accommodate the new standard for Federal Procurement Identification number format for DoD. Developed Audit Compliance Reports for TOPSS to allow Contracting Officers to better evaluate performance of contractor companies and hold them accountable for data maintenance. Upgraded browser compatibility for TOPSS to include Internet Explorer 8/9/10/11, Firefox, and Chrome. 			
Accomplishments/Planned Programs Subtotals		1.057	-
C. Other Program Funding Summary (\$ in Millions)			
N/A			
Remarks			
D. Acquisition Strategy			
N/A			
E. Performance Metrics			
N/A			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 DoD Human Resources Activity										Date: May 2017		
Appropriation/Budget Activity 0400 / 6					R-1 Program Element (Number/Name) PE 0605803SE / R&D in Support of DOD Enlistment, Testing and Evaluation				Project (Number/Name) Project 5 / Employer Support of the Guard and Reserves (ESGR) Awards and Activity Tracking & Reporting (AATR) Tool			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Project 5: Employer Support of the Guard and Reserves (ESGR) Awards and Activity Tracking & Reporting (AATR) Tool	0.000	0.500	0.000	0.900	-	0.900	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Redesign the ESGR Portal that contains the Inquiry and Case Management System, Member Management System, and Secretary of Defense Employer Support Freedom Award Nomination (FAN) system to account for technology changes and migrate to an approved DoD or Federal Cloud environment.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018
Title: ESGR Redesign/Technical Refresh	0.500	-	0.900
FY 2016 Accomplishments:			
• Designed and built Awards and Activity Tracking and Reporting (AATR).			
FY 2018 Plans:			
• ESGR Portal Redesign/Technical Refresh			
Accomplishments/Planned Programs Subtotals	0.500	-	0.900

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

N/A

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Exhibit R-2A, RDT&E Project Justification: FY 2018 DoD Human Resources Activity										Date: May 2017		
Appropriation/Budget Activity 0400 / 6					R-1 Program Element (Number/Name) PE 0605803SE / R&D in Support of DOD Enlistment, Testing and Evaluation				Project (Number/Name) Project 6 / Enterprise Data Services			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Project 6: Enterprise Data Services	0.000	0.000	4.037	0.134	-	0.134	0.114	1.165	0.619	0.631	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Cybersecurity deals with the unauthorized exposure of classified data to sites such as WikiLeaks which raised awareness on the need for improved data security management and access control measures across DoD IT enterprise. Cross Domain Information Sharing (CDS) provides for protected, automated transfer of data across networks of different security classifications reducing the need for removable media while better safe guarding the transport of information from one network to another. DMDC is developing the Enterprise Identity Attribute Service (EIAS)/Access Based Access Control technology in the classified environment as an immediate deterrent to allow/deny access to classified information giving the DoD the ability to control and monitor pre-provisioned user access in a manner that cannot be repudiated (e.g., using CAC-enabled PKE Authentication). Further, DOD will have the ability to enable, monitor and control the authorized transfer of information between SIPRNET and other DOD Networks as required via globally available and operationally effective cross domain enterprise service solutions.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018
Title: Enterprise Data Services (EDS)	-	4.037	0.134
FY 2017 Plans: <ul style="list-style-type: none"> • Procure the Automated Regression and Functional Testing (EoSL) Modernization • Install Microsoft Forefront Identity Management (FIM) • Implement Network (EoSL) Lifecycle Modernization • Modernize the VTC/AV Upgrades for DoDC (Seaside) and Mark Center (EoSL) Lifecycle Modernization • Server End of Service Life (EoSL) Lifecycle Modernization • Wireless Local Area Network (WLAN) (EoSL) Lifecycle Modernization • Destruction Of Mainframe Tapes • Implementation of Audit Log Management • Continued development and implementation of the Intrusion Detection System / Intrusion Prevention System (IDS/IPS) • Continued installation of required Port Aggregators • Implement Rogue System Detection (RSD) • Implement Dynamic Code Scanning Solution (NTO Spider) • Implement Static Code Scanning Solution (Fortify) 			
FY 2018 Plans: <ul style="list-style-type: none"> • Procure the Automated Regression and Functional Testing (EoSL) Modernization • Install Microsoft Forefront Identity Management (FIM) 			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 DoD Human Resources Activity		Date: May 2017	
Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0605803SE / <i>R&D in Support of DOD Enlistment, Testing and Evaluation</i>	Project (Number/Name) Project 6 / <i>Enterprise Data Services</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
<ul style="list-style-type: none"> • Implement Network (EoSL) Lifecycle Modernization • Modernize the VTC/AV Upgrades for DoDC (Seaside) and Mark Center (EoSL) Lifecycle Modernization • Server End of Service Life (EoSL) Lifecycle Modernization • Wireless Local Area Network (WLAN) (EoSL) Lifecycle Modernization • Destruction Of Mainframe Tapes • Implementation of Audit Log Management • Continued development and implementation of the Intrusion Detection System / Intrusion Prevention System (IDS/IPS) • Continued installation of required Port Aggregators • Implement Rogue System Detection (RSD) • Implement Dynamic Code Scanning Solution (NTO Spider) • Implement Static Code Scanning Solution (Fortify) 			
Accomplishments/Planned Programs Subtotals		-	4.037
C. Other Program Funding Summary (\$ in Millions)			
N/A			
Remarks			
D. Acquisition Strategy			
N/A			
E. Performance Metrics			
N/A			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 DoD Human Resources Activity										Date: May 2017		
Appropriation/Budget Activity 0400 / 6					R-1 Program Element (Number/Name) PE 0605803SE / R&D in Support of DOD Enlistment, Testing and Evaluation				Project (Number/Name) Project 7 / DSAID			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Project 7: DSAID	0.000	0.000	3.590	4.916	-	4.916	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification
 The Defense Sexual Assault Incidents Database (DSAID) is the integrated DoD SAPR Data Collection and Reporting System that accommodates a variety of uses, including the tracking of sexual assault victim support services, support SAPR program administration, program reporting requirements, and data analysis.

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2016	FY 2017	FY 2018
Title: Defense Sexual Assault Incidenets Database (DSAID) FY 2017 Plans: <ul style="list-style-type: none"> • Develop Secure File Locker Mechanism • Migrate from Oracle 11g to SQL Server 2012 or government approved database server & converts DSAID to Government off the Shelf (GOTS) • Incorporate DSAID Control Board (CCB) approved and pending Change Requests (CRs) • Add functionality to the Enhanced Reporting Capability FY 2018 Plans: <ul style="list-style-type: none"> • Develop Secure File Locker Mechanism • Incorporate DSAID Control Board (CCB) approved and pending Change Requests (CRs) • Add functionality to the Enhanced Reporting Capability • Implement or update interfaces with Service Legal Agency Systems, personnel systems, and external databases (DMDC/ DEERS) 	-	3.590	4.916
Accomplishments/Planned Programs Subtotals	-	3.590	4.916

C. Other Program Funding Summary (\$ in Millions)
 N/A

Remarks

D. Acquisition Strategy
 N/A

E. Performance Metrics
 N/A

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Exhibit R-2A, RDT&E Project Justification: FY 2018 DoD Human Resources Activity										Date: May 2017		
Appropriation/Budget Activity 0400 / 6					R-1 Program Element (Number/Name) PE 0605803SE / R&D in Support of DOD Enlistment, Testing and Evaluation				Project (Number/Name) Project 8 / CAP			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Project 8: CAP	0.000	0.000	0.000	1.780	-	1.780	1.303	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Computer/Electronic Accommodations Program (CAP) Portal has been certified as a Defense Business System (DBS). This project will help CAP obtain and maintain an optimized and certified DBS that executes data collection, records management, and reporting accountability for all stakeholders. In order to enhance areas of program data-tracking capabilities and stabilize the environment for future operations, CAP requires modernization of CAP Portal. The CAP Portal has pages/controls that have accumulated up to 7,000 lines of code, making it difficult to ensure the reliability of any updates made to the system which has undergone over 500 change requests since its launch.

There are components and functionality that are no longer being utilized and others needed, but it is risky to remove or disable due to the interconnected nature of the codebase. The current codebase utilizes an outdated framework that is difficult to maintain. The CAP Modernization Project will implement a .NET Model View Controller (MVC) framework to separate the business, display and input layers of the code. As CAP's operating procedures evolve, CAP Portal's current structure will not match the changing business needs of its users. Towards that end, the issue of restructuring CAP Portal is necessary to ensure flexibility and reliability moving forward. As a result of an outdated framework, the current CAP Portal is becoming increasingly challenging to maintain and less reliable when making updates. The CAP Modernization Project will provide a restructured database for CAP Portal with an updated codebase to provide a solid foundation that supports CAP's current structure and business processes while also increasing flexibility for future enhancements and efficiencies. All aspects of CAP Portal will be enhanced by this project, which will provide a streamlined foundation on which to incorporate new internal processing workflow entitled ONE CAP. It will provide the ability to implement new processes that reflect the current organization, roles, responsibilities, tasks and specific workflow and assignments. The modernization of technology will ensure full integration of the new internal operating model.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018
Title: The Computer/Electronic Accommodations Program (CAP)	0.000	-	1.780
FY 2016 Accomplishments: N/A			
FY 2018 Plans: Enhancements in FY18 will include development efforts along several lines. One such effort will be increasing the ability for CAP Staff to update content on the CAP website, CAP Mobile App, and communications template to reduce dependence on external resources to make these changes. Also included are development efforts aimed at enhancing the ability of CAP Staff to document process actions within the system in support of procurement and acquisition records keeping requirements as well as to facilitate effective relationship management between CAP, the DoD, Federal partner agencies, and other stakeholders. Another major			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 DoD Human Resources Activity		Date: May 2017	
Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0605803SE / <i>R&D in Support of DOD Enlistment, Testing and Evaluation</i>	Project (Number/Name) Project 8 / <i>CAP</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
effort will be increasing the self-service accessibility of information to CAP customers to reduce the level of effort required to pass on information regarding their requests for reasonable accommodation.			
Accomplishments/Planned Programs Subtotals		0.000	-
C. Other Program Funding Summary (\$ in Millions) N/A			
Remarks			
D. Acquisition Strategy N/A			
E. Performance Metrics N/A			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 DoD Human Resources Activity										Date: May 2017		
Appropriation/Budget Activity 0400 / 6					R-1 Program Element (Number/Name) PE 0605803SE / R&D in Support of DOD Enlistment, Testing and Evaluation				Project (Number/Name) Project 9 / Surveys, Testing, Research and Assessment (STAR)			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Project 9: Surveys, Testing, Research and Assessment (STAR)	0.000	0.000	3.680	3.640	-	3.640	4.061	4.161	4.161	4.244	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
A. Mission Description and Budget Item Justification The primary mission of STAR is to test and implement more accurate methods of assessing aptitudes required for military enlistment, success in training, and performance on the job. Also, it includes implementing methods that are useful in the identification of persons with the high aptitudes required by today's smaller and technically more demanding military.												
B. Accomplishments/Planned Programs (\$ in Millions)										FY 2016	FY 2017	FY 2018
Title: Surveys, Testing, Research and Assessment (STAR)										-	3.680	3.640
FY 2017 Plans: • Develop automated item generation of General Science and Arithmetic Reasoning items • Research efforts on new measures/new content that could potentially be added to the ASVAB												
FY 2018 Plans: • Continue to develop automated item generation of General Science and Arithmetic Reasoning items • Continue research efforts on new measures/new content that could potentially be added to the ASVAB												
Accomplishments/Planned Programs Subtotals										-	3.680	3.640
C. Other Program Funding Summary (\$ in Millions) N/A												
Remarks 												
D. Acquisition Strategy N/A												
E. Performance Metrics N/A												

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Exhibit R-2A, RDT&E Project Justification: FY 2018 DoD Human Resources Activity										Date: May 2017		
Appropriation/Budget Activity 0400 / 6					R-1 Program Element (Number/Name) PE 0605803SE / R&D in Support of DOD Enlistment, Testing and Evaluation				Project (Number/Name) Project 10 / Enterprise Human Resource Infor System(EHRIS)			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Project 10: Enterprise Human Resource Infor System(EHRIS)	0.000	0.000	4.585	8.093	-	8.093	4.320	4.419	4.422	4.511	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
A. Mission Description and Budget Item Justification												
Civilian HR automation enhancements planned for are focused on software development to support the Department’s civilian workforce, including a DoD-Wide performance management system; enhancement of employee competency assessment capability; modernization of injury and unemployment compensation case management; and EEO investigations case management. In addition, changes to DCPDS are required for mandates for the Office of Personnel Management (OPM), HR Line of Business (LoB), electronic Official Personnel Folder, and Retirement Systems Modernization implementation. DoD is one of five designated Shared Service Centers in the federal government focused on providing standard services across agency lines, gaining potential significant business and cost-saving benefits. DoD is considered a leader in this initiative.												
EHRIS is the Department’s enterprise civilian HR system that has provided the savings originally projected in the achievement of full operational capability in 2002 and which has continued to operate as the DoD system serving over 800,000 employee records. Additional initiatives to sustain the Department’s lead in automated systems include expansion of employee self service functionality, and support for data warehouse improvements, engineering plans for consolidation and migration to a federal data center, an employee-manager portal, and information assurance initiatives to comply with DoD-mandated DMZ requirements. DCPDS enhancements will support the Department’s focus on the further consolidation of civilian HR operations to a single operational site, with linkage to Component operations worldwide.												
B. Accomplishments/Planned Programs (\$ in Millions)									FY 2016	FY 2017	FY 2018	
Title: Enterprise Human Resource Infor System (EHRIS)									-	4.585	8.093	
FY 2017 Plans:												
• Deliver improved Benefits processing and employee self service capabilities												
• Complete consolidation to single database												
• Explore integration of time and attendance and payroll processing												
FY 2018 Plans:												
• Continue to deliver improved Benefits processing and employee self service capabilities												
• Continue completion efforts on consolidation to single database												
• Continue work on integration of time and attendance and payroll processing												
Accomplishments/Planned Programs Subtotals									-	4.585	8.093	
C. Other Program Funding Summary (\$ in Millions)												
N/A												

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Exhibit R-2A, RDT&E Project Justification: FY 2018 DoD Human Resources Activity		Date: May 2017
Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0605803SE / <i>R&D in Support of DOD Enlistment, Testing and Evaluation</i>	Project (Number/Name) Project 10 / <i>Enterprise Human Resource Infor System(EHRIS)</i>
C. Other Program Funding Summary (\$ in Millions)		
Remarks		
D. Acquisition Strategy N/A		
E. Performance Metrics N/A		

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Exhibit R-2A, RDT&E Project Justification: FY 2018 DoD Human Resources Activity										Date: May 2017		
Appropriation/Budget Activity 0400 / 6					R-1 Program Element (Number/Name) PE 0605803SE / R&D in Support of DOD Enlistment, Testing and Evaluation				Project (Number/Name) Project 11 / Personnel Accountability (PA)			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Project 11: <i>Personnel Accountability (PA)</i>	0.000	0.000	2.091	5.742	-	5.742	6.188	2.193	2.193	2.237	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The PA program is comprised of four sub-programs: Synchronized Pre-deployment and Operational Tracker (SPOT), Joint Personnel Accountability Reconciliation and Reporting (JPARR), Noncombatant Evacuation Operations (NEO) Tracking System (NTS), and the program management of the Defense Travel System (DTS). In addition to these sub-programs, at the request of Acting Secretary of Defense, PA is conducting a DoD Travel System Pilot Program (DTSP), as part of the DTS-M effort, to determine the viability of using commercial-off-the-shelf software as a service (CSaaS) to conduct DoD travel. This family of systems represents end-to-end tracking, reconciliation and reporting of DoD personnel location and movements, to include military, DoD affiliated civilians, contractors, and U.S. citizens. This includes DoD travel, contracts, and contractor personnel tracking in support of contingencies, military readiness, reporting of locations at the unit and person level, accountability of DoD personnel during (and after) natural or man-made disasters, and accountability and visibility of noncombatant evacuees. SPOT is the DoD system of record for accountability and visibility of contracts and contractor personnel authorized to operate in a contingency operation. JPARR is a "public" SIPR only application that provides daily person- level location reporting. JPARR receives feeds for Service and Agency deployment systems, reconciles the data, and provides various reports at unit level detail. NTS is a certified and accredited DoD automated system that accounts for, and sustains visibility of noncombatant evacuees during a NEO. DTS supports \$3.0 Billion in annual travel across the DoD. DTSP will investigate the use of CSaaS to conduct DoD Travel under the Federal and Joint Travel Regulations.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018
Title: Personnel Accountability (PA)	-	2.091	5.742
FY 2017 Plans: <ul style="list-style-type: none"> • Continue to be the system of record for accountability and visibility of contracts and contractor personnel in support of the CENTCOM Area of Responsibility and other contingencies, humanitarian assistance, peacekeeping operations, and other missions and exercises as designated by the Combatant Commanders around the world. • Continue to provide the only DoS, DoD, and USAID sanctioned Letter of Authorization (LOA) which provides the Authorized Government Services to contractor personnel. • Provide the information on contractor personnel supporting Iraq and Afghanistan to the Office of the Secretary of Defense for reports to Congress. • Provide the number of contractor personnel and contract capability to Combatant Commands for operational planning purposes and to aid in their decision making processes. • Field JAMMS NG to all locations currently serviced by JAMMS. • Allow for two different JAMMS credentials - paper LOA and plastic credential. 			
FY 2018 Plans:			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 DoD Human Resources Activity		Date: May 2017	
Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0605803SE / R&D in Support of DOD Enlistment, Testing and Evaluation	Project (Number/Name) Project 11 / Personnel Accountability (PA)	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
<ul style="list-style-type: none"> • Modernize hardware and peripheral footprint • Automate and reduce maintenance requirements for fielded systems • Modernize data management and data processing • Modernize application technologies and processes • Develop application programming interfaces (API) and micro services • Research and develop mobile technologies • Identify, reduce and consolidate fragmented/duplicated personnel accountability systems 			
Accomplishments/Planned Programs Subtotals		-	2.091
C. Other Program Funding Summary (\$ in Millions)			
N/A			
Remarks			
D. Acquisition Strategy			
N/A			
E. Performance Metrics			
N/A			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 DoD Human Resources Activity										Date: May 2017		
Appropriation/Budget Activity 0400 / 6					R-1 Program Element (Number/Name) PE 0605803SE / R&D in Support of DOD Enlistment, Testing and Evaluation				Project (Number/Name) Project 12 / Personnel Security Assurance (PSA)			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Project 12: <i>Personnel Security Assurance (PSA)</i>	0.000	0.000	4.257	4.351	-	4.351	4.540	4.635	4.635	4.728	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
A. Mission Description and Budget Item Justification Personnel Security Assurance (PSA) provides comprehensive capabilities to perform processing and verification of security clearances for all DoD military personnel, civilians and contractors including the technology and processes that need to be addressed in order to implement Continuous Evaluation. Funds within this program will support the Defense Information System for Security (DISS). The DISS mission is to consolidate the DoD personnel security mission into an enterprise adjudicative case management system that will automate the implementation of improved national investigative and adjudicative standards to eliminate costly and inefficient work processes and increase information collaboration across the community.												
B. Accomplishments/Planned Programs (\$ in Millions)									FY 2016	FY 2017	FY 2018	
Title: Personnel Security Assurance FY 2017 Plans: <ul style="list-style-type: none"> • Completion of the Case Adjudication Tracking System (CATS) Service Desk application development. • Completion of the Enterprise Service Bus (ESB) development. • Completion of activities related to the development and testing of the Joint Verification System (DISS 2.0). • Develop system capabilities for emerging Office of the Under Secretary of Defense, Intelligence requirements. • Support extension of DISS Operations and Sustainment activities to Executive Branch personnel security adjudication. FY 2018 Plans: <ul style="list-style-type: none"> • FY2018 RDT&E will be used for DISS development to meet emerging interface or architecture requirements as well as data quality initiatives. 									-	4.257	4.351	
Accomplishments/Planned Programs Subtotals									-	4.257	4.351	
C. Other Program Funding Summary (\$ in Millions) N/A Remarks D. Acquisition Strategy N/A												

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Exhibit R-2A, RDT&E Project Justification: FY 2018 DoD Human Resources Activity		Date: May 2017
Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0605803SE / <i>R&D in Support of DOD Enlistment, Testing and Evaluation</i>	Project (Number/Name) Project 12 / <i>Personnel Security Assurance (PSA)</i>
E. Performance Metrics N/A		

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Exhibit R-2A, RDT&E Project Justification: FY 2018 DoD Human Resources Activity										Date: May 2017		
Appropriation/Budget Activity 0400 / 6					R-1 Program Element (Number/Name) PE 0605803SE / R&D in Support of DOD Enlistment, Testing and Evaluation				Project (Number/Name) Project 13 / Federal Voting Assistance Program			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Project 13: Federal Voting Assistance Program	7.487	0.000	0.000	0.800	-	0.800	0.800	0.800	0.800	0.800	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
A. Mission Description and Budget Item Justification												
FVAP administers many of the federal responsibilities of the Uniformed and Overseas Citizens Absentee Voting Act (UOCAVA) of 1986 and other federal military voter registration and assistance laws. FVAP works to ensure Service members, their eligible family members and overseas citizens are aware of their right to vote and have the tools and resources to successfully do so – from anywhere in the world. FVAP works to Increase the likelihood of interested Active Duty Members to use available FVAP resources to increase their level of awareness of available DoD voting assistance resources, which will increase the likelihood of returning their absentee ballot. FVAP conducts voting research projects with States, local election jurisdictions and private entities to assist UOCAVA voters to register to vote and submit their absentee ballot and improve federal, State and local election processes and procedures.												
B. Accomplishments/Planned Programs (\$ in Millions)									FY 2016	FY 2017	FY 2018	
Title: Federal Voting Assistance Program									-	-	0.800	
Description: The Federal Voting Assistance Program (FVAP) requires a research and analysis policy clearinghouse program that continues to research and present the value of key policy and technology topics that connects to the successful return of absentee balloting materials from military and overseas citizen voters pursuant to the Uniformed and Overseas Citizens Absentee Voting Act (UOCAVA).												
FY 2018 Plans: FVAP requires a clearinghouse through a cooperative agreement with a nonprofit organization to work with FVAP to develop innovative programs to support uniformed overseas and civilian overseas voters. <ul style="list-style-type: none">• Assess the impact of previous efforts to enact structured data feeds from the States and localities with the most populous number of military and overseas voters.• Identify and assess the process to assess voter residency and how it impacts overseas citizen voters attempting to vote in federal elections.• Study the extent to which States enact authorizations for the use and acceptance of electronic signatures derived from the Department of Defense Common Access Card (CAC), or its successor.• Identify the feasibility and risks associated with a comprehensive approach for States to establish a single statewide office with the technology and software to process UOCAVA absentee balloting materials.• Monitor the implementation, adoption and impact of clearinghouse recommendations and voting technology practices.												
Accomplishments/Planned Programs Subtotals									-	-	0.800	

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Exhibit R-2A, RDT&E Project Justification: FY 2018 DoD Human Resources Activity		Date: May 2017
Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0605803SE / <i>R&D in Support of DOD Enlistment, Testing and Evaluation</i>	Project (Number/Name) Project 13 / <i>Federal Voting Assistance Program</i>
<u>C. Other Program Funding Summary (\$ in Millions)</u> N/A		
<u>Remarks</u>		
<u>D. Acquisition Strategy</u> N/A		
<u>E. Performance Metrics</u> Each project contained within this program contains specific metrics to determine progress towards completion. Metrics for all include completed and documented analysis provided by the performer. The completion date for that analysis varies with each project. In addition, to that analysis, each effort contains a roadmap addressing the best use of the findings throughout the department. If the results of the analysis show benefit to the Department, those findings are included in policy, doctrine, tactics and procedures. The project will yield actionable findings on how to best assist UOCAVA voters while reducing the overall reporting burden for these States to provide data on the number of absentee ballots transmitted to and received from military and overseas citizens after each federal election. Process mappings about how the Federal Post Card Application and the Federal Write-in Absentee Ballot, are treated by States for uniformed overseas and civilian overseas citizens and the impact of their residency classifications will identify the extent of uniformed and civilian overseas citizens who vote. The acceptance of electronic signatures derived from the Common Access Card within the Department provides significant potential for ensuring the absentee balloting process is seamless for active duty military members by permitting the use of an electronic signing and submission of an absentee ballot application in those States that permit an electronic submission. This will measure the extent to which States have proceeded with the consideration and adoption of authorizing statutes or administrative rules to permit the use of electronic signatures in a limited fashion and for a limited population of uniformed overseas voters.		

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**Department of Defense
Fiscal Year (FY) 2018 Budget Estimates**

May 2017



Defense Information Systems Agency

Defense-Wide Justification Book Volume 5 of 5

Research, Development, Test & Evaluation, Defense-Wide

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Defense Information Systems Agency • Budget Estimates FY 2018 • RDT&E Program

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Department of Defense
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

25 Apr 2017

Appropriation	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO
Research, Development, Test & Eval, DW	252,313	251,852	248,716				
Total Research, Development, Test & Evaluation	252,313	251,852	248,716				

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Department of Defense
 FY 2018 President's Budget Request
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 (Dollars in Thousands)

25 Apr 2017

Appropriation -----	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total
-----	-----	-----	-----	-----	-----	-----	-----
Research, Development, Test & Eval, DW	251,852	248,716		248,716	256,494		256,494
Total Research, Development, Test & Evaluation	251,852	248,716		248,716	256,494		256,494

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Department of Defense
FY 2018 President's Budget Request
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Total Obligational Authority
(Dollars in Thousands)

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	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO
Summary Recap of Budget Activities -----							
System Development And Demonstration	32,424	7,600	7,600				
Management Support	8,728	15,336	12,200				
Operational System Development	211,161	228,916	228,916				
Total Research, Development, Test & Evaluation	252,313	251,852	248,716				
Summary Recap of FYDP Programs -----							
General Purpose Forces	63,341	57,501	57,501				
Intelligence and Communications	165,858	194,351	191,215				
Research and Development	23,114						
Administration and Associated Activities							
Space							
Total Research, Development, Test & Evaluation	252,313	251,852	248,716				

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Department of Defense
 FY 2018 President's Budget Request
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 (Dollars in Thousands)

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Summary Recap of Budget Activities -----							
System Development And Demonstration	7,600	7,600		7,600	2,576		2,576
Management Support	15,336	12,200		12,200	22,111		22,111
Operational System Development	228,916	228,916		228,916	231,807		231,807
Total Research, Development, Test & Evaluation	251,852	248,716		248,716	256,494		256,494
Summary Recap of FYDP Programs -----							
General Purpose Forces	57,501	57,501		57,501	59,490		59,490
Intelligence and Communications	194,351	191,215		191,215	191,249		191,249
Research and Development							
Administration and Associated Activities					5,113		5,113
Space					642		642
Total Research, Development, Test & Evaluation	251,852	248,716		248,716	256,494		256,494

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System Development And Demonstration	32,424	7,600	7,600				
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Administration and Associated Activities							
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 (Dollars in Thousands)

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Intelligence and Communications	194,351	191,215		191,215	191,249		191,249
Research and Development							
Administration and Associated Activities					5,113		5,113
Space					642		642
Total Research, Development, Test & Evaluation	251,852	248,716		248,716	256,494		256,494

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 (Dollars in Thousands)

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Defense Information Systems Agency	252,313	251,852	248,716				
Total Research, Development, Test & Evaluation	252,313	251,852	248,716				

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-----	-----	-----	-----	-----	-----	-----	-----
Defense Information Systems Agency	251,852	248,716		248,716	256,494		256,494
Total Research, Development, Test & Evaluation	251,852	248,716		248,716	256,494		256,494

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 (Dollars in Thousands)

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Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO	S e c
121	0604764K	Advanced IT Services Joint Program Office (AITS-JPO)	05	18,750							U
135	0303141K	Global Combat Support System	05	13,674	7,600	7,600					U
		System Development And Demonstration		32,424	7,600	7,600					
158	0605502K	Small Business Innovative Research	06	4,364							U
176	0303267K	Auctioned Spectrum Relocation Fund	06	4,364							U
177	0305172K	Combined Advanced Applications	06		15,336	12,200					U
187	0903235K	Joint Service Provider (JSP)	06								U
		Management Support		8,728	15,336	12,200					
196	0208045K	C4I Interoperability	07	63,341	57,501	57,501					U
198	0301144K	Joint/Allied Coalition Information Sharing	07	1,735	5,935	5,935					U
202	0302016K	National Military Command System-Wide Support	07	938	575	575					U
203	0302019K	Defense Info Infrastructure Engineering and Integration	07	9,729	18,041	18,041					U
204	0303126K	Long-Haul Communications - DCS	07	36,884	13,994	13,994					U
205	0303131K	Minimum Essential Emergency Communications Network (MEECN)	07	13,384	12,206	12,206					U
210	0303150K	Global Command and Control System	07	19,395	24,438	24,438					U
211	0303153K	Defense Spectrum Organization	07	19,307	13,197	13,197					U
212	0303167K	Pre-Auction Spectrum Relocation Fund	07	100							U

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 (Dollars in Thousands)

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Appropriation: 0400D Research, Development, Test & Eval, DW

Program Line Element No Number	Item	Act	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total	S e c
121 0604764K	Advanced IT Services Joint Program Office (AITS-JPO)	05								U
135 0303141K	Global Combat Support System	05	7,600	7,600		7,600	2,576		2,576	U
	System Development And Demonstration		7,600	7,600		7,600	2,576		2,576	
158 0605502K	Small Business Innovative Research	06								U
176 0303267K	Auctioned Spectrum Relocation Fund	06								U
177 0305172K	Combined Advanced Applications	06	15,336	12,200		12,200	16,998		16,998	U
187 0903235K	Joint Service Provider (JSP)	06					5,113		5,113	U
	Management Support		15,336	12,200		12,200	22,111		22,111	
196 0208045K	C4I Interoperability	07	57,501	57,501		57,501	59,490		59,490	U
198 0301144K	Joint/Allied Coalition Information Sharing	07	5,935	5,935		5,935	6,104		6,104	U
202 0302016K	National Military Command System-Wide Support	07	575	575		575	1,863		1,863	U
203 0302019K	Defense Info Infrastructure Engineering and Integration	07	18,041	18,041		18,041	21,564		21,564	U
204 0303126K	Long-Haul Communications - DCS	07	13,994	13,994		13,994	15,428		15,428	U
205 0303131K	Minimum Essential Emergency Communications Network (MEECN)	07	12,206	12,206		12,206	15,855		15,855	U
210 0303150K	Global Command and Control System	07	24,438	24,438		24,438	42,687		42,687	U
211 0303153K	Defense Spectrum Organization	07	13,197	13,197		13,197	8,750		8,750	U
212 0303167K	Pre-Auction Spectrum Relocation Fund	07								U

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(Dollars in Thousands)

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213	0303170K	Net-Centric Enterprise Services (NCES)	07	426							U
214	0303228K	Joint Information Environment (JIE)	07		2,789	2,789					U
215	0303267K	Auctioned Spectrum Relocation Fund	07	38,137							U
216	0303430K	Federal Investigative Services Information Technology	07		75,000	75,000					U
217	0303610K	Teleport Program	07	1,665	657	657					U
222	0305103K	Cyber Security Initiative	07	2,881	1,553	1,553					U
233	0305208K	Distributed Common Ground/Surface Systems	07	3,239	3,030	3,030					U
261	1203610K	Teleport Program	07								U
		Operational System Development		211,161	228,916	228,916					
		Total Research, Development, Test & Eval, DW		252,313	251,852	248,716					

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(Dollars in Thousands)

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213	0303170K	Net-Centric Enterprise Services (NCES)	07								U
214	0303228K	Joint Information Environment (JIE)	07	2,789	2,789		2,789	4,689		4,689	U
215	0303267K	Auctioned Spectrum Relocation Fund	07								U
216	0303430K	Federal Investigative Services Information Technology	07	75,000	75,000		75,000	50,000		50,000	U
217	0303610K	Teleport Program	07	657	657		657				U
222	0305103K	Cyber Security Initiative	07	1,553	1,553		1,553	1,686		1,686	U
233	0305208K	Distributed Common Ground/Surface Systems	07	3,030	3,030		3,030	3,049		3,049	U
261	1203610K	Teleport Program	07					642		642	U
		Operational System Development		228,916	228,916		228,916	231,807		231,807	
		Total Research, Development, Test & Eval, DW		251,852	248,716		248,716	256,494		256,494	

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Defense Information Systems Agency
FY 2018 President's Budget Request
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(Dollars in Thousands)

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121 0604764K	Advanced IT Services Joint Program Office (AITS-JPO)	05	18,750							U
135 0303141K	Global Combat Support System	05	13,674	7,600	7,600					U
	System Development And Demonstration		32,424	7,600	7,600					
158 0605502K	Small Business Innovative Research	06	4,364							U
176 0303267K	Auctioned Spectrum Relocation Fund	06	4,364							U
177 0305172K	Combined Advanced Applications	06		15,336	12,200					U
187 0903235K	Joint Service Provider (JSP)	06								U
	Management Support		8,728	15,336	12,200					
196 0208045K	C4I Interoperability	07	63,341	57,501	57,501					U
198 0301144K	Joint/Allied Coalition Information Sharing	07	1,735	5,935	5,935					U
202 0302016K	National Military Command System-Wide Support	07	938	575	575					U
203 0302019K	Defense Info Infrastructure Engineering and Integration	07	9,729	18,041	18,041					U
204 0303126K	Long-Haul Communications - DCS	07	36,884	13,994	13,994					U
205 0303131K	Minimum Essential Emergency Communications Network (MEECN)	07	13,384	12,206	12,206					U
210 0303150K	Global Command and Control System	07	19,395	24,438	24,438					U
211 0303153K	Defense Spectrum Organization	07	19,307	13,197	13,197					U
212 0303167K	Pre-Auction Spectrum Relocation Fund	07	100							U

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135	0303141K	Global Combat Support System	05	7,600	7,600		7,600	2,576		2,576	U
		System Development And Demonstration		7,600	7,600		7,600	2,576		2,576	
158	0605502K	Small Business Innovative Research	06								U
176	0303267K	Auctioned Spectrum Relocation Fund	06								U
177	0305172K	Combined Advanced Applications	06	15,336	12,200		12,200	16,998		16,998	U
187	0903235K	Joint Service Provider (JSP)	06					5,113		5,113	U
		Management Support		15,336	12,200		12,200	22,111		22,111	
196	0208045K	C4I Interoperability	07	57,501	57,501		57,501	59,490		59,490	U
198	0301144K	Joint/Allied Coalition Information Sharing	07	5,935	5,935		5,935	6,104		6,104	U
202	0302016K	National Military Command System-Wide Support	07	575	575		575	1,863		1,863	U
203	0302019K	Defense Info Infrastructure Engineering and Integration	07	18,041	18,041		18,041	21,564		21,564	U
204	0303126K	Long-Haul Communications - DCS	07	13,994	13,994		13,994	15,428		15,428	U
205	0303131K	Minimum Essential Emergency Communications Network (MEECN)	07	12,206	12,206		12,206	15,855		15,855	U
210	0303150K	Global Command and Control System	07	24,438	24,438		24,438	42,687		42,687	U
211	0303153K	Defense Spectrum Organization	07	13,197	13,197		13,197	8,750		8,750	U
212	0303167K	Pre-Auction Spectrum Relocation Fund	07								U

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213	0303170K	Net-Centric Enterprise Services (NCES)	07	426							U
214	0303228K	Joint Information Environment (JIE)	07		2,789	2,789					U
215	0303267K	Auctioned Spectrum Relocation Fund	07	38,137							U
216	0303430K	Federal Investigative Services Information Technology	07		75,000	75,000					U
217	0303610K	Teleport Program	07	1,665	657	657					U
222	0305103K	Cyber Security Initiative	07	2,881	1,553	1,553					U
233	0305208K	Distributed Common Ground/Surface Systems	07	3,239	3,030	3,030					U
261	1203610K	Teleport Program	07								U
		Operational System Development		211,161	228,916	228,916					
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214	0303228K	Joint Information Environment (JIE)	07	2,789	2,789		2,789	4,689		4,689	U
215	0303267K	Auctioned Spectrum Relocation Fund	07								U
216	0303430K	Federal Investigative Services Information Technology	07	75,000	75,000		75,000	50,000		50,000	U
217	0303610K	Teleport Program	07	657	657		657				U
222	0305103K	Cyber Security Initiative	07	1,553	1,553		1,553	1,686		1,686	U
233	0305208K	Distributed Common Ground/Surface Systems	07	3,030	3,030		3,030	3,049		3,049	U
261	1203610K	Teleport Program	07					642		642	U
		Operational System Development		228,916	228,916		228,916	231,807		231,807	
		Total Defense Information Systems Agency		251,852	248,716		248,716	256,494		256,494	

R-1C1F: FY 2018 President's Budget Request (Published Version), as of April 25, 2017 at 13:51:11

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Defense Information Systems Agency • Budget Estimates FY 2018 • RDT&E Program

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Appropriation 0400: Research, Development, Test & Evaluation, Defense-Wide

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Joint Information Environment	0303228K	214	07.....	Volume 5 - 237
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Joint/Allied Coalition Information Sharing	0301144K	198	07.....	Volume 5 - 153
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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Defense Information Systems Agency **Date:** May 2017

Appropriation/Budget Activity					R-1 Program Element (Number/Name)							
0400: Research, Development, Test & Evaluation, Defense-Wide / BA 5: System Development & Demonstration (SDD)					PE 0604764K / Advanced IT Services Joint Program Office (AITS-JPO)							
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	180.919	18.750	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0	199.669
T26: Leading Edge Pilot Information Technology	180.919	18.750	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	199.669

A. Mission Description and Budget Item Justification

Advanced IT Services Joint Program Office (AITS-JPO) identifies and integrates new and mature commercial information technology (IT) and advanced operational concepts into net-centric battlespace capabilities to access and exchange critical information; exploit opportunities to enhance current force capabilities; and project future force IT requirements. AITS-JPO supports preparing for future joint force and coalition initiatives through developing and integrating a full range of data services and advanced IT applications to support cooperative activities between the US and its coalition partners. These emergent capabilities are technologies that can be rapidly infused into existing tools.

The program uses three key mechanisms to streamline the process of fielding emergent requirements: (1) Joint Capability Technology Demonstrations (JCTDs) with the Office of the Secretary of Defense (OSD)/Combatant Commands (COCOMs)/Services/Agency; (2) Joint Ventures with COCOMs/Program of Record (POR); and (3) Risk Mitigation Pilots with POR/Community of Interest. The JCTD process aligns with the revised Joint Capability Integration and Development System process, developed by the Joint Chiefs of Staff, by adapting technology and concept solutions to meet pressing warfighter needs. OSD approves new JCTDs annually and on a rolling start basis. Defense Information Systems Agency participates in both a technical and transition manager role. The JCTDs and the Joint Ventures and risk mitigation pilots use a teaming approach thereby sharing costs and reducing the risk to individual organizations.

B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	18.388	0.000	0.000	-	0.000
Current President's Budget	18.750	0.000	0.000	-	0.000
Total Adjustments	0.362	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	0.362	-			

Change Summary Explanation

No change explanation needed.

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 5					R-1 Program Element (Number/Name) PE 0604764K / Advanced IT Services Joint Program Office (AITS-JPO)				Project (Number/Name) T26 / Leading Edge Pilot Information Technology			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
T26: Leading Edge Pilot Information Technology	180.919	18.750	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	199.669
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Advanced IT Services Joint Program Office (AITS-JPO) identifies and integrates Leading Edge commercial information technology (IT) and advanced operational concepts into net-centric battlespace capabilities to access and exchange critical information; exploit opportunities to enhance current force capabilities; and project future force IT requirements. These Leading Edge products provide the Department of Defense (DoD) and National Senior Leaders, (e.g., the President of the United States, Secretary of Defense, Chairman of the Joint Chiefs of Staff, Combatant Commanders, as well as inter-agency participants) with critical focus on long-term collaboration, planning and information sharing. The Leading Edge technology pilots support future joint and coalition initiatives by developing and integrating a range of data services and advanced IT applications. These emergent capabilities are technologies that can be rapidly infused into existing tools for use by the US and coalition partners.

Program investments in advanced technology benefit strategic and tactical users in the intelligence, warfighting and business domains by providing them with reliable, persistent collaboration, and networking technologies including computing-on-demand to reduce the need to replicate data or services at the point of consumption. Investments also provide support for virtual end-user environments and semantic search capabilities which enhance the decision-making process. These capabilities provide the warfighter with technical superiority and to achieve interoperability and integration, while working in concert with joint, allied and coalition forces to effectively counter terrorism and enhance homeland security defense.

The program is further divided into major subprogram areas: Command and Control (C2) and Combat Support (CS), Information Sharing (IS), Network Infrastructure (NI), Network Operations (NetOps), Cyber Threat Discovery and Program Management Support.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018
Title: Command and Control (C2) and Combat Support (CS)	2.524	0.000	-
Description: Command and Control (C2) and Combat Support (CS)			
FY 2016 Accomplishments: CTO will continue to provide engineering, assessment and technical support to COCOMs, Services and DISA by critically analyzing C2 requirements; conducting technology and operational assessments; applying engineering best practices to expedite delivery of capabilities; and leveraging and integrating existing DISA and DoD C2 capabilities. Will participate in the Deputy Under Secretary of Defense's Rapid Fielding Directorate to provide engineering support in the development, implementation,			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency		Date: May 2017	
Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0604764K / <i>Advanced IT Services Joint Program Office (AITS-JPO)</i>	Project (Number/Name) T26 / <i>Leading Edge Pilot Information Technology</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
and transition of emerging technologies and Emergent Capability Technology Demonstrations (ECTDs) that align with COCOM requirements and DISA's Strategic Planning Guidance.			
<p>The decrease of -\$0.791 from FY 2015 to FY 2016 is due to the change in DoD policy where the JCTD process will be used to satisfy seven OSD identified technology problem areas. Because of this shift, there is a reduction in the number of longer-term JCTDs (18-48 months) with the program moving towards rapid delivery of technical capabilities with Emerging Capability Technology Demonstrations (ECTDs). ECTDs are shorter in duration (12-36 months) and provide faster delivery of capability to mission partners.</p> <p>FY 2017 Plans: The JCTD program at DISA has been disestablished as a result of Agency efficiencies.</p> <p>The decrease of -\$2.524 from FY 2016 to FY 2017 is an Agency efficiency and results in the disestablishment of the JCTD program. As a result, civilian pay and FTEs were realigned to RDT&E PE 0302019K (62 FTES), and O&M (31 FTES). In addition, non-pay funding was realigned to RDT&E PE 0302019K.</p>			
<p>Title: Information Sharing (IS)</p> <p>FY 2016 Accomplishments: CTO will continue to provide engineering support and assured and ready access to information from multiple devices under diverse conditions to the COCOMs, Services and Agencies through JIE participation and analyzing DoD information requirements. Continue providing engineering and Information Assurance capabilities to DISA on Cloud Broker, Mil Cloud and DISA's computing service offerings. Will provide engineering investigation and support for desktop virtualization, thin client environments, mobility service and enterprise service.</p> <p>The decrease of -\$0.876 from FY 2015 to FY 2016 is due to the change in DoD policy where the JCTD process will now be used to satisfy seven OSD identified technology problem areas. Because of this shift, there is a reduction in the number of longer-term JCTDs (18-48 months) with the program moving towards rapid delivery of technical capabilities with Emerging Capability Technology Demonstrations (ECTDs). ECTDs are shorter in duration (12-36 months) and provide faster delivery of capability to mission partners.</p> <p>FY 2017 Plans: The JCTD program at DISA has been disestablished as a result of Agency efficiencies.</p>		3.177	0.000
			-

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency			Date: May 2017		
Appropriation/Budget Activity 0400 / 5		R-1 Program Element (Number/Name) PE 0604764K / <i>Advanced IT Services Joint Program Office (AITS-JPO)</i>		Project (Number/Name) T26 / <i>Leading Edge Pilot Information Technology</i>	
B. Accomplishments/Planned Programs (\$ in Millions)			FY 2016	FY 2017	FY 2018
The decrease of -\$3.177 from FY 2016 to FY 2017 is an Agency efficiency and results in the disestablishment of the JCTD program. As a result, civilian pay and FTEs were realigned to RDT&E PE 0302019K (62 FTES), and O&M (31 FTES). In addition, non-pay funding was realigned to RDT&E PE 0302019K.					
Title: Network Infrastructure (NI) Description: Network Infrastructure (NI) FY 2016 Accomplishments: CTO will continue to provide COCOMs and Services engineering expertise to enable and institutionalize common technical standards, interfaces, design patterns and enterprise architectures that assure “built-in” interoperability of programs, initiatives and efforts. CTO will investigate and expand DOD’s Identity Management efforts to allow access to desktops from anywhere in the department. Will participate with Deputy Under Secretary of Defense’s Rapid Fielding Directorate to provide engineering support in the development, implementation, and transition of emerging technologies and Emergent Capability Technology Demonstrations (ECTDs) that align with COCOM requirements. The decrease of -\$0.344 from FY 2015 to FY 2016 is due to the change in DoD policy where the JCTD process will now be used to satisfy seven OSD identified technology problem areas. Because of this shift, there is a reduction in the number of longer-term JCTDs (18-48 months) with the program moving towards rapid delivery of technical capabilities with Emerging Capability Technology Demonstrations (ECTDs). ECTDs are shorter in duration (12-36 months) and provide faster delivery of capability to mission partners. FY 2017 Plans: The JCTD program at DISA has been disestablished as a result of Agency efficiencies. Disestablishes pay, benefits, travel and other program costs, including contracting support. The decrease of -\$1.316 from FY 2016 to FY 2017 is an Agency efficiency and results in the disestablishment of the JCTD program. As a result, civilian pay and FTEs were realigned to RDT&E PE 0302019K (62 FTES), and O&M (31 FTES). In addition, non-pay funding was realigned to RDT&E PE 0302019K.			1.316	0.000	-
Title: Network Operations (NetOps) FY 2016 Accomplishments: The decrease of -\$0.967 from FY 2015 to FY 2016 is due to the change in DoD policy where the JCTD process will now be used to satisfy seven OSD identified technology problem areas. Because of this shift, there is a reduction in the number of longer-term JCTDs (18-48 months) with the program moving towards rapid delivery of technical capabilities with Emerging Capability			0.000	0.000	-

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency			Date: May 2017		
Appropriation/Budget Activity 0400 / 5		R-1 Program Element (Number/Name) PE 0604764K / <i>Advanced IT Services Joint Program Office (AITS-JPO)</i>		Project (Number/Name) T26 / <i>Leading Edge Pilot Information Technology</i>	
B. Accomplishments/Planned Programs (\$ in Millions)			FY 2016	FY 2017	FY 2018
Technology Demonstrations (ECTDs). ECTDs are shorter in duration (12-36 months) and provide faster delivery of capability to mission partners.					
FY 2017 Plans: N/A					
Title: Program Management Support			11.733	0.000	-
FY 2016 Accomplishments: CTO will continue to provide core program management support and a variety of engineering, technical innovation, information services, information assurance, and integration engineering.					
The decrease of -\$3.542 from FY 2015 to FY 2016 is due to the change in DoD policy where the JCTD process will now be used to satisfy seven OSD identified technology problem areas. Because of this shift, there is a reduction in the number of longer-term JCTDs (18-48 months) with the program moving towards rapid delivery of technical capabilities with Emerging Capability Technology Demonstrations (ECTDs). ECTDs are shorter in duration (12-36 months) and provide faster delivery of capability to mission partners.					
FY 2017 Plans: The JCTD program at DISA has been disestablished as a result of Agency efficiencies.					
The decrease of -\$11.733 from FY 2016 to FY 2017 is an Agency efficiency and results in the disestablishment of the JCTD program. As a result, civilian pay and FTEs were realigned to RDT&E PE 0302019K (62 FTES), and O&M (31 FTES). In addition, non-pay funding was realigned to RDT&E PE 0302019K.					
Accomplishments/Planned Programs Subtotals			18.750	0.000	-
C. Other Program Funding Summary (\$ in Millions)					
N/A					
Remarks					
D. Acquisition Strategy					
The program accomplishes its mission through a combination of strategies focused on operations, technical integration, program management, and financial tracking. Market research during the acquisition process includes a review of DISA contracts, other DoD contract vehicles, and other Government agency contracts which are advertised for Government-wide usage. This market research also includes consideration of small businesses including, minority/women owned (8A) businesses, Historically Black Colleges and Universities, mentor/protégé and other specialized contract vehicles and processes. It evaluates all contractors available from DISA sources for their ability to deliver the products specifically required for the unique program efforts. The program works collaboratively with vendors to obtain generic					

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency		Date: May 2017
Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0604764K / <i>Advanced IT Services Joint Program Office (AITS-JPO)</i>	Project (Number/Name) T26 / <i>Leading Edge Pilot Information Technology</i>
<p>cost data for planning and analysis purposes. Past and current contract prices for similar work and other government-wide agency contracts provide additional sources of information. Quotes from multiple sources help provide averages for more realistic cost estimates. DISA makes a concerted effort to award many of its contracts to small businesses. Additionally, many of the DISA contracts are awarded with multiple option periods. These have the benefit of fixing labor costs over an extended period and minimizing the administrative costs associated with re-issuing short-term contracts. CTO reviews existing contract vehicles and the number of contracts to minimize administrative overhead. Instead of individual contracts for program management, business line improvement, asset management, and financial management, there is now one small business program services contract that provides services across DISA.</p> <p><u>E. Performance Metrics</u></p> <p>OSD holds program reviews twice a year to review cost, schedule, performance and delivery. For JCTDs/ECTDs, the program office develops an Implementation Directive and Management Plan. These guidance documents outline the project objectives, schedule, and funding for the JCTD/ECTDs. Military utility will be assessed by each JCTD/ECTD to develop and document the detailed objectives. The Operational Sponsor (a COCOM) will evaluate the process and measure results. For technology investigation and piloting, DISA CTO uses standard operating procedures for identifying objectives and metrics. Key metrics used include: utility of technology, time to delivery of technologies to the field, percentage of improvement in transition of technologies, and percentage of improvement in collaborative efforts with other Science and Technology organizations. See below for specific metrics:</p> <p>1. Metric: JCTDs/ECTDs provide rapid capabilities to the warfighter that address urgent COCOM needs. Metrics include: time of delivery of technology to the field and utility of technology.</p> <p>Measure/Goal: Number of approved JCTDs/ECTDs with CTO as the Technical Manager and the number of JCTDs/ECTDs pending approval with CTO as TM. FY16 Actual: 3-5 potential ECTDs/ETs (evaluating about 8 projects which may or may not become an ECTD/ET) FY17 Target: N/A FY18 Target: N/A</p> <p>2. Metric: Infrastructure as a Service (IaaS)/Dreamer - Implement a cloud computing infrastructure for app development, software experimentation, and pilot evaluation accessible from the corporate network. Low cost solution to help foster an innovative environment where our modern workforce can develop mobile and web apps and conduct software experimentations to meet mission requirements.</p> <p>FY16 Actual: 20 Additional Users - 5 each quarter FY17 Target: N/A FY18 Target: N/A</p>		

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Defense Information Systems Agency										Date: May 2017		
Appropriation/Budget Activity 0400: Research, Development, Test & Evaluation, Defense-Wide / BA 5: System Development & Demonstration (SDD)					R-1 Program Element (Number/Name) PE 0303141K / Global Combat Support System							
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	244.911	13.674	7.600	2.576	-	2.576	2.534	1.657	1.724	1.915	Continuing	Continuing
CS01: Global Combat Support System	244.911	13.674	7.600	2.576	-	2.576	2.534	1.657	1.724	1.915	Continuing	Continuing
Program MDAP/MAIS Code: 483												

A. Mission Description and Budget Item Justification

Global Combat Support System - Joint (GCSS-J), is a key enabler for achieving Focused Logistics and is essential during peace, contingency, crisis, and war in support of the joint warfighter across the full range of military operations. GCSS-J, the Logistics System of Record, provides a Joint Logistics Common Operational Picture to ensure the right personnel, equipment, supplies, and support are in the right place at the right time and in the right quantities to mobilize, move, and sustain all elements of operating forces within a theater or operational area.

GCSS-J gathers data from authoritative sources to provide a fused, integrated, near real-time, multidimensional view of combat support and combat service support across joint capability areas. These efforts provide situational awareness of the battlespace and logistics pipeline (e.g., supply, deployment and distribution, engineering, etc.). Using GCSS-J, the joint logistics warfighter no longer needs to log into multiple legacy systems and manually gather data to compile reports. GCSS-J provides real time actionable information in the form of watchboards (e.g., fuels and munitions watchboards) and near real time information in the form of reports and mapping visualizations.

<u>B. Program Change Summary (\$ in Millions)</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018 Base</u>	<u>FY 2018 OCO</u>	<u>FY 2018 Total</u>
Previous President's Budget	14.294	7.600	7.600	-	7.600
Current President's Budget	13.674	7.600	2.576	-	2.576
Total Adjustments	-0.620	0.000	-5.024	-	-5.024
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustment	-0.620	-	-5.024	-	-5.024

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Defense Information Systems Agency		Date: May 2017
Appropriation/Budget Activity 0400: Research, Development, Test & Evaluation, Defense-Wide / BA 5: System Development & Demonstration (SDD)	R-1 Program Element (Number/Name) PE 0303141K / Global Combat Support System	
Change Summary Explanation The decrease of -\$5.024 in FY 2018 reduces Joint Logistics Common Operational Picture (LogCOP) support to the logisticians as they plan, execute, control, and assess in an increasingly complex global environment. Additionally, the decrease reduces the overall pace and scope of GCSS development efforts to meet Joint Staff logistics operational needs. Part of the overall decrease (-\$0.274) is attributed to the Service Requirements Review Board (SSRB) contract reduction.		

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 5					R-1 Program Element (Number/Name) PE 0303141K / Global Combat Support System				Project (Number/Name) CS01 / Global Combat Support System			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
CS01: Global Combat Support System	244.911	13.674	7.600	2.576	-	2.576	2.534	1.657	1.724	1.915	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Global Combat Support System – Joint (GCSS-J) provides the warfighter with a single, end-to-end capability to manage and monitor personnel and equipment through the mobilization process. GCSS-J, the Logistics' System of Record, provides a Joint Logistics Common Operational Picture (JLogCOP), ensuring the right personnel, equipment, supplies, and support are in the right place, at the right time, and in the right quantities across the full spectrum of military operations.

GCSS-J gathers data from authoritative sources to provide fused, integrated, near real-time multidimensional view of combat support and combat service support across joint capability areas. These efforts provide situational awareness of the battlespace and logistics pipeline (e.g., Supply, Deployment and Distribution, Engineering, etc.). Using GCSS-J, the joint logistics warfighter no longer needs to log into multiple legacy systems and manually gather data to compile reports. GCSS-J provides real-time in the form of reports and mapping visualizations.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018
Title: Global Combat Support System-Joint	13.674	7.600	2.576
<p>Description: GCSS-J is a key enabler for achieving Focused Logistics and is essential during peace, contingency, crisis, and war in support of the joint warfighter across the full range of military operations. GCSS-J, the Logistics System of Record, provides a Joint Logistics Common Operational Picture (LogCOP) to ensure the right personnel, equipment, supplies, and support are in the right place at the right time and in the right quantities to mobilize, move, and sustain all elements of operating forces within a theater or operational area.</p> <p>FY 2016 Accomplishments: The focus in FY16 was to simplify the system architecture. This goal was accomplished with the successful transition to a virtualized environment resulting in a more efficient system with greater reliability, better through-put, and better performance. The Program Management Office met the functional requirements that were identified and prioritized by the Joint Staff J-4 (JS J-4) which included new widgets to improve the visibility of personnel, equipment, and supplies.</p> <p>The FY 2016 to FY 2017 decrease of - \$6.074 is the result of a reduction in the number of GCSS-J development efforts required to meet Joint Staff logistics operational needs while continuing to meet current functional priorities of the joint logistics community, as documented by Joint Staff requirements.</p> <p>FY 2017 Plans:</p>			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency							Date: May 2017				
Appropriation/Budget Activity 0400 / 5				R-1 Program Element (Number/Name) PE 0303141K / Global Combat Support System			Project (Number/Name) CS01 / Global Combat Support System				
B. Accomplishments/Planned Programs (\$ in Millions)							FY 2016	FY 2017	FY 2018		
<p>The GCSS-J PMO will continue to meet the JS J-4 approved and prioritized functional requirements to support the joint logistics community. The JS J-4, in collaboration with the Combatant Commands (CCMDs) approved the transition of GCSS-J to a SharePoint-based Logistics Common Operational Picture. The PMO will introduce SharePoint server within the GCSS-J enclave to provide an Enterprise SharePoint Solution which integrates the automated data services and visualizations provided by GCSS-J and supports site specific user defined operational pictures (UDOP). This will promote standardization across CCMDs and allow CCMDs to use their primary SharePoint portal or alternative work space to visualize and share data with other CCMDs. Additionally, the functional sponsor approved the development of widgets to support the Operational Contract Support (OCS) community allowing visibility of contractor management, awarded procurements, and emerging requirements.</p> <p>FY 2018 Plans:</p> <p>The GCSS-J PMO will continue to meet the JS J-4 approved and prioritized functional requirements to support the joint logistics community providing a fused, integrated, near real-time view of combat support and combat service support throughout the battlespace and the logistics pipeline through interoperability and connectivity of information system.</p> <p>The decrease of -\$5.024 from 2017 to FY 2018 reduces Joint Logistics Common Operational Picture (LogCOP) support to the logisticians as they plan, execute, control, and assess in an increasingly complex global environment. Additionally, the decrease reduces the overall pace and scope of GCSS development efforts to meet Joint Staff logistics operational needs. Part of the overall decrease (-\$0.274) is attributed to the Service Requirements Review Board (SSRB) contract reduction.</p>											
Accomplishments/Planned Programs Subtotals							13.674	7.600	2.576		
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
• O&M, DW/PE	13.735	17.668	17.337	-	17.337	17.383	17.375	17.505	17.720	Continuing	Continuing
0303141K: O&M, DW											
Remarks											
D. Acquisition Strategy											
The GCSS-J Program Management Office (PMO) uses various contract types, employs large and small contractors, and is focused on achieving agency socio-economic goals and incorporating DoD acquisition reform initiatives in purchasing. The PMO maximizes the use of performance-based contracts and requires contractors to establish and manage specific earned value data to mitigate risk and monitor deviations from cost, schedule, and performance objectives. The PMO evaluates performance by conducting thorough Post-award Contract Reviews, monthly Contract Performance Reviews, and bi-monthly In-Process Reviews.											

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency		Date: May 2017
Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0303141K / <i>Global Combat Support System</i>	Project (Number/Name) CS01 / <i>Global Combat Support System</i>
<p>The PMO uses a Statement of Objectives (SOO) for development efforts rather than the traditional Statement of Work, as it provides potential offerors flexibility to develop cost-effective solutions and the opportunity to propose innovative alternatives to meet GCSS-J requirements. By stating the requirements in a SOO, the contractor can produce a technical solution methodology to deliver leading edge technology to the warfighter.</p> <p>E. Performance Metrics</p> <p>GCSS-J fields capabilities based on functional priorities of the Combatant Command 129 Requirements Document as approved and prioritized by the functional sponsor, Joint Staff J4. These requirements and goals are translated into releases with specific capabilities, which have established cost, schedule, and performance parameters approved by the DISA's Component Acquisition Executive/Milestone Decision Authority.</p> <p>Metrics and requirements are routinely gathered by the GCSS-J PMO. The metrics from the strategic server sites are analyzed by the PMO to ensure that operational mission threads continue to be met and if system enhancement/capabilities are of benefiting the user. Future capabilities include tools that allow GCSS-J to refine and enhance the type of performance metrics that can be gathered and analyzed. These tools become increasingly important as GCSS-J continues to integrate additional data sources and external applications, which allows GCSS-J to continue to transition to a Service Oriented Architecture and directly supports DoD's net-centric vision of exposing and consuming web services. As GCSS-J usage increases and new capabilities are fielded, performance metrics will ensure that the system is meeting user requirements.</p> <p>1. Mission and Business Results and Strategic National and Theater Defense</p> <p>FY 2016 (Actual) The KPPs, found in the GCSS-J Acquisition Program Baseline, define baseline measures for the effectiveness of mission performance; the threshold is 95%. Data was gathered from the First Look Site during development and from surveys after the capability was deployed. FY16 Target: 95%. Metric was met.</p> <p>FY 2017 (Estimate) The KPPs, found in the GCSS-J Acquisition Program Baseline, define baseline measures for the effectiveness of mission performance; the threshold is 95%. Data will be gathered from the First Look Site during development and from surveys once the capability is deployed. FY17 Target: 95%</p> <p>FY 2018 (Estimate) The KPPs, found in the GCSS-J Acquisition Program Baseline, define baseline measures for the effectiveness of mission performance; the threshold is 95%. Data will be gathered from the First Look Site during development and from surveys once the capability is deployed. FY18 Target: 95%</p> <p>2. Customer Results and Customer Satisfaction</p> <p>FY 2016 (Actual) Help Desk KPIs define the baseline measure to evaluate customer satisfaction and provide a service desk assessment; KPI threshold is 80%. Data was gathered from the strategic server site, DECC-Montgomery, and from user surveys. FY16 Target: 80%. Metric was met.</p> <p>FY 2017 (Estimate) Help Desk KPIs define the baseline measure to evaluate customer satisfaction and provide a service desk assessment; KPI threshold is 80%. Data will be gathered from the strategic server site, DECC-Montgomery, and from user surveys. FY17 Target: 80%</p>		

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency		Date: May 2017
Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0303141K / <i>Global Combat Support System</i>	Project (Number/Name) CS01 / <i>Global Combat Support System</i>
<p>FY 2018 (Estimate) Help Desk KPIs define the baseline measure to evaluate customer satisfaction and provide a service desk assessment; KPI threshold is 80%. Data will be gathered from the strategic server site, DECC-Montgomery, and from user surveys. FY18 Target: 80%</p> <p>3. Processes and Activities and Program Monitoring</p> <p>FY 2016 (Actual) Baseline Measure – Increment 8, v8.1 was deployed in 2nd Quarter 2016. Metric was met with the fielding of Increment 8, v8.1 on time.</p> <p>FY 2017 (Estimate) Baseline Measure – To deploy Increment 8, v8.2 in 3rd Quarter 2017.</p> <p>FY 2018 (Estimate) Baseline Measure – To deploy Increment 8, v8.3 in 2nd Quarter 2018.</p> <p>4. Technology and System Development</p> <p>FY 2016 (Actual) Baseline Measure was the ability to provide current and accurate information from the ADS at a 95% effectiveness level. System Administrators at the Defense Enterprise Computing Centers gathered data from system logs to validate effectiveness. FY16 Target: 95%. Metric was met.</p> <p>FY 2017 (Estimate) Baseline Measure is the ability to provide current and accurate information from the ADS at a 95% effectiveness level. System Administrators at the Defense Enterprise Computing Centers will gather data from system logs to validate effectiveness. FY17 Target: 95%</p> <p>FY 2018 (Estimate) Baseline Measure is the ability to provide current and accurate information from the ADS at a 95% effectiveness level. System Administrators at the Defense Enterprise Computing Centers will gather data from system logs to validate effectiveness. FY18 Target: 95%</p>		

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Exhibit R-3, RDT&E Project Cost Analysis: FY 2018 Defense Information Systems Agency													Date: May 2017		
Appropriation/Budget Activity 0400 / 5						R-1 Program Element (Number/Name) PE 0303141K / Global Combat Support System				Project (Number/Name) CS01 / Global Combat Support System					
Product Development (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Product Development 1	C/T&M	Enterworks : Sterling, VA	8.745	-		0.000		-		-		-	0.000	8.745	8.745
Product Development 2	C/T&M	WFI (DSI) : Manassas, VA	4.125	-		0.000		-		-		-	0.000	4.125	4.125
Product Development 3	C/CPAF	NGIT : Herndon, VA	127.849	-		-		-		-		-	0.000	127.849	127.849
Product Development 4	C/T&M	SAIC : Falls Church, VA	17.061	-		0.000		-		-		-	0.000	17.061	17.061
Product Development 5	C/FFP	NGIT, : Reston, VA	21.669	5.382	Mar 2016	0.000		-		-		-	0.000	27.051	27.051
Product Development 6	SS/FFP	UNISYS, : Falls Church, VA	16.472	-		0.000		-		-		-	0.000	16.472	16.472
Product Development 7	MIPR	FGM, : Reston, VA	5.482	-		0.000		-		-		-	0.000	5.482	5.482
Product Development 8	SS/FFP	Merlin, : McLean, VA	1.664	-		0.000		-		-		-	0.000	1.664	1.664
Product Development 9	MIPR	JDTC, : Ft. Eustis, VA	2.423	-		0.000		-		-		-	0.000	2.423	2.423
Product Development 10	MIPR	CSC, : Norfolk, VA	0.300	-		0.000		-		-		-	0.000	0.300	0.300
Product Development 11	C/FFP	Pragmatics : Reston, VA	-	6.730	May 2016	6.570	May 2017	1.546	May 2018	-		1.546	Continuing	Continuing	Continuing
Subtotal			205.790	12.112		6.570		1.546		-		1.546	-	-	-
Test and Evaluation (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Test & Evaluation 1	C/CPFF	COMTEK, : Sterling,VA	3.902	-		0.000		-		-		-	0.000	3.902	3.902
Test & Evaluation 2	MIPR	SSO, : Montgomery	0.500	-		0.000		-		-		-	0.000	0.500	0.500
Test & Evaluation 3	MIPR	DIA : WDC	3.325	0.460	Aug 2016	-		-		-		-	0.000	3.785	3.785
Test & Evaluation 4	C/CPFF	Pragmatics : Pragmatics	1.684	-		0.000		-		-		-	0.000	1.684	1.684
Test & Evaluation 5	C/CPFF	AAC, Inc., : Vienna, VA	2.790	-		0.000		-		-		-	0.000	2.790	2.790

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Exhibit R-3, RDT&E Project Cost Analysis: FY 2018 Defense Information Systems Agency												Date: May 2017			
Appropriation/Budget Activity 0400 / 5						R-1 Program Element (Number/Name) PE 0303141K / Global Combat Support System				Project (Number/Name) CS01 / Global Combat Support System					
Test and Evaluation (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Test & Evaluation 6	MIPR	JITC, : Ft. Huachuca, AZ	6.232	0.800	Oct 2015	0.600	Oct 2016	0.600	Oct 2017	-		0.600	Continuing	Continuing	Continuing
Test & Evaluation 7	MIPR	STRATCOM (DAA) : Bolling AFB, DC	0.622	0.170	Sep 2016	0.170	Jul 2016	0.170	Sep 2018	-		0.170	Continuing	Continuing	Continuing
Test & Evaluation 8	MIPR	DISA (TE LAB Support) : Fort Meade, MD	1.262	0.102	Oct 2015	0.100	Oct 2016	0.100	Oct 2017	-		0.100	Continuing	Continuing	Continuing
Test & Evaluation 9	MIPR	DISA FSO Security Testing Support : Fort Meade, MD	-	0.030	Aug 2016	0.160	Oct 2016	0.160	Oct 2017	-		0.160	Continuing	Continuing	Continuing
Subtotal			20.317	1.562		1.030		1.030		-		1.030	-	-	-
Management Services (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Management Services 1	FFRDC	MITRE, : Vienna, VA	16.934	-		-		-		-		-	0.000	16.934	16.934
Management Services 2	SS/CPFF	UMD, : Eastern Shore, MD	1.021	-		-		-		-		-	0.000	1.021	1.021
Management Services 3	MIPR	IDA, : Alexandria, VA	0.749	-		-		-		-		-	0.000	0.749	0.749
Management Services 4	MIPR	JFCOM, : Norfolk, Va	0.100	-		0.000		-		-		-	0.000	0.100	0.100
Subtotal			18.804	-		0.000		-		-		-	0.000	18.804	18.804
			Prior Years	FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			244.911	13.674		7.600		2.576		-		2.576	-	-	-
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: FY 2018 Defense Information Systems Agency										Date: May 2017				
Appropriation/Budget Activity 0400 / 5					R-1 Program Element (Number/Name) PE 0303141K / Global Combat Support System					Project (Number/Name) CS01 / Global Combat Support System				

	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Acquisition Events – Milestone B/C: Increment 8																												
System Development & Testing - Increment 8																												
Full Deployment Decision - Increment 8																												
Acquisition Events - Milestone B/C: Increment 9 - MS B																												
Acquisition Events - Milestone B/C: Increment 9 - MS C																												
System Development & Testing - Increment 9																												

	FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Acquisition Events – Milestone B/C: Increment 8																												
System Development & Testing - Increment 8																												
Full Deployment Decision - Increment 8																												
Acquisition Events - Milestone B/C: Increment 9 - MS B																												
Acquisition Events - Milestone B/C: Increment 9 - MS C																												
System Development & Testing - Increment 9																												

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Exhibit R-4A, RDT&E Schedule Details: FY 2018 Defense Information Systems Agency			Date: May 2017
Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0303141K / <i>Global Combat Support System</i>	Project (Number/Name) CS01 / <i>Global Combat Support System</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Acquisition Events – Milestone B/C: Increment 8	2	2014	2	2014
System Development & Testing - Increment 8	2	2014	4	2019
Full Deployment Decision - Increment 8	4	2019	4	2019
Acquisition Events - Milestone B/C: Increment 9 - MS B	1	2020	1	2020
Acquisition Events - Milestone B/C: Increment 9 - MS C	3	2020	3	2020
System Development & Testing - Increment 9	3	2020	4	2022

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Defense Information Systems Agency	Date: May 2017
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Appropriation/Budget Activity 0400: Research, Development, Test & Evaluation, Defense-Wide / BA 6: RDT&E Management Support	R-1 Program Element (Number/Name) PE 0605502K / Small Business Innovative Research
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COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	0.000	4.364	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
SB-01: Small Business Innovative Research	0.000	4.364	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

A. Mission Description and Budget Item Justification

In accordance with Public Law No: 112-81 (National Defense Authorization Act) and Small Business Technology Transfer Program Reauthorization Act, the DISA Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs are designed to provide small, high-tech businesses and academic institutions the opportunity to propose radical, innovative, high-risk approaches to address existing and emerging national security threats; thereby supporting DISA's overall strategy to enable fundamental discoveries and technological breakthroughs that provide new military capabilities.

B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	0.000	0.000	0.000	-	0.000
Current President's Budget	4.364	0.000	0.000	-	0.000
Total Adjustments	4.364	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	4.364	-			

Change Summary Explanation

FY 2016: Increase reflects the SBIR/STTR transfer.

FY 2017: N/A

FY 2018: N/A

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 6					R-1 Program Element (Number/Name) PE 0605502K / <i>Small Business Innovative Research</i>				Project (Number/Name) SB-01 / <i>Small Business Innovative Research</i>			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
SB-01: <i>Small Business Innovative Research</i>	0.000	4.364	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
A. Mission Description and Budget Item Justification <p>In accordance with Public Law No: 112-81 (National Defense Authorization Act) and Small Business Technology Transfer Program Reauthorization Act, the DISA Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs are designed to provide small, high-tech businesses and academic institutions the opportunity to propose radical, innovative, high-risk approaches to address existing and emerging national security threats; thereby supporting DISA's overall strategy to enable fundamental discoveries and technological breakthroughs that provide new military capabilities.</p>												
B. Accomplishments/Planned Programs (\$ in Millions)									FY 2016	FY 2017	FY 2018	
Title: Small Business Innovation Research Description: The Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs are designed to provide small, high-tech businesses and academic institutions the opportunity to propose radical, innovative, high-risk approaches to address existing and emerging national security threats; thereby supporting DISA's overall strategy to enable fundamental discoveries and technological breakthroughs that provide new military capabilities. FY 2016 Accomplishments: - The DISA SBIR and STTR were executed within OSD guidelines.									4.364	-	-	
Accomplishments/Planned Programs Subtotals									4.364	-	-	
C. Other Program Funding Summary (\$ in Millions) N/A Remarks D. Acquisition Strategy N/A E. Performance Metrics N/A												

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Defense Information Systems Agency	Date: May 2017
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Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 6: RDT&E Management Support</i>					R-1 Program Element (Number/Name) PE 0305172K I <i>Combined Advanced Applications</i>							
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	0.000	0.000	12.200	16.998	-	16.998	14.500	5.500	5.500	5.500	Continuing	Continuing
CA1: <i>Combined Advanced Applications</i>	0.000	0.000	12.200	16.998	-	16.998	14.500	5.500	5.500	5.500	Continuing	Continuing

A. Mission Description and Budget Item Justification

Program is classified and exhibit will be provided under a separate cover.

B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	0.000	15.336	13.866	-	13.866
Current President's Budget	0.000	12.200	16.998	-	16.998
Total Adjustments	0.000	-3.136	3.132	-	3.132
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-	-3.136	3.132	-	3.132

Change Summary Explanation

Program is classified and exhibit will be provided under a separate cover.

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 6					R-1 Program Element (Number/Name) PE 0305172K / <i>Combined Advanced Applications</i>				Project (Number/Name) CA1 / <i>Combined Advanced Applications</i>			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
CA1: <i>Combined Advanced Applications</i>	0.000	0.000	12.200	16.998	-	16.998	14.500	5.500	5.500	5.500	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
A. Mission Description and Budget Item Justification Program is classified and exhibit will be provided under a separate cover.												
B. Accomplishments/Planned Programs (\$ in Millions)									FY 2016	FY 2017	FY 2018	
Title: Combined Advanced Applications									-	12.200	16.998	
FY 2017 Plans: Classified.												
FY 2018 Plans: Classified.												
Accomplishments/Planned Programs Subtotals									-	12.200	16.998	
C. Other Program Funding Summary (\$ in Millions) N/A												
Remarks												
D. Acquisition Strategy Classified												
E. Performance Metrics Classified												

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Defense Information Systems Agency	Date: May 2017
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Appropriation/Budget Activity 0400: Research, Development, Test & Evaluation, Defense-Wide / BA 6: RDT&E Management Support	R-1 Program Element (Number/Name) PE 0903235K / Joint Service Provider
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COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	-	0.000	0.000	5.113	-	5.113	5.148	5.137	5.224	5.311	Continuing	Continuing
1: JSP	-	0.000	0.000	5.113	-	5.113	5.148	5.137	5.224	5.311	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Joint Service Provider (JSP) provides Information Technology infrastructure and office automation systems, components, supporting software, and IT support services for the Office of the Secretary of Defense (OSD), Joint Staff, WHS, Pentagon Force Protection Agency (PFPA), Consolidated Adjudication Facility (CAF), and other WHS-supported users and communities supported within the Pentagon Reservation and other areas in the National Capitol Region. The funding levels represent transfers from the legacy organizations, WHS-EITSD and Joint Staff support their ongoing consolidated mission. RDT&E provides for the test, pilot, and development of new integrated business tools to enhance the JSP business processes and improve the delivery of IT services and capabilities to JASN.

B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	0.000	0.000	0.000	-	0.000
Current President's Budget	0.000	0.000	5.113	-	5.113
Total Adjustments	0.000	0.000	5.113	-	5.113
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Functional Transfer	-	-	5.113	-	5.113

Change Summary Explanation

The increase of +\$5.113 in FY 2018 is due to the functional transfer of JSP to DISA.

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 6					R-1 Program Element (Number/Name) PE 0903235K / Joint Service Provider				Project (Number/Name) 1 / JSP			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
1: JSP	-	0.000	0.000	5.113	-	5.113	5.148	5.137	5.224	5.311	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Joint Service Provider (JSP) provides mobile classified computing and communications platforms technology test and development for the immediate Office of the Secretary of Defense, enabling secured computing at residence, temporary and mobile locations around the world.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018
Title: Pentagon/NCR Core Enterprise Services Description: Provides development, test, and pre-deployment for JSP-supported services to include network transport, network security, computer network defense, intrusion detection, Pentagon Installation Processing Node (IPN), and other components of the Pentagon's core network infrastructure. FY 2018 Plans: Develop, test, and pre-deploy JSP-supported services to include network transport, network security, computer network defense, intrusion detection, Pentagon Installation Processing Node (IPN), and other components of the Pentagon's core network infrastructure. The increase of +\$3.871 from FY 2017 to FY 2018 is due to the functional transfer of JSP to DISA.	-	-	3.871
Title: SECDEF Communications Description: Provides mobile classified computing and communications platforms technology test and development for the immediate Office of the Secretary of Defense, enabling secured computing at residence, temporary and mobile locations around the world. FY 2018 Plans: To develop better mobile classified computing and communications platforms for all customers to have secure computing at residences and temporary and mobile locations around the world. The increase of +\$0.101 from FY 2017 to FY 2018 is due to the functional transfer of JSP to DISA.	-	-	0.101
Title: Business Solutions - Enterprise Services Description: Provides development, testing, piloting, and pre-deployment support for integrated business tools that will enhance JSP-supported enterprise mission application environment.	-	-	1.141

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency		Date: May 2017	
Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0903235K / <i>Joint Service Provider</i>	Project (Number/Name) 1 / <i>JSP</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
<i>FY 2018 Plans:</i> Develop and test tools that will improve the delivery of IT services and capabilities for all JSP users. JSP will continue to expand the engineering, testing and development networks for NIPR and SIPR. The increase of +\$1.141 from FY 2017 to FY 2018 is due to the functional transfer of JSP to DISA.			
Accomplishments/Planned Programs Subtotals		-	5.113
C. Other Program Funding Summary (\$ in Millions)			
N/A			
Remarks			
D. Acquisition Strategy			
N/A			
E. Performance Metrics			
Pentagon/NCR Core Enterprise Services: Number of NCR Core Infrastructure development, test, and pre-deployment tests FY16 Target: N/A FY17 Target: N/A FY18 Target: 4 Planned/4 Required SECDEF Communications: Number of System upgrades FY 2016 Target: N/A FY 2017 Target: N/A FY 2018 Target: 2 Planned/2 Required Business Solutions - Enterprise Services: Number of Operational Test Events for the NIPR and SIPR FY 2016 Target: N/A FY 2017 Target: N/A			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency		Date: May 2017
Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0903235K / Joint Service Provider	Project (Number/Name) 1 / JSP
FY 2018 Target: 2 Planned/2 Required		

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Defense Information Systems Agency	Date: May 2017
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Appropriation/Budget Activity	R-1 Program Element (Number/Name)											
0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development</i>	PE 0208045K / <i>C4I Interoperability</i>											
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	631.107	63.341	57.501	59.490	-	59.490	60.649	61.267	62.551	63.838	Continuing	Continuing
T30: <i>MRTFB Test and Evaluation</i>	154.161	6.074	7.624	7.732	-	7.732	7.884	7.893	8.056	8.056	Continuing	Continuing
T40: <i>Major Range Test Facility Base Operations</i>	476.946	57.267	49.877	51.758	-	51.758	52.765	53.374	54.495	55.782	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Defense Information Systems Agency's Joint Interoperability Test Command (JITC) serves as the only joint element of the Department of Defense's (DoD's) Major Range and Test Facility Base (MRTFB) that is operated primarily for Information Technology and National Security Systems (IT/NSS) Test and Evaluation (T&E) support missions. JITC executes the T&E mission in support of Command, Control, Communications, Computers and Intelligence (C4I), and is the DoD's Sole Interoperability Certifier and the only Non-Service Operational Test Agency.

With a focus on T&E for IT, JITC has the unique mission to provide consistent, structured, and effective T&E services that include converged information environment, Cyber, Cloud services, Mobility and NSS. JITC also has the responsibility for ensuring Joint/Coalition interoperability; issuing interoperability certifications; conducting operational evaluations; maintaining a federated IT infrastructure as a MRTFB activity and providing direct interoperability support to the warfighter by ensuring Joint warfighting capabilities are interoperable and support mission needs.

B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	63.341	57.501	59.657	-	59.657
Current President's Budget	63.341	57.501	59.490	-	59.490
Total Adjustments	0.000	0.000	-0.167	-	-0.167
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Reprogramming	-	-	-0.167	-	-0.167

Change Summary Explanation

The decrease of -\$0.167 in FY 2018 is a reduction to the automation and virtualization capabilities of DISA IT testing and evaluation services.

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 0208045K / C4I Interoperability				Project (Number/Name) T30 / MRTFB Test and Evaluation			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
T30: MRTFB Test and Evaluation	154.161	6.074	7.624	7.732	-	7.732	7.884	7.893	8.056	8.056	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Defense Information Systems Agency (DISA), through the Joint Interoperability Test Command (JITC), manages the Department's Interoperability Test, Evaluation, and Certification process that is structured to provide meaningful and independent test results in order to increase stakeholder confidence. The objectives, of the Test and Evaluation (T&E) activities, are to validate that DISA's (and the Department's, where appropriate) deliverables have met operational requirements. The T&E activities target evaluation strategies in the design, development, operational, integration and/or sustainment aspects of every program requiring support. DISA's T&E efforts span a variety of test categories supporting DISA's delivery of Department-wide enterprise solutions as well as Service, Agency, and mission partner developmental, operational, Information Assurance, and interoperability testing, validation and certification efforts. These efforts are focused on T&E for Information Technology (IT) that includes the Joint Information Environment (JIE), Cyber, Cloud services, and Mobility.

As the Department of Defense (DoD) Joint Interoperability Certification Authority, JITC annually:

- Issues hundreds of interoperability testing and certification related products.
- Manages the scheduling and executes multiple annual distributed Joint Tactical Data Link hardware in the loop interoperability test events. These events are designed to evaluate, certify and re-certify Service/Agency Tactical Data systems.
- Reviews hundreds of Joint Capabilities Integration and Development System documents, interoperability support plans and Legacy Waiver requests on behalf of the DoD Chief Information Officer (CIO) and the Joint Staff.
- Serves as executive agent to DoD Interoperability Steering Group, in support of the DoD CIO, and uses this forum to coordinate policy, adjudicate issues, and to process Interim Certificates to Operate.
- Ensures interoperability test and certification standard practices and procedures are in accordance with DoD policy, and reviews and issues over 600 Joint interoperability certifications annually for DoD's Information Technology and National Security Systems (IT/NSS).
- Manages the scheduling and prioritization of multiple annual distributed Joint Tactical Data Link simulated test events using real components (hardware in the loop interoperability test events) designed to evaluate, certify and re-certify Service/Agency Tactical systems.

JITC provides interoperability test support to Joint, Coalition and Allied operations in theater by providing Interoperability test support within the area of responsibility and supports exercises intended to evaluate Joint, Coalition and Allied operations in, or planning to deploy to theater by:

- Providing on-demand rapid response contingency support to Regional Combatant Commands (COCOMs) as required, and conducting assessments of interoperability exercises.
- Conducting assessments during one of the largest interoperability exercises (the Endeavors).
- Broadening its support to the Joint Staff and functional COCOMs with a multitude of interoperability assessment services.
- Maintaining a 24x7 Warfighter Command, Control, Communications, Computers and Intelligence (C4I) Interoperability Hotline that connects warfighters to subject matter experts to resolve IT interoperability challenges.

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency			Date: May 2017		
Appropriation/Budget Activity 0400 / 7		R-1 Program Element (Number/Name) PE 0208045K / C4I Interoperability	Project (Number/Name) T30 / MRTFB Test and Evaluation		
<ul style="list-style-type: none">Establishing the framework for the conduct of annual independent evaluations and the status of interoperability through DoD Interoperability Communications Exercises (DICE).Emulating a distributed Joint Task Force network, providing realism and operational significance during the assessments and evaluations of data integrity, interfacing and responsiveness coupled with efficient configuration tactics, techniques, and procedures.Including first responder local and federal communications as part of the task force. <p>As the only non-Service Operational Test Agency (OTA) within DoD, JITC conducts operational testing of IT/NSS under realistic conditions to determine the operational effectiveness, suitability, interoperability, and security; and independently assesses the operational impact of system issues on mission accomplishment. JITC is the OTA for DISA-managed programs, and also upon request serves as the OTA for other Agencies such as the Defense Logistics Agency, Department of Homeland Security, and the National Security Agency.</p> <p>JITC designs Operational Test and Evaluation (OT&E) events to determine if IT/NSS meet user requirements, offering sustaining support services to users to assist Acquisition Program Managers with meeting their overall milestone objectives.</p> <p>JITC focuses its efforts towards core T&E improvements, better T&E policy for IT/NSS and designing new test methodologies to better assess Enterprise Service systems, aligning with the Information Technology Service Management model evaluating fulfillment services for suitability.</p> <p>The T&E project supports the strategy development and investment plans in support of maintaining, improving and operating the DISA Major Range and Test Facility Base (MRTFB). Specific goals for DISA's MRTFB each year are to:</p> <ul style="list-style-type: none">Integrate evolving technologies that are able to leverage efficiencies such as virtualization, enterprise elements such as Infrastructure as a Service and Platform as a Service, and the foundational Cyber assets mandated by the JIE.Expand test infrastructure and operations to allow for rapid, on-demand provisioning, and federation across the DoD and Cyber integration with enterprise environments.Design consistent, repeatable test methodologies that ensure efficient T&E on changing or emerging technologies.Provide T&E guidance/oversight to nearly 130 DISA programs, creating synergy and efficiencies across the large DISA IT portfolio, gaining insight in new technologies and commercial best practices.					
B. Accomplishments/Planned Programs (\$ in Millions)			FY 2016	FY 2017	FY 2018
Title: DoD's Joint Interoperability Certification Authority			5.296	6.704	6.812
Description: Plans and executes interoperability certifications for Department of Defense's (DoD)) Information Technology and National Security Systems (IT/NSS) by evaluating joint military operations, conformance to standards, and participating in developmental testing or executing purposefully planned Interoperability Test Events.					
FY 2016 Accomplishments: Focused on new T&E capabilities designed to add flexibility and enhance collaboration with partners to improve T&E services. Leveraged cloud and virtual technologies to provide automation and services that are more agile than physical test environments.					

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency			Date: May 2017		
Appropriation/Budget Activity 0400 / 7		R-1 Program Element (Number/Name) PE 0208045K / C4I Interoperability		Project (Number/Name) T30 / MRTFB Test and Evaluation	
B. Accomplishments/Planned Programs (\$ in Millions)			FY 2016	FY 2017	FY 2018
Continued to capitalize on big data analytics and tools to conduct data analysis in the operational environment allowing for continuous assessment of overall performance, providing a means to define trends, focus test events, as well as reduce risk through continuous monitoring and evaluation.					
The decrease of -\$3.524 from FY 2015 to FY 2016 is due to realignment between T30 MRTFB Test & Evaluation and T40 Major Range Test Facility Base Operations to improve the expansion of automation and virtualization capabilities of DISA IT testing and evaluation services.					
FY 2017 Plans: Continue to enhance current T&E capabilities by employing automation technologies making these capabilities accessible to customers via the cloud in a self-service mode. Employ new technology and methodology to conduct data analysis in the operational environment promoting continuous assessment of capability performance resulting in identification/analysis of trends impacting ability to focus test events and reduce risk.					
The decrease of -\$0.392 from FY 2016 to FY 2017 is due to the automation of T&E services through the use of virtualization and cloud technologies thus reducing contractor support for these services and the reduction of contractor support for DICE Tactical Edge Testbed and methodology development completely phased out at the end of FY 2016.					
FY 2018 Plans: Increase customer accessibility through enhanced T&E capabilities by employing automation technologies via the cloud in a self-service mode. Continue to reduce risk and identify/analyze trends by employing new technology and methodology to conduct data analysis in the operational environment.					
The increase of +\$0.108 from FY 2017 to FY 2018 will enable development of new methodologies for conducting Interoperability assessments.					
Title: Operational Test and Evaluation			0.658	0.800	0.800
Description: Conduct operational testing of IT/NSS under realistic operational conditions to determine the operational effectiveness, suitability, interoperability, and security of a particular system. Independently assesses the operational impact of system issues on mission accomplishment.					
FY 2016 Accomplishments: Improved OT&E processes, procedures, and tools to evolve operational testing capabilities through the use of virtualization to emulate users and devices to better evaluate performance. Provided OT&E for JIE to ensure capabilities are effective, suitable, interoperable, and secure. Provided continuing OT&E support to COCOMs, Military Services, and Defense Agencies, as requested.					

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency			Date: May 2017		
Appropriation/Budget Activity 0400 / 7		R-1 Program Element (Number/Name) PE 0208045K / C4I Interoperability	Project (Number/Name) T30 / MRTFB Test and Evaluation		
B. Accomplishments/Planned Programs (\$ in Millions)			FY 2016	FY 2017	FY 2018
<p>The decrease of -\$0.125 from FY 2015 to FY 2016 is due to realignment between T30 MRTFB Test & Evaluation and T40 Major Range Test Facility Base Operations to improve the expansion of automation and virtualization capabilities of DISA IT testing and evaluation services.</p> <p>FY 2017 Plans: Will continue to enhance OT&E processes, procedures, and tools through the use of automation and virtualization to improve operational testing capabilities for evolving requirements to better evaluate performance. Will provide OT&E support to COCOMs, Military Services, and Defense Agencies as requested.</p> <p>The decrease of -\$0.056 from FY 2016 to FY 2017 is due to transition of OT&E support for JIE contract reductions for delivery of testing tools.</p> <p>FY 2018 Plans: Will continue to enhance OT&E processes, procedures, and tools by increasing automation and utilizing virtualization as needed, to better evaluate performance and to improve operational testing capabilities for evolving requirements. Will continue to provide OT&E support to COCOMs, Military Services, and Defense Agencies as requested.</p>					
<p>Title: Support to Warfighter</p> <p>Description: Provides pre/post-production evaluations including: collecting relevant data during a continuous monitoring effort, and providing on-the-spot evaluations of problem areas and viable mission-oriented solutions to warfighting COCOMs during exercises and contingency operations.</p> <p>FY 2016 Accomplishments: Focused support primarily on the Asia Pacific region, consistent with the National Defense Strategy. Sustained a Warfighter Support capability to respond to critical fielded system issues only.</p> <p>The decrease of -\$0.142 from FY 2015 to FY 2016 is due to reduction or elimination of support consistent with the National Defense Strategy.</p> <p>FY 2017 Plans: Focused support primarily on the Asia Pacific region will continue, consistent with the National Defense Strategy. Will sustain a Warfighter Support capability sufficient to respond to critical fielded system issues only.</p> <p>FY 2018 Plans:</p>			0.120	0.120	0.120

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency		Date: May 2017	
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0208045K / C4I Interoperability	Project (Number/Name) T30 / MRTFB Test and Evaluation	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
Support will continue to be focused primarily on the Asia Pacific region, consistent with the National Defense Strategy. Will sustain a Warfighter Support capability sufficient to respond to critical fielded system issues only.			
Accomplishments/Planned Programs Subtotals		6.074	7.624
C. Other Program Funding Summary (\$ in Millions)			
N/A			
Remarks			
D. Acquisition Strategy			
T&E Mission Support Services (MSS) cost plus and firm fixed price contract provides T&E support by performing a wide range of non-personal services to encompass testing, scientific, engineering, logistic, administrative, and ancillary support of the DISA T&E missions. The T&E MSS contract provides for expansion and contraction of staff years as workload dictates.			
E. Performance Metrics			
JITC manages the Department's Joint Interoperability Test, Evaluation, and Certification process and Operational testing for Information Technology (IT)/National Security Systems (NSS) as well as test and evaluation activities for DISA's deliverables ensuring they have met operational requirements. JITC develops test and evaluation strategies, plan, and reports in the design, development, operational, integration and/or sustainment aspects of every program requiring support. Specific metrics are described below:			
1. Metric: Provide operational test plans prior to the start date of a test for all customers where JITC is the OTA. Measure/Goal: 90% FY16 Target: 95% Actual: 88% FY17 Target: 95% FY18 Target: 95%			
2. Metric: Provide operational test reports no later than 60 days after the completion of a test event when JITC is the responsible OTA. Measure/Goal: 90% FY16 Target: 95% Actual: 66% FY17 Target: 95% FY18 Target: 95%			
3. Provide a interoperability certification letter to customers (JS, COCOMS,AT&L, etc) no later than 60 days from the completion of the test event/effort. Measure/Goal: 95% FY16 Target: 95% Actual: 96%			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency		Date: May 2017
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0208045K / <i>C4I Interoperability</i>	Project (Number/Name) T30 / <i>MRTFB Test and Evaluation</i>
FY17 Target: 95% FY18 Target: 95% 4. JITC surveys customers for each product that is delivered (POA&Ms, test Plans, Test Reports, etc.) in terms of cost, schedule, and overall performance on a 1-5 scale with 5 being the highest rating. Measure/Goal: 4.5 FY16 Target: 4.5 Actual: 4.4 FY17 Target: 4.5 FY18 Target: 4.5		

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 0208045K / C4I Interoperability				Project (Number/Name) T40 / Major Range Test Facility Base Operations			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
T40: Major Range Test Facility Base Operations	476.946	57.267	49.877	51.758	-	51.758	52.765	53.374	54.495	55.782	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

As the only non-Service activity of the Department of Defense (DoD) Major Range and Test Facility Base (MRTFB), Defense Information Systems Agency (DISA) provides the only dedicated Information Technology (IT) environment investing in a single end-to-end infrastructure for testing the Enterprise Edge to the Tactical Edge. As an MRTFB, Joint Interoperability Test Command (JITC) provides tested IT infrastructure products to the DoD, Federal/non-Federal Government, Commercial vendors, and Allied partners.

The DISA MRTFB infrastructure:

- Encompasses two geographic locations (Ft. Huachuca, AZ; Indian Head, MD; Ft. Meade, MD).
- 116K square feet of raised floor space comprised of multiple test environments and test networks supporting over a 100 programs on an annual basis.
- Complies with multiple levels of security and is scaled to support approximately 1,000 annual testing events to evaluate the DoD's converged information environment, Cyber, Cloud services, Mobility, and National Security Systems (NSS).
- Encompasses a significant portfolio of reference implementations, test tools, and supporting IT systems to aid both test execution and data collection/analysis.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018
Title: MRTFB Improvements and Operations	57.267	49.877	51.758
Description: Information Technology and National Security Systems (IT/NSS), Command and Control (C2), Defense reform initiatives, and the Department of Defense's (DoD's) migration towards more agile development and acquisition of IT capabilities by providing Test and Evaluation (T&E) support, including infrastructure, testing capabilities and events, policies and processes to Regional Combatant Commands (COCOMS), Military Services, DoD Agencies, other Federal Government agencies, private industry, Coalition partners and allies.			
FY 2016 Accomplishments: As an MRTFB, JITC operates the DISA IT test infrastructure. Standardization of testbed infrastructure is ongoing and leveraging of cloud technologies provides seamless distributed testing services and efficient use of testing equipment and resources across			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency			Date: May 2017		
Appropriation/Budget Activity 0400 / 7		R-1 Program Element (Number/Name) PE 0208045K / C4I Interoperability	Project (Number/Name) T40 / Major Range Test Facility Base Operations		
B. Accomplishments/Planned Programs (\$ in Millions)			FY 2016	FY 2017	FY 2018
<p>the Agency and the Department. Expanded use of automation, virtualization, and access to big data will enable the reduction of the MRTFB IT footprint. Maintain technical workforce skills, support base operations, communications, automation, operating expenses at each location.</p> <p>The increase of +\$4.230 from FY 2015 to FY 2016 will continue efforts to improve the expansion of automation and virtualization capabilities of DISA IT testing and evaluation services.</p> <p>FY 2017 Plans: As an MRTFB, JITC operates the DISA IT Test infrastructure which consists of a standarized test bed at Fort George G. Meade, MD and Fort Huachuca, AZ. JITC will continue to expand the use of cloud technologies provide seamless distributed testing services and efficient use of testing equipment and resources for use across the Agency and the Department. JITC will maintain technical workforce, support base operations, communications, and operating expenses at each location.</p> <p>The decrease of -\$5.392 from FY 2016 to FY 2017 is due to implementation of new cyber and enterprise test methods and automated tools and use of virtualization and cloud technologies, enabling JITC to reduce the IT foot print and gain operational efficiencies.</p> <p>FY 2018 Plans: As an MRTFB, JITC will continue to operate the DISA IT Test infrastructure standarized test bed at Fort George G. Meade, MD and Fort Huachuca, AZ. JITC will continue to support the Agency and the Department by expanding the use of cloud technologies to provide seamless distributed testing services and efficient use of testing equipment and resources. JITC will continue to maintain technical workforce, support base operations, communications, and operating expenses at each location.</p> <p>The increase of +\$1.881 from FY 2017 to FY 2018 will adapt additional cloud technologies through rapid re-configurations resulting in the development of a single DoDIN Lab Test-bed. his increase is partially offset by a decrease of -\$0.822 attributed to the Service Requirements Review Board (SSRB) contract reduction.</p>					
Accomplishments/Planned Programs Subtotals			57.267	49.877	51.758
C. Other Program Funding Summary (\$ in Millions)					
N/A					
Remarks					

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency		Date: May 2017
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0208045K / <i>C4I Interoperability</i>	Project (Number/Name) T40 / <i>Major Range Test Facility Base Operations</i>
<p><u>D. Acquisition Strategy</u></p> <p>A T&E Mission Support Services (MSS) cost plus and firm fixed price contract provides T&E support by performing a wide range of non-personal services to encompass testing, scientific, engineering, logistic, administrative, and ancillary support of the DISA T&E missions. The T&E MSS contract provides maximum flexibility and allow for expansion and contraction of staff years as workload dictates. An additional contract is a Federal Preferential Sole Source Procurement set-aside which provides consolidated facilities support.</p> <p><u>E. Performance Metrics</u></p> <p>Major Range Test Facility Base (MRTFB) Operations sustain the infrastructure, capabilities and services of DISA's MRTFB. While maintaining a focus on improving automation, instrumentation and virtualization, this MRTFB is working toward ensuring assets support customers with testing on demand services to enable rapid delivery of enhanced military capabilities. Specific metrics are described below:</p> <p>5. Provide configuration changes to the MRTFB infrastructure NLT 5 days after formal customer service request received. Measure/Goal: 90% FY16 Target: 95% Actual: Data Capture not available for newly established tracking capability FY17 Target: 95% FY18 Target: 95%</p> <p>6. Complete new configuration additions (equipment installs) NLT 14 days after receipt of customer requirements form. Measure/Goal: 90% FY16 Target: 90% Actual: Data Capture not available for newly established tracking capability FY17 Target: 95% FY18 Target: 95%</p> <p>7. Availability of enterprise service test capabilities T&E enclave. Measure/Goal: 95% FY16 Target: 90% Actual: 100% FY17 Target: 95% FY18 Target: 95%</p> <p>8. Availability of the Tactical Data Link Standard Conformance test tool to various DoD platforms (e.g., weapons systems). Measure/Goal: 95% FY16 Target: 95% Estimated Actual: Data Capture not available for newly established tracking capability FY17 Target: 95% FY18 Target: 95%</p>		

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Exhibit R-3, RDT&E Project Cost Analysis: FY 2018 Defense Information Systems Agency												Date: May 2017			
Appropriation/Budget Activity 0400 / 7						R-1 Program Element (Number/Name) PE 0208045K / C4I Interoperability						Project (Number/Name) T40 / Major Range Test Facility Base Operations			
Test and Evaluation (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Test and Evaluation 1	C/T&M	Northrop Grumman Mission System : Ft. Huachuca, AZ	75.279	-		-		-		-		-	0.000	75.279	75.279
Test and Evaluation 2	C/T&M	Interop Joint Venture : Ft. Huachuca, AZ	99.188	-		-		-		-		-	0.000	99.188	99.188
Test and Evaluation 3	C/T&M	Northrop Grumman Information Technology : Ft. Huachuca, AZ	49.746	-		-		-		-		-	0.000	49.746	49.746
Test and Evaluation 4	C/Various	VARIOUS - pending development of query : VARIOUS	54.481	-		-		-		-		-	Continuing	Continuing	Continuing
Test and Evaluation 5	Option/CPFF	ALION SCIENCE & TECHNOLOGY CORP : Various	-	0.218	Oct 2015	0.192	Oct 2016	0.207	Oct 2017	-		0.207	Continuing	Continuing	Continuing
Test and Evaluation 6	Option/CPFF	AMERICAN SYSTEMS COPR : Various	-	0.551	Oct 2015	0.485	Oct 2016	0.523	Oct 2017	-		0.523	Continuing	Continuing	Continuing
Test and Evaluation 7	Option/CPFF	MANTECH TELECOMMUNICATIONS AND INFORMATION : Various	-	3.502	Oct 2015	3.081	Oct 2016	3.320	Oct 2017	-		3.320	Continuing	Continuing	Continuing
Test and Evaluation 8	Option/CPFF	OBERON ASSOCIATES : Various	-	5.297	Oct 2015	4.660	Oct 2016	5.023	Oct 2017	-		5.023	Continuing	Continuing	Continuing
Test and Evaluation 9	Option/CPFF	TASC, INC. : Various	-	1.397	Oct 2015	1.229	Oct 2016	1.325	Oct 2017	-		1.325	Continuing	Continuing	Continuing
Test and Evaluation 10	Option/CPFF	BEACON GROUP SW, INC : Various	-	8.614	Oct 2015	7.579	Oct 2016	7.450	Oct 2017	-		7.450	Continuing	Continuing	Continuing
Test and Evaluation 11	Option/CPFF	Multiple : Various	-	8.696	Oct 2015	8.032	Oct 2016	8.658	Oct 2017	-		8.658	Continuing	Continuing	Continuing
Subtotal			278.694	28.275		25.258		26.506		-		26.506	-	-	-

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Exhibit R-3, RDT&E Project Cost Analysis: FY 2018 Defense Information Systems Agency												Date: May 2017			
Appropriation/Budget Activity 0400 / 7						R-1 Program Element (Number/Name) PE 0208045K / C4I Interoperability						Project (Number/Name) T40 / Major Range Test Facility Base Operations			
Management Services (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Management Services	Various	Defense Information Systems Agency : Ft. Huachuca, AZ	198.252	28.992	Oct 2015	24.619	Oct 2016	25.252	Oct 2017	-		25.252	Continuing	Continuing	Continuing
Subtotal			198.252	28.992		24.619		25.252		-		25.252	-	-	-
			Prior Years	FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			476.946	57.267		49.877		51.758		-		51.758	-	-	-
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: FY 2018 Defense Information Systems Agency										Date: May 2017			
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 0208045K / C4I Interoperability					Project (Number/Name) T40 / Major Range Test Facility Base Operations			

FY 2009				FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

Develop and Implement Interoperability test systems to support warfighters																												
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FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

Develop and Implement Interoperability test systems to support warfighters																												
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Exhibit R-4A, RDT&E Schedule Details: FY 2018 Defense Information Systems Agency			Date: May 2017
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0208045K / <i>C4I Interoperability</i>	Project (Number/Name) T40 / <i>Major Range Test Facility Base Operations</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Develop and Implement Interoperability test systems to support warfighters	1	2015	4	2022

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Defense Information Systems Agency										Date: May 2017		
Appropriation/Budget Activity 0400: Research, Development, Test & Evaluation, Defense-Wide I BA 7: Operational Systems Development					R-1 Program Element (Number/Name) PE 0301144K I Joint/Allied Coalition Information Sharing							
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	78.860	1.735	5.935	6.104	-	6.104	5.413	5.423	5.544	5.683	Continuing	Continuing
NND: Multinational Information sharing	78.860	1.735	5.935	6.104	-	6.104	5.413	5.423	5.544	5.683	Continuing	Continuing

A. Mission Description and Budget Item Justification

Through the Combined Enterprise Regional Information Exchange System (CENTRIXS) and Pegasus, the Multinational Information Sharing (MNIS) Program enables secure sharing of operational and intelligence information and enhances collaboration between United States (US) forces, trusted allies and other multinational partners. This effort also increases overall combat effectiveness by leveraging capabilities and information from all partners and reducing the possibility of fratricide. These coalition information sharing systems are in direct support of the Department of Defense's (DoD's) strategic goals to "Win our Nation's Wars" and "Deter conflict and promote security". The MNIS program supports five Combatant Commands (COCOMs) with connectivity in 89 nations, the North America Treaty Organization, 11 Bilateral agreements and 150 sites with over 80,000 users worldwide. MNIS also evaluates new technologies and develops tactics, techniques and procedures to facilitate the integration of emerging technologies and capabilities into operational multinational information sharing capability. The integration of new technology for CENTRIXS and Pegasus is accomplished through research, integration, and testing using the Combined Federated Battle Laboratory Network.

A planned improvement to the CENTRIXS coalition network, Common Mission Network Transport (CMNT), will provide distinct and permanent transport capabilities; enabling network operation centers to priority command and control information more efficiently. CMNT supports DoD instruction 8110.1 guidance for integrating CENTRIXS and other operational networks into existing DoD general service communications infrastructure as a separate network servicing all DoD MNIS requirements. This capability provides a common transport for encrypted traffic. CMNT will be the established encrypted network to facilitate the movement of virtual private network traffic between segments.

The MNIS emerging capability, Unclassified Information Sharing Services (UISS), extends US information sharing capabilities to mission partners providing enterprise-level solutions that allow COCOMs to share unclassified information with US Government agencies and non-traditional partners such as, host nations, intergovernmental organizations, and nongovernmental organizations. The employment concept for the UISS is to implement enterprise Web-based, "non-mil" platform, available to as broad a community as needed to support mission operations, with worldwide, 24 hour-a-day, seven day-a-week access, to any user with an Internet connection, including web-enabled mobile personal devices. Using an Internet-based capability and an integrated suite of commercial-off-the-shelf collaboration tools the UISS capability will enable unclassified information exchanges and ad-hoc communications for shared communities of interest and issue-specific groups among and across organizations and individuals.

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Defense Information Systems Agency				Date: May 2017	
Appropriation/Budget Activity		R-1 Program Element (Number/Name)			
0400: Research, Development, Test & Evaluation, Defense-Wide I BA 7: Operational Systems Development		PE 0301144K I Joint/Allied Coalition Information Sharing			
B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	1.845	5.935	6.104	-	6.104
Current President's Budget	1.735	5.935	6.104	-	6.104
Total Adjustments	-0.110	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-0.110	-			
• SBIR/STTR Transfer	-	-			
Change Summary Explanation					
No change explanation needed.					

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 0301144K / Joint/Allied Coalition Information Sharing				Project (Number/Name) NND / Multinational Information sharing			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
NND: Multinational Information sharing	78.860	1.735	5.935	6.104	-	6.104	5.413	5.423	5.544	5.683	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Multinational Information Sharing (MNIS) Program is a portfolio of four coalition information sharing capabilities designed to enable and improve sharing of operational and intelligence information among United States (US) forces and multinational partners.

1) Combined Enterprise Regional Information Exchange System (CENTRIXS), supports intelligence and classified operations at the Secret Releasable level. There are multiple, cryptographically-isolated CENTRIXS enclaves serving various communities of interest (COI) that support multinational efforts including Overseas Contingency Operations and counter-narcotics operations. CENTRIXS is regionally focused and combatant command (COCOM) centric. The MNIS Program Management Office provides selected centralized services from two Defense Enterprise Computing Centers for five of the 40+ CENTRIXS networks/COIs, and engineering support for standardized solutions.

2) Pegasus connects the national Command and Control (C2) systems of Combined Communications Electronics Board (CCEB) Nations including Australia, Canada, New Zealand, United Kingdom and the US, using commercial-off-the-shelf security appliances and cross domain solutions that facilitate situational awareness and operational planning/execution. Pegasus has a strategic focus and is member nation centric.

3) The Combined Federated Battle Laboratory Network (CFBLNet) provides a controlled coalition Research, Development, Trials and Assessment coalition information sharing “sandbox” for the US, CCEB Nations, North Atlantic Treaty Organization (NATO), and other mission essential nations. This sandbox is used to evaluate new technologies and to develop tactics, techniques and procedures that facilitate the transition of promising technologies and capabilities into operational multinational information sharing capability enhancements. CFBLNet's direct customers are the CCEB nations’ military operational and intelligence entities led by their US counterparts at the COCOM and Agency levels. It is being used for the Coalition Warrior Interoperability Demonstrations, NATO missile defense initiatives, and by the Intelligence, Surveillance and Reconnaissance community to test capabilities prior to deployment.

4) The Unclassified Information Sharing Service (UISS) extends US information sharing capabilities to mission partners, enterprise-level solutions that allow COCOMs to share unclassified information with other US Government agencies, host nations, inter-governmental organizations, non-governmental organizations, and other partners.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018
Title: Multinational Information Sharing	1.735	5.935	6.104
Description: Through the CENTRIXS and Pegasus, the MNIS Program enables secure sharing of operational and intelligence information and enhances collaboration among US forces, most trusted allies and additional multinational partners. The MNIS			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency		Date: May 2017	
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0301144K / <i>Joint/Allied Coalition Information Sharing</i>	Project (Number/Name) NND / <i>Multinational Information sharing</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
<p>Program also initiated a capability to support enhancements for the UISS-All Partners Access (APAN). UISS-APAN migrated existing systems supporting coalition sharing to an enterprise solution hosted on a DISA Defense Enterprise Computing Center. UISS-APAN capability will satisfy COCOM needs for tools and technology to support collaboration with non-traditional partners for humanitarian missions.</p> <p>FY 2016 Accomplishments: CENTRIXS CMNT: Completed CMNT transport integration and testing which improves and provides more effective and faster classified information sharing across the enterprise. Performed testing and support activities for the first CENTRIXS virtualized node location to evolve CENTRIXS to the Mission Partner Environment - Information Systems (MPE-IS) to be more responsive to COCOM missions to receive services within days vice weeks.</p> <p>Pegasus: Performed testing and integration activities to implement new Pegasus Five Eyes (FVEY) nations Sharepoint capability.</p> <p>CFBLNet: Provided integration and testing services to support Coalition Verification and Validation Environment (CV2E) enclave and support Coalition and NATO testing initiatives for Enterprise Challenge 2016 (EC16) among other exercises.</p> <p>UISS-APAN: Developed network system architecture designs and integration testing for commercial cloud services transition from legacy hosting platform.</p> <p>The decrease of -\$2.086 from FY 2015 to FY 2016 is attributed to decreased testing activities; research, engineering, and planning support for classified networks that include CENTRIXS, Pegasus, and CFBLNet coalition environments.</p> <p>FY 2017 Plans: CENTRIXS CMNT: Continue leveraging technology refresh activities for integration of CENTRIXS environments to include MPE-IS and standardize coalition environments to support hosting more COIs to gain efficiencies in infrastructure consolidation and rapid mission response time. MPE-IS testing and integration activities will support CENTRIXS core services for Episodic and Enduring MPE Capabilities for COCOMs.</p> <p>Pegasus: Plan to perform testing and integration activities for MPE FVEY Nations capabilities to support one-time and on-going capabilities for FVEY Nations (AUS/CAN/NZL/UK/USA).</p> <p>CFBLNet: Plan to perform testing and integration activities for Commercial Solutions for Classified (CSfC) to provide more efficient classified communications for coalition networks. Plan to provide integration and testing services to expand CFBLNet as a Service to support MPE virtualization and Coalition Test Bed Environments.</p>			
		FY 2018	

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency			Date: May 2017
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0301144K / <i>Joint/Allied Coalition Information Sharing</i>	Project (Number/Name) NND / <i>Multinational Information sharing</i>	

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2016	FY 2017	FY 2018
<p>UISS-APAN: Plan to perform network system architecture integration and testing for the Unclassified Mission Partner Environment (MPE) Gateway and cloud efforts to support Software as a Service (SaaS), Infrastructure as a Service (IaaS), and Platform as a Service (PaaS).</p> <p>The increase of +\$4.090 from FY 2016 to FY 2017 provides an increase in testing and integration activities for MPE Episodic and Enduring capabilities to implement virtualized technologies for Classified COIs and Unclassified MPE Gateway integration and testing.</p> <p>FY 2018 Plans: CENTRIXS CMNT: Continue leveraging technology refresh activities for integration of legacy CENTRIXS environments to gain efficiencies in virtualization consolidation for storage and services to reduce sustainment costs. Plan for integration and testing of additional core services to mission partners.</p> <p>Pegasus: Plan to perform testing and integration activities for Coalition Network Operations Center (CNOC) and National-level Network Operations Center (NNOC) FVEY (AUS/CAN/NZL/UK/USA) Nations capabilities.</p> <p>CFBLNet: Plan to perform testing and integration activities for technical refresh of Wide Area Network (WAN) infrastructure to support Research and Development, Training, Trials & Assessment (RDTT&A) initiatives on a recurring annual basis. Support testing and integration for virtualized infrastructure for Cross Domain Enterprise Services.</p> <p>UISS-APAN: Plan to perform cloud platform integration and testing for the Unclassified information sharing capabilities supporting Humanitarian Assistance & Disaster Relief (HA/DR) efforts.</p> <p>The increase of +\$0.169 from FY 2017 to FY 2018 provides an increase in testing and integration activities for MPE Episodic and Enduring capabilities to implement virtualized technologies for Classified COIs.</p>			
Accomplishments/Planned Programs Subtotals	1.735	5.935	6.104

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
• O&M, DW/0301144K: <i>O&M, DW</i>	50.352	47.629	46.665	-	46.665	46.749	47.227	48.172	48.357	Continuing	Continuing
• Proc, DW/0301144K: <i>Proc, DW</i>	0.596	0.623	0.708	-	0.708	1.003	1.003	1.023	1.049	Continuing	Continuing

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency										Date: May 2017	
Appropriation/Budget Activity 0400 / 7				R-1 Program Element (Number/Name) PE 0301144K / Joint/Allied Coalition Information Sharing				Project (Number/Name) NND / Multinational Information sharing			
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Remarks											
D. Acquisition Strategy											
Performance-based contracts are primarily used for this support. MNIS maximizes the use of competitive awards and uses various contract types, employs large and small contractors, and is focused to achieve agency socio-economic goals and incorporate DoD acquisition reform initiatives. MNIS evaluates performance by conducting thorough Post-award Contract Reviews, monthly Contract Performance Reviews, and monthly In-Process Reviews.											
E. Performance Metrics											
Measure:											
-Functional and/or Security Test & Evaluation test cases.											
Performance Metric:											
-System will provide for 99.99% data integrity for authorized users sharing information cross COI. FY14 (Actual): Met											
FY16 (Estimate): N/A											
FY17 (Estimate): N/A											
-Maintain 99.99% confidentiality for users, by Nation between COI's. FY14 (Actual): Met											
FY16 (Estimate): N/A											
FY17 (Estimate): N/A											
-Direct traffic with 99.99% accuracy for chat, email, VOIP, file transfer, data storage and web service. FY14 (Actual): Met											
FY16 (Estimate): N/A											
FY17 (Estimate): N/A											
Methodology:											
-Assessment Plan											
-Sample ≥ 10K transactions (Email, chat & file storage/transfer)											
-Conduct selected ST&E test cases											
Measure:											

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency		Date: May 2017
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0301144K / <i>Joint/Allied Coalition Information Sharing</i>	Project (Number/Name) NND / <i>Multinational Information sharing</i>
<p>-Security Performance Metric:</p> <p>-Deny 98.5% of unauthorized user attempts FY14 (Actual): Met FY16 (Estimate): N/A FY17 (Estimate): N/A</p> <p>Methodology: -Assessment Plan -DISA Field Security Operations will conduct penetration testing</p> <p>Measure: -Security</p> <p>Performance Metric: -Audit log must capture 99.99% of any unauthorized user activity. FY14 (Actual): Met FY16 (Estimate): N/A FY17 (Estimate): N/A</p> <p>Measure: -% of design, testing and integration activities for MNIS classified technology refresh projects complete (9 Nodes) – 100%</p> <p>Performance Metric: -Information Assurance (Classified) FY16 (Estimate): Met FY17 (Estimate): Expected to Meet FY18 Target: Expected to Meet</p> <p>Methodology: -Technology Refreshes Projects – 100% -Direct traffic with 99.99% accuracy for chat, email, VOIP, file transfer, data storage and web service.</p> <p>Measure: -Number of CFBLNet Exercises/Events hosted</p>		

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency		Date: May 2017
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0301144K / <i>Joint/Allied Coalition Information Sharing</i>	Project (Number/Name) NND / <i>Multinational Information sharing</i>
<p>Performance Metric:</p> <p>-Annual number of CFBLNet Exercises hosted \geq 2 Exercises Hosted (Empire Challenge & CWIX)</p> <p>FY16 (Estimate): Met</p> <p>FY17 (Estimate): Expected to Meet</p> <p>FY18 Target: Expected to Meet</p> <p>-Annual number of Test Bed Exercise \geq 16 Test Events Hosted FY16 (Estimate): Met</p> <p>FY16 (Estimate): Met</p> <p>FY17 (Estimate): Expected to Meet</p> <p>FY18 Target: Expected to Meet</p> <p>Methodology:</p> <p>-Number of exercises hosted per Fiscal Year</p> <p>Measure:</p> <p>Cloud integration, Development, Integration, Testing (Unclassified)</p> <p>Performance Metric:</p> <p>% of Cloud Development, Testing, Integration and Implementation Complete = 100%</p> <p>FY16 (Estimate): Met</p> <p>FY17 (Estimate): Expected to Meet</p> <p>FY18 Target: Expected to Meet</p>		

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Defense Information Systems Agency **Date:** May 2017

Appropriation/Budget Activity 0400: Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development					R-1 Program Element (Number/Name) PE 0302016K / National Military Command System-Wide Support							
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	6.315	0.938	0.575	1.863	-	1.863	1.849	1.823	1.855	1.866	Continuing	Continuing
S32: NMCS Command Center Engineering	6.315	0.938	0.575	1.863	-	1.863	1.849	1.823	1.855	1.866	Continuing	Continuing

A. Mission Description and Budget Item Justification

The National Military Command System (NMCS), operated by the Chairman of the Joint Chiefs of Staff, provides the President, Secretary of Defense, and other national senior leaders the ability to maintain situational and operational awareness and command and control of military forces in all crisis and/or national emergency contingencies. DISA's NMCS engineering program meets the NMCS systems engineer responsibilities, per Department of Defense Directive (DoDD) S-5100.44 and Chairman of the Joint Chiefs of Staff Instruction (CJCSI) 3280.01B, to provide the Joint Staff with operationally efficient and cost-effective engineering solutions to ensure that components and facilities satisfy operational requirements including emergency messaging, situational awareness, crisis action, and information management.

The NMCS engineering program is vital in supporting the government's ability to safeguard national security and respond to contingencies globally and/or nuclear war. NMCS engineering focuses on implementing collaborative tools into current and crisis operations areas, integrating adequate back-up storage and recovery of voice, video and data across the continental United States to support key leaders, transitioning nuclear command and control to Internet Protocol based networks, migrating data and voice network to next generation satellites, implementing modern cryptological devices, and utilizing wireless networking to support warning systems and situational awareness. In addition, NMCS engineering continues to maintain the NMCS Reference Guide required by DoDD S-5100.44 and to develop engineering and test plans for the installation of hardware and software systems utilized within the NMCS.

B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	0.963	0.575	1.155	-	1.155
Current President's Budget	0.938	0.575	1.863	-	1.863
Total Adjustments	-0.025	0.000	0.708	-	0.708
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-0.025	-			
• SBIR/STTR Transfer	-	-			
• Other adjustments	-	-	0.708	-	0.708

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Defense Information Systems Agency		Date: May 2017
Appropriation/Budget Activity 0400: Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development	R-1 Program Element (Number/Name) PE 0302016K / National Military Command System-Wide Support	
Change Summary Explanation The increase of +\$0.708 in FY 2018 is due to application of the National Leadership Command Capability (NLCC) Configuration Management process to applicable NMCS systems; engineering support for Northstar and SATSTAR services transition to new NLCC transport infrastructure; and implementation/ engineering of expanded conferencing capabilities in support of all NMCS sites. This increase is partially offset by a decrease of -\$0.079 attributed to the Service Requirements Review Board (SSRB) contract reduction.		

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 0302016K / National Military Command System-Wide Support				Project (Number/Name) S32 / NMCS Command Center Engineering			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
S32: NMCS Command Center Engineering	6.315	0.938	0.575	1.863	-	1.863	1.849	1.823	1.855	1.866	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The National Military Command System (NMCS), operated by the Chairman of the Joint Chiefs of Staff, provides the President, Secretary of Defense, and other national senior leaders the ability to maintain situational and operational awareness and command and control of military forces in all crisis and/or national emergency contingencies. DISA's NMCS engineering program meets the NMCS systems engineer responsibilities, per Department of Defense Directive (DoDD) S-3710.01 and Chairman of the Joint Chiefs of Staff Instruction (CJCSI) 3280.01C, to provide the Joint Staff with operationally efficient and cost-effective engineering solutions to ensure that components and facilities satisfy operational requirements including emergency messaging, situational awareness, crisis action, and information management.

The NMCS engineering program is vital in supporting the government's ability to safeguard national security and respond to contingencies globally and/or nuclear war. NMCS engineering focuses on implementation of collaborative tools into current and crisis operations areas, the integration of adequate back-up storage and recovery of voice, video and data across the continental United States to support key leaders, transition of nuclear command and control to Internet Protocol (IP)-based networks, migration of data and voice network to next generation satellites, implementation of modern crypto-logical devices, and the utilization of wireless networking to support warning systems and situational awareness. In addition, NMCS engineering continues to maintain the NMCS Reference Guide (NRG) required by DoDD S-3710.01 and to develop engineering and test plans for the installation of hardware and software systems utilized within the NMCS.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018
Title: NMCS Systems Engineering	0.938	0.575	1.863
FY 2016 Accomplishments: Maintained the NMCS Reference Guide (NRG) and the PCC Toolkit to ensure expanded collaboration and information sharing. Updated, automated and maintained the Online Companion Reference for the CJCSI 3280.01M which is critical to ongoing operations. Provided technical evaluations and strategies for implementing Nuclear Command and Control over IP into other National Leadership Command Capability (NLCC) enabling programs. Supported engineering requirements and continued in identifying technical solutions to integrate NMCS with other senior leadership and continuity command, control and communication (C3) systems that constitute the NLCC. Focused on implementing collaborative tools into current and crisis operations areas, integrating adequate back-up storage and recovery of voice, video and data to support key leaders, and migrating data and voice networks to next generation satellites.			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency							Date: May 2017				
Appropriation/Budget Activity 0400 / 7			R-1 Program Element (Number/Name) PE 0302016K / <i>National Military Command System-Wide Support</i>			Project (Number/Name) S32 / <i>NMCS Command Center Engineering</i>					
B. Accomplishments/Planned Programs (\$ in Millions)							FY 2016	FY 2017	FY 2018		
<p>The increase of +\$0.039 from FY 2015 to FY 2016 addressed data integration and engineering activities required to deliver enterprise level solutions to meet NMCS priorities.</p> <p>FY 2017 Plans: Will modernize and integrate NMCS capabilities (e.g. transition platforms, data interfaces, security and graphical user interfaces) as the NMCS systems engineer IAW the CJCSI 3280 and CJCSI 5119. Will focus on the improvement of collaborative services, and the integration of new transport mediums that facilitate C3 services.</p> <p>The decrease of -\$0.413 from FY 2016 to FY 2017 is due to a reduction of Joint System Engineering & Integration Office engineering and analysis efforts supporting Ultra High Frequency (UHF) Emergency Network (UEN) ground entry points (GEPs) re-siting and network infrastructure redesign.</p> <p>FY 2018 Plans: Will continue to engineering and integrate the modernization of NMCS capabilities (e.g. transition platforms, data interfaces, security and graphical user interfaces) as the NMCS Systems Engineer IAW CJCSI 3280 and CJCSI 5119. Will focus on the improvement of collaborative services, and the integration of new transport mediums that facilitate C3 services. Integrate applicable portions of the NMCS into the National Leadership Command Capability (NLCC) portfolio.</p> <p>The increase of +\$1.367 from FY 2017 to FY 2018 is due to application of the NLCC Configuration Management process to applicable NMCS systems and to provide engineering support for Northstar and SATSTAR services transition to new NLCC transport infrastructure. This increase is partially offset by a decrease of -\$0.079 attributed to the Service Requirements Review Board (SSRB) contract reduction.</p>											
Accomplishments/Planned Programs Subtotals							0.938	0.575	1.863		
C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u> <u>Base</u>	<u>FY 2018</u> <u>OCO</u>	<u>FY 2018</u> <u>Total</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• O&M, DW/PE	3.053	3.156	4.306	-	4.306	4.342	4.485	4.553	4.615	Continuing	Continuing
0302016K: O&M, DW											
Remarks											
D. Acquisition Strategy											
During FY2017 a full and open competition will be conducted for an NLCC Systems Engineering and Technical Assistance (SETA) contract to provided programmed support to JSEIO in FY2018 as follow-on to the previous contract with Raytheon, Arlington, VA.											

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency		Date: May 2017
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0302016K / National Military Command System-Wide Support	Project (Number/Name) S32 / NMCS Command Center Engineering

E. Performance Metrics

The JSEIO conducts regularly scheduled In-progress Program Reviews (IPRs) and Configuration Control Board (CCB) meetings to monitor status of engineering projects/tasks. Each current project/task is evaluated in terms of how well the technical work is progressing and how allocated resources are being utilized. Adjustments to resources, schedules, and technical directions are made, as required. Future projects/tasks are also discussed, thereby ensuring an integrated approach is maintained across all related project/task areas. To further increase the utility of the IPR/CCB structure, the Joint Staff customer participates in the project/task reviews. The result of this approach is a truly integrated effort of NMCS Engineering, contractor, and Joint Staff working together to achieve common program goals. Suitable products are delivered within allocated resources and delivered on schedule 90% of the time.

The NMCS met all FY 2016 performance metrics and is on track to meet its FY 2017 and FY 2018 metrics by delivering suitable products on schedule and within allocated resources 100% of the time.

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Defense Information Systems Agency										Date: May 2017		
Appropriation/Budget Activity 0400: Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development					R-1 Program Element (Number/Name) PE 0302019K / Defense Info. Infrastructure Engineering and Integration							
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	117.426	9.729	18.041	21.564	-	21.564	22.009	21.335	21.819	22.268	Continuing	Continuing
E65: Modeling and Simulation	78.775	5.583	4.084	9.251	-	9.251	9.888	9.611	9.829	10.033	Continuing	Continuing
T62: DoD Information Network (DoDIN) Systems Engineering and Support	38.651	4.146	13.957	12.313	-	12.313	12.121	11.724	11.990	12.235	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Defense Information Infrastructure Engineering and Integration effort encompasses two projects: Modeling and Simulation and DoD Information Network (DODIN) Systems Engineering and Support. There are two major activities under the Modeling and Simulation project: Modeling and Simulation and DODIN Enterprise Wide Systems Engineering (EWSE).

The DODIN EWSE activity resolves near term (one to three years) high-priority technical issues defined by DoD Chief Information Officer (DoD CIO) and Defense Information Systems Agency (DISA), that impact operational capabilities affecting DODIN End-to-End (E2E) interoperability and performance.

The Modeling and Simulation project provides architecture, systems engineering and E2E analytical functions for DISA and its customers, ensuring integrated capabilities to fulfill warfighter mission requirements. Ongoing beneficiaries of these capabilities include DoD CIO, the DISA Network Services Directorate, the DISA Enterprise Services Directorate, Program Executive Office-Mission Assurance, the Defense Information Systems Network Command Center and Joint Communications Simulation System users in DoD.

The DoDIN Systems Engineering and Support project performs discovery, research, development and experimentation of emerging and commercial technologies through the Office of the Chief Technology Officer (OCTO) to fill capability shortfalls and technology gaps across the Future Years Defense Program (FYDP). The OCTO identifies these gaps/shortfalls, pursues leading innovative solutions from industry, academia, and the Federal sector, and engages industry partners for commercial best practices. The OCTO Develops technology forecasts and innovation roadmaps for existing and nascent DISA Programs in the following areas: Process/Automation, Cloud, Cyber Security, End-User Devices, Communication (DoDIN/Mobile/End-User Devices). The OCTO conducts technical system engineering reviews and oversight of DISA and DoD enterprise products and services. The OCTO performs early identification of technology needs and explores, develops, and delivers recommended emerging technologies to the DISA Requirements & Analysis Office.

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Defense Information Systems Agency	Date: May 2017
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Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I</i> BA 7: <i>Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0302019K / <i>Defense Info. Infrastructure Engineering and Integration</i>
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B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	10.120	18.041	23.499	-	23.499
Current President's Budget	9.729	18.041	21.564	-	21.564
Total Adjustments	-0.391	0.000	-1.935	-	-1.935
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-0.391	-			
• SBIR/STTR Transfer	-	-			
• Other adjustments	-	-	-1.935	-	-1.935

Change Summary Explanation

The decrease of -\$1.935 in FY 2018 is attributable to the shifting of agency priorities to align with evolving mission. The decrease is attributed to the termination in research efforts of the Service Level Interoperability of Tactical Edge Core (SLITEC). Decrease is also attributable to technology maturing at such a rapid pace, it is imperative to rapidly assess, integrate, and transition promising technologies and capabilities. To improve efficiency and effectiveness of these processes, the assessment framework will be streamlined to reduce the timelines, resource requirements, and fiscal requirements. Capability prototypes will be delivered more rapidly through the use of Other Transaction Authorities (OTAs) and/or Broad Agency Announcements (BAAs), and joint assessment initiatives and partnerships will be coordinated. These improvements are expected to yield an estimated cost savings in FY 2018.

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 0302019K / Defense Info. Infrastructure Engineering and Integration				Project (Number/Name) E65 / Modeling and Simulation			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
E65: Modeling and Simulation	78.775	5.583	4.084	9.251	-	9.251	9.888	9.611	9.829	10.033	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Modeling and Simulation project provides architecture, systems engineering and end-to-end (E2E) analytical functions for the Defense Information Systems Agency (DISA) and its customers, ensuring integrated capabilities to fulfill warfighter mission requirements. Modeling and Simulation activities support the Department of Defense (DoD) communications planning and investment strategy, including: application performance assessments, contingency planning, network capacity planning and diagnostics, and systems-level modeling and simulation. Project efforts provide across-theater information awareness for Combatant Commands through application solutions for integrated networks, including DoD's missions in Afghanistan and the Defense Information Systems Network (DISN) by: (1) supporting the development and implementation of DoD Information Network (DODIN) Enterprise Wide Systems Engineering (EWSE) processes essential to evolving the DODIN in a manner that enables interoperability and E2E performance for critical DODIN programs; (2) developing standardized DISA systems analyses and integration processes to improve systems integration across DISA for all DISA developed communication systems and services; and (3) providing the underlying modeling and simulation and analytical support for E2E DISA and DoD systems engineering and assessment.

Project efforts provide DoD decision makers with services and a suite of tools capable of identifying key points of impact on DoD command and control information systems and recommending trade-offs within the DODIN configuration with regard to prioritized performance, availability, and security. This effort will reduce the risk in products deployed to the warfighter through improved network performance and traffic analysis, and an efficient means of troubleshooting and subsequent redesign.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018
Title: Modeling and Simulation	5.583	4.084	9.251
FY 2016 Accomplishments: Resolved high-priority technical issues impacting interoperability of DODIN capabilities in communications, computing services, applications/services, information assurance (IA) and net-centric operations (NetOps). Analyzed/prototyped cloud computing services that can be integrated or interoperated with DoD capabilities. Identified capability candidates for analysis; perform technical market research, alternatives analysis and trade-off studies of candidates within a defined trade space; analyzed and evaluated existing/new capabilities through engineering methods to include proof-of-concept demonstrations; and performed technical assessments to develop technical recommendations supporting solution development decisions. Analyzed/prototyped cloud computing services and open source capabilities for integration and interoperability with DoD capabilities. Examined application of SDN technologies for Core Data Centers and DISN. Performed technical assessments for open source alternatives for new technology solutions. Developed enterprise architecture and SysML modeling artifacts for high priority DISA enterprise services. Enhanced proactive end-to-end performance capabilities, including data collection and tools to support enterprise wide			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency		Date: May 2017	
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0302019K / <i>Defense Info. Infrastructure Engineering and Integration</i>	Project (Number/Name) E65 / <i>Modeling and Simulation</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
troubleshooting and analysis. The results will be socialized with the DoD community for action/adoption or further development. Where appropriate, the results will also be documented in GTP for compliance by the POR.			
<p>Will continue efforts to enhance modeling capabilities that will provide DISN IP and Transport Capacity Planning models, modifying tools and processes to reflect the operational DISN architecture and technologies as evolved under Joint Information Environment (JIE) initiatives and technical advances. These enhancements include: (1) preparing for the FY 2018 Technology Refresh (feasibility analyses required prior to hardware being added to the DODIN) and new user requirements; (2) enhanced modeling and instrumentation techniques for new or evolving enterprise Services and customer needs in DISA program/project decisions and planning; (3) DoD Internet traffic models and analyses for capacity planning and IA initiatives for CYBERCOM and additional organizations within DISA; (4) enhanced modeling tools and techniques to provide inputs to network planning and performance assessments in support of Unified Communications and E2E security goals of the evolving DISN; and (5) an updated version of the Joint Communications Simulation System.</p> <p>FY 2017 Plans:</p> <p>Will evolve EWSE and standards efforts to operationalize the E2E performance efforts and distill the standards efforts to support DISA Strategic Initiatives and to resolve high-priority technical issues impacting interoperability of DoDIN capabilities in communications, computing services, enterprise applications/services, information assurance (IA) and net-centric operations (NetOps). Will identify capability candidates for analysis; perform technical market research, alternatives analysis and trade-off studies of candidates within a defined trade space; analyze and evaluate existing/new capabilities through engineering methods to include proof-of-concept demonstrations; and perform technical assessments to develop technical recommendations supporting solution development decisions. Will analyze/prototype cloud computing services and open source capabilities for integration and interoperability with DoD capabilities. Will support application and implementation of SDN technologies for Core Data Centers and the DISN. Will continue to enhance end-to-end performance capabilities, including data collection and tools to support enterprise wide troubleshooting and analysis. The results will be socialized with the DoD community for action/adoption or further development. Where appropriate, the results will also be documented in GTP for compliance by the POR.</p> <p>Will continue efforts to enhance modeling capabilities that will provide DISN IP and Transport Capacity Planning models and expand computing infrastructure modeling capabilities, modifying tools and processes to reflect the operational DODIN architecture and technologies as evolved under Joint Regional Security Stacks (JRSS) and the common informational architecture initiatives and technical advances. These enhancements include: (1) preparing for the FY 2019 Technology Refresh (feasibility analyses required prior to hardware being added to the DODIN) and new user requirements; (2) enhanced modeling and instrumentation techniques for new or evolving enterprise services and customer needs in DISA program/project decisions and planning; (3) DoD Internet traffic models and analyses for capacity planning and IA initiatives for CYBERCOM and organizations within DISA; (4) enhanced modeling tools and techniques to provide inputs to network planning and performance assessments</p>			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency							Date: May 2017				
Appropriation/Budget Activity 0400 / 7			R-1 Program Element (Number/Name) PE 0302019K / Defense Info. Infrastructure Engineering and Integration				Project (Number/Name) E65 / Modeling and Simulation				
B. Accomplishments/Planned Programs (\$ in Millions)							FY 2016	FY 2017	FY 2018		
in support of Unified Communications and End-to-End (E2E) security goals of the evolving DODIN; (5) capacity planning for data centers infrastructure computing and network; and (6) an updated version of the Joint Communications Simulation System.											
There is a decrease of -\$1.499 between FY 2016 and FY 2017. The FY 2017 funding will be used to broadened and enhanced modeling and simulation methodologies to properly identify the network planning and bandwidth sufficiency needs of the evolving DODIN.											
FY 2018 Plans: Will develop modeling and simulation tools to analyze planned changes to the DISN optical and IP core network, data centers, internet and commercial cloud computing gateways, and network security solutions. Will develop capabilities for analysis of software defined networking. Will perform test and evaluation of DISN Internet Access Point security solutions with government and contracted labor support. Will research technologies and solutions that can be transitioned to operations and will demonstrate feasibility through solutions analysis and proof-of-concept development and test. Will perform product and solution assessments using developed modeling tools to provide technical solutions for IT capabilities to ensure compatibility and interoperability with the DISN, data centers, and JIE solution architectures. Will develop application performance monitoring framework to support reliable operation of enterprise services and applications.											
The increase of +\$5.167 from FY 2017 to FY 2018 is attributed to increased efforts in evaluating tools and solutions for a regional defensive cyber security systems, performance of cloud computing and security. Additionally, the increase is associated with test and evaluation of larger scale software defined data centers and network function virtualization. This increase is partially offset by a decrease of -\$0.207 is attributed to the Service Requirements Review Board (SSRB) contract reduction.											
Accomplishments/Planned Programs Subtotals							5.583	4.084	9.251		
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
• PE 0302019K: Operation & Maintenance, Defense-Wide	15.496	15.989	15.606	-	15.606	16.437	16.579	16.911	-	Continuing	Continuing
Remarks											
D. Acquisition Strategy											
EWSE uses contractors to assist/supplement the Government lead/team for technical activities. Subject matter experts in both large and small businesses are sought for the engineering support. Firm fixed price contracts with one option year are typically used in open competition. Furthermore, technical work with Federally Funded											

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency		Date: May 2017
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0302019K / <i>Defense Info. Infrastructure Engineering and Integration</i>	Project (Number/Name) E65 / <i>Modeling and Simulation</i>
<p>Research and Development Centers (FFRDCs) such as MITRE and MIT Lincoln Lab are established and coordinated when the Government can leverage their expertise and R&D in the key technology.</p> <p>Modeling and Simulation uses a range of contractors for modeling support to the various projects. Contractors range from small to large business, predominantly using open competition methods and Firm Fixed Price (FFP) tasks and utilizing multi-year (base plus option years) contracts where possible. Support includes network modeling tool and processes development to adapt to ever-evolving OSD/DISA programs and projects, analyses, capacity planning, and network redesign using the models. Some specific support (e.g., integration with proprietary software) will require contracting with OPNET (e.g., sole source). FFRDCs are also considered depending upon the task.</p> <p><u>E. Performance Metrics</u></p> <p>DISN core transport bandwidth sufficiency, tied to capacity planning and activation of bandwidth in the DISN optical core to keep at least 25% spare capacity, to allow for provisioning of unforeseen requirements and rerouting under outages.</p> <p>DISN IP Core bandwidth sufficiency tied to capacity planning and activation of IP bandwidth to maintain average bandwidth utilization of DISN IP Core and NIPRNet backbone circuits under 65% during daily peak periods.</p> <p>DISN SIPRNet bandwidth sufficiency tied to capacity planning and activation of IP bandwidth to maintain average bandwidth utilization of SIPRNet backbone circuits under 50% during daily peak periods.</p> <p>The EWSE projects will be measured by the number of technical studies performed with associated systems engineering artifacts (market research reports, technology assessments, solutions analyses, etc.) that are developed to support DODIN capabilities; and the number of proof-of-concept demonstrations or pilots executed to support viability of the technical approach/recommendation. These products will be coordinated with the stakeholders, users and/or Program Management Offices (PMO) to ensure EWSE provides the right deliverables for solution development decisions.</p> <p>FY 2016 completed: 1 technical studies, 1 engineering artifact, and 0 concept demonstrations. FY 2017 planned target: 2 technical studies, 6 engineering artifacts, and 2 concept demonstrations. FY 2018 planned target: 2 technical studies, 6 engineering artifacts, and 2 concept demonstrations.</p> <p>The Modeling and Simulation project provides architecture, systems engineering and E2E analytical functions for DISA and its customers, ensuring integrated capabilities to fulfill warfighter mission requirements. Ongoing beneficiaries of these capabilities include DoD Enterprise Activities, the DODIN and DISA applications, as well as engineering capabilities support to programs and projects to address technical and engineering solutions to activities such as information assurance and cyber security; mobility and cloud technologies and warfighter and mission support activities.</p>		

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 0302019K / Defense Info. Infrastructure Engineering and Integration				Project (Number/Name) T62 / DoD Information Network (DoDIN) Systems Engineering and Support			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
T62: DoD Information Network (DoDIN) Systems Engineering and Support	38.651	4.146	13.957	12.313	-	12.313	12.121	11.724	11.990	12.235	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The DoD Information Network (DODIN) Systems Engineering and Support project aligns with the updated DISA Strategic Plan, which includes the Chief Technology Officer's Outlook and a Technology Watchlist. The Watchlist identifies key technology areas that are essential for Defense Information Systems Agency (DISA) including: Process/Automation, Cloud, Cyber Security, End-User Devices, and Communication (DoDIN, Mobile/End-User Devices).

The DODIN Systems Engineering and Support Project ensure the technical strategies for the Defense Information Systems Agency (DISA) are in line with the DoD IT Efficiency strategy and the latest Department of Defense Chief Information Office (DoD CIO) Capabilities Planning Guidance (CPG) through the Office of the Chief Technology Officer (OCTO). These strategies will establish the foundation for DISA's technology investments and technical development. The OCTO leverages emerging technology to drive efficiencies and cost savings to the DoD, the Warfighter, and other Federal Agencies, and provides actionable, decision-oriented information to the Secretary of Defense, Joint Staff, Military Services, Combatant Commands, and other mission partners in satisfying DoD mission objectives. Cyber security and cloud computing present critical near term challenges, especially the ability to securely leverage commercial cloud service offerings. The OCTO's partnership with Defense Advanced Research Projects Agency (DARPA) will assess and transition technologically relevant and mature solutions. Included are applications with a security wrapper that detect and mitigate cyberattacks; smart routing and managed reputation capability; embedded system defense capabilities; and resilient and intrusion-tolerant network capabilities.

Partnerships with industry, academia, and the Federal sectors will produce requisite cyber measures and ensure optimal use of commercial cloud services. The OCTO will conduct technology assessments, process improvements, as well as the analysis and review of potential technology solutions, products, capabilities and services to ensure consistency with DODIN architecture and standards. Enabled by the Technology Assessment Framework (TAF) and the DISA Technology Information Repository (DTIR), the OCTO will perform "quick looks" and deeper technology evaluations to provide critical awareness, characterization, and suitability of specific technologies. These include the assessments of advanced cloud management capabilities; physical containers to enable mobile data center; emerging open source Storage Service APIs and/or abstractions and global standards for storage services; analytic platform performance baselines of emerging commercial analytic platform products; advanced approaches to Continuity of Operations (COOP) in a hybrid cloud environment; and the next generation software defined networks for automating and virtualizing the DODIN.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018
Title: Department of Defense Information Network (DODIN) Systems Engineering and Support	4.146	13.957	12.313
FY 2016 Accomplishments:			
CTO continued to develop the Technology Environment (TE), composed of the technical infrastructure, associated processes, practices, and methodologies that are used to evaluate and characterize new technologies. Projects like CTO's Quick Win			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency			Date: May 2017		
Appropriation/Budget Activity 0400 / 7		R-1 Program Element (Number/Name) PE 0302019K / <i>Defense Info. Infrastructure Engineering and Integration</i>		Project (Number/Name) T62 / <i>DoD Information Network (DoDIN) Systems Engineering and Support</i>	
B. Accomplishments/Planned Programs (\$ in Millions)			FY 2016	FY 2017	FY 2018
<p>Concept Demonstrators (QWCD) delivered to the department and the Warfighter a more secure light weight tablet device that allow full access to office automations which can be leveraged anytime and anywhere. Within the TE, CTO performed technical assessments and proof of concepts for key capability portfolios (Networking, computing & storage, UC, mobility, cyber security, and network operations). CTO included cloud computing technologies and innovative service delivery models, mobile devices, application development and vetting best practices, and next generation virtualized Software Defined Networks for automating and virtualizing the DoD Information Network (DoDIN). CTO continues to partner with commercial partners, academia, technology analysis centers, as well as member organizations within the Intelligence Community, to bring state of the art capabilities to DISA for better communications and monitoring tools, enterprise services and improved end-user services and capabilities. The CTO authored the Software Defined Network (SDN) security framework document which provides security parameters for the SDN. CTO has developed to concept of operations market analysis report for milCloud v2.0 which is the next generation DoD cloud environment.</p> <p>FY 2017 Plans:</p> <p>Will conduct technology assessments, process improvements, as well as the analysis and review of potential technology solutions, products, capabilities and services to ensure consistency with DODIN architecture and standards. Enabled by the TAF and the Defense Technical Intelligence Report (DTIR), the OCTO will perform “quick looks” and deeper technology evaluations to provide critical awareness, characterization, and suitability of specific technologies. These include the assessments of advanced cloud management capabilities, physical containers to enable mobile data center; emerging open source Storage Service APIs and/or abstractions and global standards for storage services, analytic platform performance baselines of emerging commercial analytic platform products, advanced approaches to COOP in a hybrid cloud environment, and the next generation software defined networks for automating and virtualizing the DODIN.</p> <p>Will assess and transition technologically relevant and mature solutions, provides smart routing and managed reputation capabilities; Software Symbiotes which provides embedded system defense capabilities; and advanced technologies and protocols that provide resilient and intrusion-tolerant network and messaging capabilities.</p> <p>Will produce requisite cyber measures and ensure optimal use of commercial cloud services through Partnerships with industry, academia, and the Federal sectors.</p> <p>The increase of +\$9.811 from FY 2016 to FY 2017 is primarily attributable to the discovery, research, development and experimentation of emerging and commercial technology needed to support the development and adoption of key technological solutions, the realignment of civilian Full-Time-Equivalents (FTEs) and the associated payroll from PE0604764K to promote centralized, coordinated technology policy, direction, standards, and leadership allowing CTO and DISA the ability to influence</p>					

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency							Date: May 2017				
Appropriation/Budget Activity 0400 / 7			R-1 Program Element (Number/Name) PE 0302019K / Defense Info. Infrastructure Engineering and Integration			Project (Number/Name) T62 / DoD Information Network (DoDIN) Systems Engineering and Support					
B. Accomplishments/Planned Programs (\$ in Millions)							FY 2016	FY 2017	FY 2018		
and promote technology innovation that meets future DoD requirements. In addition, CTO will perform assessment and reconnaissance of emerging technologies.											
FY 2018 Plans: The CTO will expand its focus on laboratory prototyping known as Software Defined Everything (SDE) which is based on the notion of using software to keep redefining itself, rather than being locked into operating in a specific way. It is easily reconfigurable and extensible software that rapidly morphs to adapt to newly emerging situations. SDE will serve as an enabler to leverage capabilities from five principal areas. These five areas are; Process/Automation, Cloud, Cyber Security, End-User Devices, Communication (DoDIN, Mobile/End-User Devices). CTO will conduct technical assessments for future cloud computing technologies and innovative service delivery models, mobile devices, application development and vetting best practices, and next generation virtualized Software Defined Networks (SDN) for automating and virtualizing the DODIN. CTO will partner with commercial partners, academia, technical analysis centers, as well as organizations within the Intelligence Community, to bring state of the art capabilities to the DISA/DoD resulting in better communications and monitoring tools, enterprise services and improved end-user services and capabilities. CTO will continue to pursue and refine methods, processes and strategies to assist in the acceleration of capability into the operational environment.											
There is a decrease of -\$1.644 from FY 2017 to FY 2018. The FY 2017 funding will be used to morph to an internet 2.0 environment where DoD, other government organizations, coalition members, first responders, private industry, academia and commercial vendors will be able to share secured data and information in such a way that adversaries can be identified, found, brought to Justice before inflicting harm on innocent citizens and allies anywhere in the world. CTO will aggressively pursue next generation technologies to feed the internet 2.0 environment. These technologies will be leveraged through the expansion of a CTO futuristic Skunk Works effort known as Software Defined Everything (SDE) which is based on the notion of using software to keep redefining itself, rather than being locked into operating in a specific way. It is easily reconfigurable and extensible software that rapidly morphs to adapt to newly emerging situations. SDE will serve as an enabler for the internet 2.0 environment. This increase is partially offset by a decrease of -\$0.276 is attributed to the Service Requirements Review Board (SSRB) contract reduction.											
Accomplishments/Planned Programs Subtotals							4.146	13.957	12.313		
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
• O&M, DW/PE	0.994	2.607	2.773	-	2.773	2.814	2.899	2.962	3.035	Continuing	Continuing
0302019K: Operation & Maintenance, Defense-Wide											

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency										Date: May 2017	
Appropriation/Budget Activity 0400 / 7				R-1 Program Element (Number/Name) PE 0302019K / <i>Defense Info. Infrastructure Engineering and Integration</i>				Project (Number/Name) T62 / <i>DoD Information Network (DoDIN) Systems Engineering and Support</i>			
C. Other Program Funding Summary (\$ in Millions)											
			<u>FY 2018</u>	<u>FY 2018</u>	<u>FY 2018</u>					<u>Cost To</u>	
<u>Line Item</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>Base</u>	<u>OCO</u>	<u>Total</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>Complete</u>	<u>Total Cost</u>
<u>Remarks</u>											
D. Acquisition Strategy											
<p>Market research during the acquisition process includes a review of DISA contracts, other DoD contract vehicles, and other Federal Government agency contracts which are advertised for Government-wide usage. This market research also includes consideration of small businesses including minority/women owned (8A) businesses, Historically Black Colleges and Universities, mentor/protégé and other specialized contract vehicles and processes. Market research evaluates all contractors available from DISA sources for their ability to deliver the products specifically required for the unique program efforts. The program works collaboratively with vendors to obtain generic cost data for planning and analysis purposes. Past and current contract prices for similar work and other government-wide agency contracts provide additional sources of information. Quotes from multiple sources help provide averages for more realistic cost estimates. DISA makes a concerted effort to award many of its contracts to small businesses. Additionally, many of the DISA contracts are awarded with multiple option periods. These have the benefit of fixing labor costs over an extended period and minimizing the administrative costs associated with re-issuing short-term contracts.</p>											
E. Performance Metrics											
Number of Technology Assessments											
<p>Performance is measured by the number of technologies assessed and the technologies transitioned or presented to DISA decision-making bodies such as the Service Portfolio Council (SPC) for acquisition decisions. The assessments identify, promote, channel and align technology research and investments. The objectives are to satisfy warfighter requirements by addressing capability gaps, to improve operational effectiveness and efficiency, and to reduce the time needed to field emerging technologies.</p>											
<p>Measure/Goal: Number of technology assessments instantiated within the CTO Technology Environment. Number of research initiatives designed, developed, demonstrated, and transitioned or presented to DISA decision-making bodies such as the SPC for acquisition decisions.</p>											
<p>FY 2016 Actual: 10 Assessed and 5 transitioned Target: Met FY 2017 Target: 8 Assessed and 5 transitioned FY 2018 Target: 12 Assessed and 8 transitioned</p>											

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Exhibit R-3, RDT&E Project Cost Analysis: FY 2018 Defense Information Systems Agency												Date: May 2017			
Appropriation/Budget Activity 0400 / 7						R-1 Program Element (Number/Name) PE 0302019K / Defense Info. Infrastructure Engineering and Integration						Project (Number/Name) T62 / DoD Information Network (DoDIN) Systems Engineering and Support			
Product Development (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Engineering and Technical Services	FFRDC	MITRE : McLean, VA	7.527	1.584	Oct 2015	2.299	Oct 2016	1.500	Oct 2017	-		1.500	Continuing	Continuing	Continuing
Industry Tech Res	C/FFP	Gartner : Various	0.249	-		-		-		-		-	0	0.249	0.249
GIG Technical Insertion Engineering	C/FFP	SRA, Inc. : Fairfax, VA	1.211	-		-		-		-		-	0	1.211	1.211
Product Development	C/Various	Raytheon : Various	1.601	-		-		-		-		-	0	1.601	1.601
DAMA-C	MIPR	Defense Micro-electronics Activity : Various	11.794	-		-		-		-		-	0	11.794	11.794
Thin Engineering Support	MIPR	MIT Lincoln Labs : Lexington, MA	4.260	-		-		-		-		-	0	4.260	4.260
Engineering and Technical Support	C/FFP	Moya Technologies, Inc. : TBD	1.212	-		-		-		-		-	0	1.212	1.212
Engineering Technical Services	MIPR	TBD : TBD	3.315	-		-		-		-		-	0	3.315	3.315
Product Development	C/FFP	Science and Technology Associates, Inc : Arlington, VA	1.551	-		0.540	Jul 2017	-		-		-	0.000	2.091	2.091
Product Development	MIPR	SPAWAR : Charleston, SC	0.376	-		-		-		-		-	0	0.376	0.376
Product Development	MIPR	NSA : Ft. Meade, MD	0.691	-		-		-		-		-	0	0.691	0.691
Engineering Technical Services	C/FFP	TWM : Falls Church, VA	0.202	-		-		-		-		-	0	0.202	0.202
Product Development	C/FFP	SOLERS : Arlington, VA	0.995	-		1.378	Jul 2017	0.650	Jul 2018	-		0.650	Continuing	Continuing	Continuing
Product Development	C/FFP	Booz Allen Hamilton : McLean, VA	0.500	-		-		0.562	Jan 2018	-		0.562	Continuing	Continuing	Continuing
Product Development	MIPR	JITC : Ft. Meade, MD	0.351	-		-		-		-		-	0	0.351	0.351

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Exhibit R-3, RDT&E Project Cost Analysis: FY 2018 Defense Information Systems Agency												Date: May 2017			
Appropriation/Budget Activity 0400 / 7						R-1 Program Element (Number/Name) PE 0302019K / Defense Info. Infrastructure Engineering and Integration						Project (Number/Name) T62 / DoD Information Network (DoDIN) Systems Engineering and Support			
Product Development (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Engineering Technical Services	MIPR	Various : Ft. Meade, MD	1.742	1.429	Dec 2015	0.782	Oct 2016	1.528	Oct 2017	-		1.528	Continuing	Continuing	Continuing
Engineering Technical Services	C/Various	IV2: IT Consulting Services, LLC : Jackson, WY	1.074	0.600	Oct 2015	-		-		-		-	Continuing	Continuing	Continuing
Engineering Technical Services	C/FFP	Information Assurance TWM Follow On : TBD	-	0.533	Oct 2015	0.208	Oct 2016	-		-		-	Continuing	Continuing	Continuing
Engineering Technical Services	C/CPFF	TIE NEMS: B&D Consulting : TBD	-	-		0.564	Oct 2016	-		-		-	Continuing	Continuing	Continuing
Engineering Technical Services	C/Various	Tapestry Technologies, INC : TBD	-	-		1.637	Mar 2017	2.536	Mar 2018	-		2.536	Continuing	Continuing	Continuing
Management Services - Civilian Pay	Various	Various : Ft. Meade	-	-		6.549	Oct 2016	4.957	Oct 2017	-		4.957	Continuing	Continuing	Continuing
Engineering Technical Services	C/FFP	PMPC-Itility LLC : Ft. Meade, MD	-	-		-		0.580	Mar 2018	-		0.580	Continuing	Continuing	-
Subtotal			38.651	4.146		13.957		12.313		-		12.313	-	-	-
			Prior Years	FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			38.651	4.146		13.957		12.313		-		12.313	-	-	-
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: FY 2018 Defense Information Systems Agency										Date: May 2017				
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 0302019K / Defense Info. Infrastructure Engineering and Integration					Project (Number/Name) T62 / DoD Information Network (DoDIN) Systems Engineering and Support				

	FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Technical Direction Agent (TDA)																												
Technical Direction Agent (TDA)																												
Engineering Support																												
Engineering Support																												
Industry/University Technical Research																												
Industry/University Technical Research																												
Technology Assessments																												
Technology Assessments																												

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Exhibit R-4A, RDT&E Schedule Details: FY 2018 Defense Information Systems Agency			Date: May 2017
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0302019K / <i>Defense Info. Infrastructure Engineering and Integration</i>	Project (Number/Name) T62 / <i>DoD Information Network (DoDIN) Systems Engineering and Support</i>	

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Technical Direction Agent (TDA)				
Technical Direction Agent (TDA)	1	2016	4	2022
Engineering Support				
Engineering Support	1	2016	4	2022
Industry/University Technical Research				
Industry/University Technical Research	1	2016	4	2022
Technology Assessments				
Technology Assessments	1	2016	4	2022

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Defense Information Systems Agency **Date:** May 2017

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development</i>					R-1 Program Element (Number/Name) PE 0303126K / <i>Long-Haul Communications - DCS</i>							
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	218.752	36.884	13.994	15.428	-	15.428	15.002	14.951	15.262	15.557	Continuing	Continuing
PC01: <i>Presidential and National Voice Conferencing/</i>	65.571	28.122	3.072	3.195	-	3.195	3.159	3.134	3.148	3.256	Continuing	Continuing
T82: <i>DISN Systems Engineering Support</i>	153.181	8.762	10.922	12.233	-	12.233	11.843	11.817	12.114	12.301	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Defense Information Systems Network (DISN) is the Department of Defense's (DoD's) consolidated worldwide telecommunications capability that provides secure, end-to-end information transport for DoD operations. It also provides the warfighter and the Combatant Commands (COCOMs) with a robust Command, Control, Communications, Computing, and Intelligence infrastructure to support DoD net-centric missions and business requirements. The Defense Red Switch Network (DRSN) is a DoD Secure Voice, Command and Control Network that is controlled and directed by the Joint Staff and the Office of the Secretary of Defense. It provides multi-level secure, rapid, ad hoc, voice calling and conferencing capability to the President, Secretary of Defense, Services, COCOMs, subordinate organizations (military and civilian) and coalition allies. DRSN also supports the Presidential and National Voice Conferencing (PNVC) (formerly known as National Emergency Action Decision Network (NEADN)) and the Enhanced Pentagon Capability/Survivable Emergency Conferencing Network. These funds support three major efforts:

DISN Systems Engineering Support: This effort includes engineering for Networking capabilities and optical transport capabilities to ensure the essential operations of a robust and secure DISN; refreshing the systems that instrument and automate the operations, administration, maintenance and provisioning functions and creating a single DISN-wide view for network managers and operators.

PNVC: The PNVC provides selected system engineering for continued development and testing of the PNVC equipment for senior leaders. The PNVC system provides a military, satellite-based, survivable, secure, and near toll-quality voice conferencing capability for the President, Secretary of Defense, Chairman, Joint Chiefs of Staff, and other senior national/military leaders anywhere in the world as needed. Funding supports the acquisition activities for the PNVC baseband equipment, including critical and essential engineering required to develop new vocoder and cryptographic and audio-summing equipment.

DoD Mobility: The Mobility Program will lead the development of an Enterprise Solution to support Controlled Unclassified Information (CUI) and leverage commercial carrier infrastructure to provide entry points for both classified and unclassified wireless capabilities. Continued evolution and expansion, within the Department, of the DoD Mobility program will allow for increased mobile services in direct support of the warfighter and the COCOMs.

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Defense Information Systems Agency	Date: May 2017
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Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0303126K / <i>Long-Haul Communications - DCS</i>
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B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	36.830	13.994	13.517	-	13.517
Current President's Budget	36.884	13.994	15.428	-	15.428
Total Adjustments	0.054	0.000	1.911	-	1.911
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	0.054	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustment	-	-	1.911	-	1.911

Change Summary Explanation

The increase of \$1.911 in FY2018 will fund additional support to meet new operational needs in a more rapid manner and simultaneously take advantage of industry advancements. This will include research and test activities in support of necessary encryption, cybersecurity, redundancy and diversity requirements integrated into the DISN. The effects of this enhancement will include test and evaluate technologies enabling both current and future projected DISN services, networking technologies and architectures to include but not limited to connectivity devices to access points, software defined capabilities and survivability. This also supports test and deploy DISN capabilities into tactical environments.

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 0303126K / Long-Haul Communications - DCS				Project (Number/Name) PC01 / Presidential and National Voice Conferencing/			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
PC01: Presidential and National Voice Conferencing/	65.571	28.122	3.072	3.195	-	3.195	3.159	3.134	3.148	3.256	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Presidential and National Voice Conferencing (PNVC) (formerly called National Emergency Action Decision Network (NEADN)) provides system engineering, development and testing of the equipment for senior leaders. The PNVC system provides a military satellite-based, world-wide, survivable, secure, and near toll-quality voice conferencing capability for the President, Secretary of Defense, Chairman, Joint Chiefs of Staff, and other senior national/military leaders. By implementing new technology capabilities (e.g. Ethernet-Framing and higher data rate), this project provides improved performance to the survivable voice conferencing capability. This project supports the acquisition activities for the PNVC baseband equipment, including engineering required to develop new vocoder, cryptographic and audio-summing equipment.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018
Title: Presidential and National Voice Conferencing (PNVC)	28.122	3.072	3.195
<p>Description: Presidential and National Voice Conferencing (PNVC) Systems Engineering conduct analyses for continuity of NEADN voice conferencing for national/military leaders through PNVC deployment. Program continues engineering, technical analysis, development, and coordination to ensure terminal, baseband, and satellite synchronization for voice conferencing amongst senior leaders.</p> <p>FY 2016 Accomplishments: Continued to perform integration and testing of the pre-production units for BIG and the Audio Conferencing Equipment at the JITC and Colorado Springs test facilities. These efforts will lead into the initial testing of the production units. Also provided systems engineering and testing support to integrate baseband kits to military aircrafts (Air Force E-4B and Navy E-6B).</p> <p>FY 2017 Plans: Continue to support PNVC integration and testing and fielding of initial capability and upgrades at PNVC sites. This includes systems engineering and testing support to the various platforms receiving the capability.</p> <p>The decrease of -\$25.050 from FY 2016 to FY 2017 is primarily attributed to the one time increase in FY 2016 to complete the airborne variants of the PNVC baseband equipment. The original environmental requirements for the PNVC baseband equipment were changed in FY14 and the original designs were deemed suitable only for ground locations. This necessitated the creation of airborne variants of the baseband equipment to meet the more stringent aircraft requirements of the E-4B and E-6B platforms.</p>			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency							Date: May 2017	
Appropriation/Budget Activity 0400 / 7			R-1 Program Element (Number/Name) PE 0303126K / Long-Haul Communications - DCS			Project (Number/Name) PC01 / Presidential and National Voice Conferencing/		

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2016	FY 2017	FY 2018
<p>The funding for the Engineering Change Proposals (ECPs) to develop the airborne versions came in two increments: an FY15 reprogramming and in FY16 to complete the development.</p> <p>FY 2018 Plans: Continue to support PNVC integration and testing and fielding of expanded capability and upgrades at PNVC sites. This includes systems engineering and testing support to the various platforms receiving the capability. Fund Engineering change proposals for software as needed to respond to user feedback.</p> <p>The increase of +\$0.123 from FY 2017 to FY 2018 is attributed to increased requirements for engineering support during system testing and changes to software.</p>			
Accomplishments/Planned Programs Subtotals	28.122	3.072	3.195

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
• Procurement, DW/PE 0303126K: <i>Procurement, Defense-Wide</i>	1.377	1.119	1.261	-	1.261	1.386	1.515	1.546	1.577	Continuing	Continuing
Remarks											
D. Acquisition Strategy											
<p>The audio equipment development activities are incorporated into the sole source DRSN sustainment contract. For the development of the BIG cryptographic device, NSA will perform an assisted acquisition for DISA using a competitively awarded fixed price contract. Engineering support for PNVC is provided by task orders competitively awarded on existing DoD contracts and Federally Funded Research and Development Contracts (FFRDC) support.</p>											
E. Performance Metrics											
<p>PNVC project metrics track the development status of program acquisition documents, as required by the component executive. These documents include: Project Execution Plan, Concept of Operations Acquisition Strategy, Capability Production Document, System Engineering Plan and other documents required by the DISA's Component Acquisition Executive. Additionally, for management and system engineering support vendors, monthly reports are critical to tracking overall programmatic and engineering progress and the percent of total deliverables received on time.</p> <p>For product development activities, effective progress is measured based upon the task order milestones in the form of development reviews and weekly progress meetings. As end items (hardware and software) become available for test, additional measures will be available. Specifically, the percentage of successfully verified requirements out of the number tested and the number of critical trouble reports outstanding longer than six months, will be tracked.</p>											

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency		Date: May 2017
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303126K / <i>Long-Haul Communications</i> - DCS	Project (Number/Name) PC01 / <i>Presidential and National Voice Conferencing/</i>
<p>Performance Metrics:</p> <p>Project Support Deliverables received on time</p> <p>FY16 (actual result): 100% FY17 (expected result): 100% FY18 (expected result): 100%</p> <p>Product Deliverable Milestones completed on time</p> <p>FY16 (met): 100% FY16 (expected result): 100% FY17 (expected result): 100%</p> <p>Successfully Tested Requirements:</p> <p>FY16: N/A FY17 (expected result): 95% FY18 (expected result): 95%</p> <p>Critical Trouble Reports > 6 months old</p> <p>FY16 (met) 100% FY15 (expected result): ≤ 4 FY16 (expected result): ≤ 4</p>		

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 0303126K / Long-Haul Communications - DCS				Project (Number/Name) T82 / DISN Systems Engineering Support			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
T82: DISN Systems Engineering Support	153.181	8.762	10.922	12.233	-	12.233	11.843	11.817	12.114	12.301	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The DISN Systems Engineering Support project encompasses four activities:

Next Generation Networking Technologies (formally known as Internet Protocol (IP) and Optical Transport Technology Refresh): Provides engineering technical expertise to support and integrate newer, more efficient technologies required to replace end of lifecycle equipment and to achieve more efficient Networking technologies. These new technologies provide protected and assured services for critical support to the warfighter as well as other DoD and federal customers.

Element Management System (EMS): Provides operational and network operating systems that instrument and automate the operations, administration, maintenance and provisioning functions creating a single DISN-wide view for network managers and operators. EMS is a component of the DISN Operational Support Systems (OSS).

Peripheral and Component Design (Secure Voice Switches): This equipment satisfies unique military requirements for multi-level security (i.e., extensive conferencing/ conference management capabilities and features, and gateway functions) that are not available in commercial products.

DoD Mobility: The Mobility Program will lead the development of an Enterprise Solution to support Controlled Unclassified Information (CUI) and leverage commercial carrier infrastructure to provide entry points for both classified and unclassified wireless capabilities. Continued evolution and expansion, within the Department, of the DoD Mobility program will allow for increased mobile services in direct support of the warfighter and the COCOMs.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018
Title: Next Generation Networking Technologies (formally known as Internet Protocol (IP) and Optical Transport Technology Refresh.	2.899	3.162	5.400
FY 2016 Accomplishments: Purchased and tested commercially available components to replace end of life/obsolete equipment deployed on the DISN. Focus was be on optical and IP routers, switches and Communications Security (COMSEC) equipment. Also continued functionality testing of 100G-capable commercial components with a focus on streamlining the overall DISN architecture profile.			
FY 2017 Plans: The test and evaluation of technologies required to meet the needs of the evolving DISN.			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency			Date: May 2017		
Appropriation/Budget Activity 0400 / 7		R-1 Program Element (Number/Name) PE 0303126K / <i>Long-Haul Communications</i> - DCS		Project (Number/Name) T82 / <i>DISN Systems Engineering Support</i>	
B. Accomplishments/Planned Programs (\$ in Millions)			FY 2016	FY 2017	FY 2018
The decrease of -\$0.227 from FY 2016 to FY 2017 is due to a reduction in technical evaluation activities.					
FY 2018 Plans: The increase +\$2.238 from FY 2017 to FY 2018 will support additional test and evaluation of networking components for efforts such as Automated Provisioning and Software Defined Networking for IP and Optical components.					
Title: DISN OSS FY 2016 Accomplishments: No planned accomplishments. FY 2017 Plans: Will develop web services in support of Information Sharing Services. The increase of +\$0.764 from FY 2016 to FY 2017 is due to an increase in web service development. FY 2018 Plans: No plans required. The decrease of -\$0.764 from FY 2017 to FY 2018 is due to the reduction in web services development requirements for operational and network operating systems within the DISN OSS.			0.000	0.764	0.000
Title: Peripheral and Component Design FY 2016 Accomplishments: Performed integration and testing of the production units of switch IP Media cards (developed in FY12-14) to ensure compatibility with Voice Over Internet Protocol (VoIP)/ Voice Over Secure Internet Protocol (VoSIP) capabilities. Continued Engineering Change Proposal (ECP) effort from FY2015 to modify software to support full capabilities in to improve reliability and performance supporting transition to IP trunking between switches. FY 2017 Plans: Support ECP for upgrades to National Conference Management capabilities to incorporate new software updates and changes driven by user feedback and improve performance. Also fund modifications needed to support line side IP services as part of time Division multiplexing (TDM) elimination efforts. The increase of +\$0.671 from FY 2016 to FY 2017 is due to increased ECP activities and increased contract requirements for ECPs. FY 2018 Plans:			1.694	2.565	2.413

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency		Date: May 2017	
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303126K / <i>Long-Haul Communications</i> - DCS	Project (Number/Name) T82 / <i>DISN Systems Engineering Support</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
Support upgrades to switch software for IA/Cybersecurity improvements and continued integration of IP trunking and IP line-side and gateway functions in evolving system to meet RMF and NC3 requirements.			
The decrease of -\$0.152 from FY 2017 to FY 2018 reflects a decrease in the amount of software development and testing efforts required in FY 2018.			
Title: Mobility		4.169	4.431
FY 2016 Accomplishments: Funds support tech insertion and deployment of two DMCC gateways which will include Top Secret (TS) and Secret capabilities in the remaining CONUS and OCONUS areas requiring gateways to ensure adequate load balancing of mobile device usage on the DoD Mobility Architecture. Will also support evaluation of tech insertion of classified and unclassified data at multiple sites both CONUS and OCONUS. DoD Mobility will evaluate and test the centralized mobility management components for the classified components. Funds will provide support for test and evaluation (T&E) of centralization of the mobile device hardware, software, middleware, and MDM associated capabilities integration efforts. Will provide for T&E of DoD Mobility NIPRNet & SIPRNet Suite insertion efforts to include mobile VPN and authentication, mobile devices, and mobile applications. Will provide for T&E of mobile devices including prototypes for next generation classified devices and additional commercial mobile devices to test their interoperability across the enterprise. Additionally, funds will support T&E of mobile applications to ensure Mobile Applications are verified and validated prior to hosting on the MAS. Will support testing of commercial mobile devices and certification and accreditation approval. Funds will support quarterly testing and evaluation of various mobile initiatives; follow up testing against the Mobile Device Management (MDM); verification and validation testing of devices used against the MDM; and requirements testing to ensure Mobility's requirements have been met. DoD Mobility will continue to evolve detailed Implementation Plans, Concept of Operations and Standard Operating Procedures for DMCC Capabilities.			4.420
FY 2017 Plans: DoD Mobility will continue to evaluate and test the centralized mobility management components for the classified components and support T&E of centralization of the mobile device hardware, software, middleware, and MDM capabilities. T&E of mobile devices includes prototypes for next generation classified devices and assured interoperability for new commercial mobile devices. T&E of mobile applications ensures mobile applications are verified and validated prior to hosting on the MAS. T&E of DoD Mobility NIPRNet & SIPRNet Suite insertion efforts includes mobile VPN and authentication, verification and validation testing of devices used against the MDM, and requirements testing to ensure Mobility's requirements have been met.			
The decrease of -\$4.486 from FY 2016 to FY 2017 is due to planned program reductions as a result of completing pre-fielding for TS and Secret, certification and testing requirements as the DMCC continues to mature. Testing and fielding certification			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency									Date: May 2017		
Appropriation/Budget Activity 0400 / 7				R-1 Program Element (Number/Name) PE 0303126K / Long-Haul Communications - DCS				Project (Number/Name) T82 / DISN Systems Engineering Support			
B. Accomplishments/Planned Programs (\$ in Millions)									FY 2016	FY 2017	FY 2018
reductions are tied to the fielding of mobile device hardware, software, middleware, and MDM associated capabilities integration efforts.											
FY 2018 Plans: DoD Mobility will continue to evaluate and test the centralized mobility management components for the top secret capabilities as well as newly deployed mobile device hardware, software, middleware that will be integrated into the existing infrastructure. T&E of next generation prototype devices, assured interoperability and application integration for new commercial mobile devices will continue through the FYDP.											
The decrease of -\$0.011 from FY 2017 to FY 2018 is due to decreased testing and integration of the DMCC-S proxy server.											
Accomplishments/Planned Programs Subtotals									8.762	10.922	12.233
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
• O&M/PE0303126K: Operation & Maintenance, Defense-Wide	61.246	35.685	39.040	-	39.040	37.426	37.522	38.259	-	Continuing	Continuing
• Procurement/PE0303126K: Procurement, Defense-Wide	139.921	99.928	115.194	-	115.194	116.958	117.993	117.993	-	Continuing	Continuing
Remarks											
D. Acquisition Strategy											
Products acquired for EMS requirements are professional services, network management software, supporting hardware, and development tools. Professional services will be procured through existing contracts available to DISA. The DISA Computing Services will be used for hardware and software leased managed services, as well as the NASA enterprise equipment contracting vehicle when necessary and applicable.											
The Internet Protocol (IP) enabling of the DRSN DSS-2A switch, Secure voice conference management improvements, HEMP Phone and related DRSN components will use an existing Air Force Command and Control Switching Systems (CCSS) Depot Support contract with the Secure Voice Switch systems manufacturer (Raytheon) to perform the development and modification work, system integration and testing support.											
The Mobility initiative supports systems engineering and development of a DoD Mobility solution. The focus is on acquisitions to support the program across the DoD to include scheduling, delivery approach, and risk management. This also includes the vision and phased approach to unified capabilities for classified and unclassified wireless capabilities to meet DoD needs.											

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency		Date: May 2017
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303126K / <i>Long-Haul Communications</i> - DCS	Project (Number/Name) T82 / <i>DISN Systems Engineering Support</i>
<p>Products acquired for EMS requirements are professional services, network management software, supporting hardware, and development tools. Professional services will be procured through existing contracts available to DISA. The DISA Computing Services will be used for hardware and software leased managed services, as well as the NASA enterprise equipment contracting vehicle when necessary and applicable.</p> <p>The Internet Protocol (IP) enabling of the DRSN DSS-2A switch, Secure voice conference management improvements, HEMP Phone and related DRSN components will use an existing Air Force Command and Control Switching Systems (CCSS) Depot Support contract with the Secure Voice Switch systems manufacturer (Raytheon) to perform the development and modification work, system integration and testing support.</p> <p>The Mobility initiative supports systems engineering and development of a DoD Mobility solution. The focus is on acquisitions to support the program across the DoD to include scheduling, delivery approach, and risk management. This also includes the vision and phased approach to unified capabilities for classified and unclassified wireless capabilities to meet DoD needs.</p> <p>E. Performance Metrics</p> <p>Funds support tech insertion and deployment of two DMCC gateways which will include Top Secret (TS) and Secret capabilities in the remaining CONUS and OCONUS areas requiring gateways to ensure adequate load balancing of mobile device usage on the DoD Mobility Architecture. Will also support evaluation of tech insertion of classified and unclassified data at multiple sites both CONUS and OCONUS. DoD Mobility will evaluate and test the centralized mobility management components for the classified components. Funds will provide support for test and evaluation (T&E) of centralization of the mobile device hardware, software, middleware, and MDM associated capabilities integration efforts. Will provide for T&E of DoD Mobility NIPRNet & SIPRNet Suite insertion efforts to include mobile VPN and authentication, mobile devices, and mobile applications. Will provide for T&E of mobile devices including prototypes for next generation classified devices and additional commercial mobile devices to test their interoperability across the enterprise. Additionally, funds will support T&E of mobile applications to ensure mobile applications are verified and validated prior to hosting on the MAS. Will support testing of commercial mobile devices and certification and accreditation approval. Funds will support quarterly testing and evaluation of various Mobile Initiatives; follow up testing against the Mobile Device Management (MDM); verification and validation testing of devices used against the MDM; and requirements testing to ensure Mobility's requirements have been met. DoD Mobility will continue to evolve detailed Implementation Plans, Concept of Operations and Standard Operating Procedures for DMCC Capabilities.</p> <p>FY 2016 (Actual): 100% successful developmental and production testing by the PMO of new-model commercial mobile devices authenticated against the Mobile Device Manager. Successful security, interoperability, and functional evaluation of 85% of mobile applications requested to be approved and made available in the hosted Mobile Application Store. 100% successful integration testing of the enterprise security ecosystem into existing Mobility infrastructure and development and production testing of infrastructure components, including additional gateway instances supporting unclassified, secret, and top secret domains, and Mobile Device Management for the top secret domain, with successful deployment within the DoD Mobility architecture.</p> <p>FY 2017 (Estimated): 100% successful developmental and production testing of new-model commercial mobile devices per product baseline, per carrier, per platform authenticated against the Mobile Device Manager. Successful security, interoperability, and functional evaluation of at least of 85% of mobile applications requested to be approved and available in the hosted Mobile Application Store. 100% successful production testing of the applications development framework and integration testing for infrastructure components, including additional gateway instances supporting secret and top secret domains as well as any COTS component technology refresh requirements against the end-to-end architecture.</p>		

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency		Date: May 2017
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303126K / <i>Long-Haul Communications</i> - DCS	Project (Number/Name) T82 / <i>DISN Systems Engineering Support</i>
<p>FY 2018 (Estimated): 100% successful developmental and production testing of new-model commercial mobile devices per product baseline, per carrier, per platform authenticated against the Mobile Device Manager. Successful security, interoperability, and functional evaluation of at least of 85% of mobile applications requested to be approved and available in the hosted Mobile Application Store. 100% successful production testing of the applications development framework and integration testing for infrastructure components, including additional gateway instances supporting secret and top secret domains as well as any COTS component technology refresh requirements against the end-to-end architecture.</p>		

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Exhibit R-3, RDT&E Project Cost Analysis: FY 2018 Defense Information Systems Agency												Date: May 2017			
Appropriation/Budget Activity 0400 / 7						R-1 Program Element (Number/Name) PE 0303126K / Long-Haul Communications - DCS				Project (Number/Name) T82 / DISN Systems Engineering Support					
Product Development (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Systems Engineering for DSRN Components & Peripherals	Various	Raytheon : Florida	10.035	1.194	Feb 2016	2.565	Feb 2017	0.983	Mar 2018	-		0.983	Continuing	Continuing	Continuing
Systems Engineering for IP Enabling DSS-2A Secure Voice Switch	C/T&M	Raytheon : Florida	21.440	-		-		-		-		-	Continuing	Continuing	Continuing
Engineering &Technical Services for Information Sharing Services for Voice	C/T&M	SAIC : VA	2.774	-		-		-		-		-	Continuing	Continuing	Continuing
Engineering & Technical Services for Network Mgmt Solutions for New DISN Element Technologies	C/T&M	Various : VA	2.026	-		-		-		-		-	Continuing	Continuing	Continuing
Single Sign On	C/T&M	SAIC : Various	1.397	-		-		-		-		-	Continuing	Continuing	Continuing
System Engineering for VoSIP	C/T&M	Various : Various	1.218	-		-		-		-		-	Continuing	Continuing	Continuing
Space Vehicle Upload	SS/CPFF	Iridium : McLean, VA	12.635	-		-		-		-		-	Continuing	Continuing	Continuing
Gateway Improvement	SS/CPFF	Iridium : McLean, VA	13.565	-		-		-		-		-	Continuing	Continuing	Continuing
Field Application Tool	MIPR	NSWC : Dahlgren	6.635	-		-		-		-		-	Continuing	Continuing	Continuing
DTCS Handset	SS/CPFF	Iridium : McLean, VA	5.850	-		-		-		-		-	Continuing	Continuing	Continuing
Command and Control Handset	SS/CPFF	Iridium : McLean, VA	7.275	-		-		-		-		-	Continuing	Continuing	Continuing
Alt. Supplier Development	MIPR	NSWC : Dahlgren, VA	3.450	-		-		-		-		-	Continuing	Continuing	Continuing
Radio Only Interface	MIPR	NSWC : Dahlgren, VA	2.525	-		-		-		-		-	Continuing	Continuing	Continuing
Remote Control Unit	SS/CPFF	Iridium : McLean, VA	2.100	-		-		-		-		-	Continuing	Continuing	Continuing
Type 1 Security	SS/CPFF	Iridium : McLean, VA	6.455	-		-		-		-		-	Continuing	Continuing	Continuing
Vehicle Integration	MIPR	NSWC : Dahlgren, VA	3.185	-		-		-		-		-	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: FY 2018 Defense Information Systems Agency												Date: May 2017			
Appropriation/Budget Activity 0400 / 7						R-1 Program Element (Number/Name) PE 0303126K / Long-Haul Communications - DCS				Project (Number/Name) T82 / DISN Systems Engineering Support					
Product Development (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Systems Engineering for IP and Optical Technology Refresh	Various	DITCO : Various	8.717	-		-		-		-		-	Continuing	Continuing	-
Engineering & Technical Services for Web Based Mediation	C/T&M	Apptis : VA	1.168	-		-		-		-		-	-	-	-
System Engineering and Technical Services for ISOM	Various	DITCO : Various	2.915	-		-		-		-		-	-	-	-
Serialized Asset Management - OSS	C/T&M	SAIC : VA	0.822	-		-		-		-		-	-	-	-
Gateways - Mobility	TBD	TBD : TBD	7.107	-		-		-		-		-	-	-	-
Thin Client Solution - Mobility	TBD	TBD : TBD	1.550	0.604		-		-		-		-	-	-	-
New Field Communications	C/FFP	TBD : TBD	0.550	-		-		-		-		-	-	-	-
National Conference Management	MIPR	USAF : Ratheon	4.514	-		-		-		-		-	-	-	-
IP Enable DRSN	MIPR	USAF : Ratheon	1.562	-		-		1.408	Feb 2018	-		1.408	-	-	-
HEMP Phone Development	TBD	Raytheon : TBD	0.869	-		-		-		-		-	-	-	-
100G Optical	TBD	TBD : TBD	0.337	-		-		-		-		-	-	-	-
Defense Production Act III Optical Networking	TBD	TBD : TBD	-	2.666		-		-		-		-	Continuing	Continuing	-
DoD Mobility Capability Service Assurance	C/FFP	TBD : TBD	1.416	0.900		-		-		-		-	-	-	-
TBD	TBD	TBD : TBD	-	-		-		-		-		-	Continuing	Continuing	-
TBD	TBD	*** PERFORMING ACTIVITY *** - *** LOCATION ***	-	-		-		2.420	Feb 2018	-		2.420	Continuing	Continuing	-
System Engineering Support DMCC/DMUC	C/FFP	JHU-APL : NAVSEA	-	-		-		-		-		-	Continuing	Continuing	-

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Exhibit R-3, RDT&E Project Cost Analysis: FY 2018 Defense Information Systems Agency												Date: May 2017			
Appropriation/Budget Activity 0400 / 7						R-1 Program Element (Number/Name) PE 0303126K / Long-Haul Communications - DCS				Project (Number/Name) T82 / DISN Systems Engineering Support					
Product Development (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
System Engineering Support DMCC/DMUC	C/FFP	BAH : TBD	-	-		-		2.000	Feb 2018	-		2.000	Continuing	Continuing	-
Subtotal			134.092	5.364		2.565		6.811		-		6.811	-	-	-
Support (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
IT Support - Mobility	C/FFP	Arieds, LLC : Ft. Meade	2.300	-		-		-		-		-	-	-	-
NS2 SE Support - Mobility	C/FFP	APPTIS : Ft. Meade	0.311	-		-		-		-		-	-	-	-
IT Support - Mobility	Various	TBD : TBD	3.000	-		-		-		-		-	-	-	-
Subtotal			5.611	-		-		-		-		-	-	-	-
Test and Evaluation (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Certification Testing	Various	JITC : Various	5.554	1.095	Oct 2015	1.593	Oct 2016	-		-		-	Continuing	Continuing	Continuing
Test & Evaluation Support - Mobility	Various	JITC : Ft. Meade	3.710	1.300	Oct 2015	0.897	Oct 2016	-		-		-	-	-	-
Integration, Test ann Modification - Mobility	Various	TBD : TBD	4.214	1.003	Nov 2015	1.941	Nov 2016	-		-		-	-	-	-
Tech Refresh/Functionality Testing	MIPR	Multiple : Various	-	-		-		-		-		-	Continuing	Continuing	Continuing
Tech Refresh/Functionality Testing	MIPR	Naval Observatory : MA	-	-		-		-		-		-	-	-	Continuing
OSS/Functionality-Configuration	MIPR	Multiple : Various	-	-		-		-		-		-	Continuing	Continuing	Continuing
DISN Tech Refresh	TBD	TBD : TBD	-	-		3.926	Jan 2017	0.000		-		0.000	-	-	-

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Exhibit R-3, RDT&E Project Cost Analysis: FY 2018 Defense Information Systems Agency												Date: May 2017		
Appropriation/Budget Activity 0400 / 7						R-1 Program Element (Number/Name) PE 0303126K / Long-Haul Communications - DCS				Project (Number/Name) T82 / DISN Systems Engineering Support				

Test and Evaluation (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Various	TBD	TBD : TBD	-	-		-		5.422	Jan 2018	-		5.422	Continuing	Continuing	-
Subtotal			13.478	3.398		8.357		5.422		-		5.422	-	-	-

	Prior Years	FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	153.181	8.762		10.922		12.233		-		12.233	-	-	-

Remarks

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Exhibit R-4, RDT&E Schedule Profile: FY 2018 Defense Information Systems Agency										Date: May 2017			
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 0303126K / Long-Haul Communications - DCS					Project (Number/Name) T82 / DISN Systems Engineering Support			

	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
DRSN																												
DRSN																												
OSS																												
OSS																												
Technology Refresh																												
Technology Refresh																												
DISN Tech Refresh																												
Mobility																												
Lab Purchase (Gateways, NIPR, SIPR, TS Enclave)																												
DoD Mobility Gateways - Architecture Support																												
NIPR Enclave (MDM, MAS)																												
SIPR Enclave (MDM, MAS)																												
TS Enclave (MDM, MAS)																												
MDM & MAS Operational Testing																												

	FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
DRSN																												
DRSN																												
OSS																												
OSS																												
Technology Refresh																												
Technology Refresh																												

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Exhibit R-4, RDT&E Schedule Profile: FY 2018 Defense Information Systems Agency **Date:** May 2017

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303126K / Long-Haul Communications - DCS	Project (Number/Name) T82 / DISN Systems Engineering Support
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	FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
DISN Tech Refresh																												
Mobility																												
Lab Purchase (Gateways, NIPR, SIPR, TS Enclave)																												
DoD Mobility Gateways - Architecture Support																												
NIPR Enclave (MDM, MAS)																												
SIPR Enclave (MDM, MAS)																												
TS Enclave (MDM, MAS)																												
MDM & MAS Operational Testing																												

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Exhibit R-4A, RDT&E Schedule Details: FY 2018 Defense Information Systems Agency			Date: May 2017
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303126K / Long-Haul Communications - DCS	Project (Number/Name) T82 / DISN Systems Engineering Support	

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
DRSN				
DRSN	1	2015	4	2021
OSS				
OSS	1	2015	4	2016
Technology Refresh				
Technology Refresh	1	2015	4	2021
DISN Tech Refresh	1	2017	4	2022
Mobility				
Lab Purchase (Gateways, NIPR, SIPR, TS Enclave)	1	2015	4	2017
DoD Mobility Gateways - Architecture Support	1	2015	4	2022
NIPR Enclave (MDM, MAS)	1	2015	4	2017
SIPR Enclave (MDM, MAS)	1	2016	4	2018
TS Enclave (MDM, MAS)	1	2016	4	2020
MDM & MAS Operational Testing	1	2015	4	2022

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Defense Information Systems Agency	Date: May 2017
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Appropriation/Budget Activity	R-1 Program Element (Number/Name)											
0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development</i>	PE 0303131K / <i>Minimum Essential Emergency Communications Network (MEECN)</i>											
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	140.481	13.384	12.206	15.855	-	15.855	15.883	15.721	16.025	16.320	Continuing	Continuing
T64: <i>Special Projects</i>	65.934	5.051	5.207	5.481	-	5.481	5.458	5.558	5.564	5.562	Continuing	Continuing
T70: <i>Strategic C3 Support</i>	74.547	8.333	6.999	10.374	-	10.374	10.425	10.163	10.461	10.758	Continuing	Continuing

A. Mission Description and Budget Item Justification

Minimum Essential Emergency Communications Network (MEECN) provides the Nuclear Command, Control, and Communications (NC3) Engineer with plans and procedures, systems analysis, operational assessments, systems engineering, and development of concepts of operation and architectures. The NC3 System provides connectivity from the President and the Secretary of Defense through the National Military Command System to nuclear execution forces integral to fighting a "homeland-to-homeland," as well as theater nuclear war. MEECN includes the Emergency Action Message dissemination systems and those systems used for integrated Tactical Warning/Attack Assessment, presidential decision-making conferencing, force report back, re-targeting, force management, and requests for permission to use nuclear weapons. Efforts assure positive control of nuclear forces and connectivity between the Secretary of Defense, military forces, and an informed decision-making linkage between the President, the Secretary of Defense, and the Combatant Commands. MEECN ensures our national leadership has proper command and control of our forces during times of national emergency, up to and including nuclear war.

B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	13.735	12.206	16.449	-	16.449
Current President's Budget	13.384	12.206	15.855	-	15.855
Total Adjustments	-0.351	0.000	-0.594	-	-0.594
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustment	-0.351	-	-0.594	-	-0.594

Change Summary Explanation

Program is classified and exhibit will be provided under a separate cover.

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 0303131K / Minimum Essential Emergency Communications Network (MEECN)				Project (Number/Name) T64 / Special Projects			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
T64: Special Projects	65.934	5.051	5.207	5.481	-	5.481	5.458	5.558	5.564	5.562	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
A. Mission Description and Budget Item Justification The mission is performing classified work. All aspects of this project are classified and require special access. Detailed information on this project is not contained in this document.												
B. Accomplishments/Planned Programs (\$ in Millions)									FY 2016	FY 2017	FY 2018	
Title: Special Projects									5.051	5.207	5.481	
Description: Program is classified and exhibit will be provided under a separate cover.												
FY 2016 Accomplishments: Program is classified and exhibit will be provided under a separate cover.												
FY 2017 Plans: Program is classified and exhibit will be provided under a separate cover.												
FY 2018 Plans: Program is classified and exhibit will be provided under a separate cover.												
Accomplishments/Planned Programs Subtotals									5.051	5.207	5.481	
C. Other Program Funding Summary (\$ in Millions) N/A												
Remarks												
D. Acquisition Strategy Program is classified and exhibit will be provided under a separate cover.												
E. Performance Metrics Program is classified and exhibit will be provided under a separate cover.												

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 0303131K / <i>Minimum Essential Emergency Communications Network (MEECN)</i>				Project (Number/Name) T70 / <i>Strategic C3 Support</i>			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
T70: <i>Strategic C3 Support</i>	74.547	8.333	6.999	10.374	-	10.374	10.425	10.163	10.461	10.758	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project supports the mission of the Nuclear Command, Control, and Communications (NC3) Systems Engineer to the Joint Staff and Executive Leadership. It also provides NC3 expertise to the Department of Defense (DoD) Chief Information Officer (CIO) National Leadership Command Capability (NLCC) Management Office. Systems Analysis supports long range planning and vulnerability assessments to ensure the NC3 System is adequate under all conditions of stress or war and recommends investment strategies to evolve the Nuclear Command and Control System to achieve desired capabilities. Operational Assessments of fielded systems and weapon platforms provide the sole means for verification of NC3 systems' performance in support of plans and procedures, operation orders, training, equipment, and end-to-end system configuration. Assessments provide strategic and theater level C3 interfaces into the NC3 System. Supporting efforts assure positive control of nuclear forces and connectivity between the Secretary of Defense and strategic and theater forces. Systems Engineering provides the Senior Leadership C3 System with technical and management advice, planning and engineering support, and Test & Evaluation. Leading Edge Command, Control, Communications, Computers, and Intelligence technology is assessed for all communication platforms supporting executive travelers and senior leaders to include the interoperability of hardware and operational procedures. These technology elements support the President's and other DoD command centers and aircraft (e.g., Air Force One and the National Airborne Operations Center).

B. Accomplishments/Planned Programs (\$ in Millions)

				FY 2016	FY 2017	FY 2018
Title: Systems Engineering, Analysis and Architecture				8.333	6.999	10.374
FY 2016 Accomplishments: Implement a portfolio management and configuration control construct to facilitate integration and modernization of continuity of operations/continuity of government (COOP/COG), NC3 and Senior Leader Command, Control, and Communications Systems (SLC3S) capabilities that modernize and increase NLCC performance requirements. Continue updates for the Program Tracking Report, NC3 Architecture Diagrams and NC3 Scenarios document to improve NLCC capabilities. Develop engineering solutions and documentation to improve NLCC future capabilities as well as perform operational assessments of the communication platforms to identify performance, operational and any potential vulnerabilities. Expand NLCC future architecture and roadmap to identify return on investment constructs and improve/modernize NLCC capabilities.						
FY 2017 Plans: Will continue oversight and configuration control of the NLCC functional baseline. Will continue to identify NLCC capability gaps, and develop engineering courses of action to close those gaps. Will continue to shape plans for future NLCC capabilities, perform end-to-end testing of fielded capabilities, and perform operational assessments of current capabilities to provide quantitative						

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency			Date: May 2017
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303131K / <i>Minimum Essential Emergency Communications Network (MEECN)</i>	Project (Number/Name) T70 / <i>Strategic C3 Support</i>	

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2016	FY 2017	FY 2018
<p>measures of ongoing system performance and operational efficiency. Will continue to develop the NLCC Reference Architecture, its associated NLCC Roadmap, and the technical architecture patterns that will guide future solution architecture development.</p> <p>The decrease of -\$1.566 from FY 2016 to FY 2017 is a result of decreased end-to-end user assessments for Senior Leader communications and mission effectiveness and a reduction in engineering activities supporting the transition of NLCC future capabilities to full operational capability.</p> <p><i>FY 2018 Plans:</i> Will continue oversight and configuration control of the NLCC functional baseline. Will continue to identify NLCC capability gaps, and develop engineering courses of action to close those gaps. Will continue to shape plans for future NLCC capabilities, perform end-to-end testing of fielded capabilities, and perform operational assessments of current capabilities to provide quantitative measures of ongoing system performance and operational efficiency. Will continue to develop the NLCC Reference Architecture, its associated NLCC Roadmap, and the technical architecture patterns that will guide future solution architecture development.</p> <p>The increase of +\$3.672 from FY 2017 to FY 2018 is due to additional number of technical assessments required, expansion of the production of architectural artifacts required to complete the NLCC Technical Architecture; development of a NLCC Modeling and Simulation (M&S) capability; support engineering and implementation of the NLCC enterprise mobility infrastructure. Part of the overall increase (-\$0.297) is attributed to the Service Requirements Review Board (SSRB) contract reduction.</p>			
Accomplishments/Planned Programs Subtotals	8.333	6.999	10.374

C. Other Program Funding Summary (\$ in Millions)

Line Item	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
• O&M, PE 0303131K: O&M	15.366	19.160	24.374	-	24.374	24.683	25.081	25.599	26.023	Continuing	Continuing

Remarks

D. Acquisition Strategy

Full and open competition resulted in contract vehicles with Raytheon, Arlington, VA; Science Applications Int'l Corporation (SAIC), McLean, VA; and Pragmatics, Mclean, VA.

E. Performance Metrics

Performance is measured by compliance with contract deliverables schedules for specifically included products, such as: operational assessment plans, operational assessment reports; recommended revisions to the Joint Staff's Emergency Action Procedures (EAP-CJCS) Volumes VI and VII; updates to NC3 System Description

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency		Date: May 2017
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303131K / <i>Minimum Essential Emergency Communications Network (MEECN)</i>	Project (Number/Name) T70 / <i>Strategic C3 Support</i>
<p>documents and Nuclear C3 Architecture Diagrams. In addition, performance of the NC3 System is directly measured by the operational assessments funded by this program element. These periodic assessments evaluate the connectivity used for the five functions of Nuclear command and control: Situation Monitoring, Planning, Decision Making, Force Execution, and Force Management. Performance of the SLC3S-Airborne fleet is measured by the technical assessment results documented in the assessment reports. Assessment results are used by the Joint Staff and the DoD CIO to direct changes in system engineering and integration, programmatic execution, and training.</p> <p>Specific performance metrics include the following:</p> <p>Provide engineering products in all task areas that satisfy DoD/CIO and Joint Staff needs within allocated resources 90% of the time.</p> <p>Conduct assessments of the NC3 system and the SLC3S that provide actionable results and recommendations for the Joint Staff and DoD/CIO to pursue improvements to these capabilities 90% of the time.</p> <p>MEECN achieved all its FY 2016 performance metrics and is on track to achieve the FY 2017 and FY 2018 targets of provisioning the Joint Staff requirements within the allocated resources 90% of the time.</p>		

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Exhibit R-3, RDT&E Project Cost Analysis: FY 2018 Defense Information Systems Agency												Date: May 2017			
Appropriation/Budget Activity 0400 / 7						R-1 Program Element (Number/Name) PE 0303131K / <i>Minimum Essential Emergency Communications Network (MEECN)</i>				Project (Number/Name) T70 / <i>Strategic C3 Support</i>					
Support (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Systems Engineering 1	C/CPAF	SAIC : McLean, VA	17.628	2.432	Aug 2016	1.639	Aug 2017	-		-		-	Continuing	Continuing	Continuing
Systems Engineering 2	C/CPAF	Raytheon Company : Arlington, VA	32.258	3.342		-		-		-		-	Continuing	Continuing	Continuing
Systems Engineering 3	C/CPFF	Pragmatics : McLean, VA	10.080	-		-		-		-		-	Continuing	Continuing	10.080
Systems Engineering 4	C/FP	Raytheon Company : Arlington, VA	7.808	1.503	Feb 2016	4.419	Feb 2017	5.200	Feb 2018	-		5.200	Continuing	Continuing	Continuing
Systems Engineering 5	C/CPFF	BAH : Falls Church, VA	4.273	-		-		-		-		-	Continuing	Continuing	4.273
Systems Engineering 6	C/CPFF	Harris Corporation : Melbourne, FL	2.500	-		-		-		-		-	Continuing	Continuing	2.500
Systems Engineering 7	C/CPAF	Carson Engineering : Bethesda, MD	-	1.056	Jun 2016	-		-		-		-	Continuing	Continuing	Continuing
System Engineering 8	C/FFP	MITRE Corp : McLean, VA	-	-		0.941	Sep 2017	1.332	Oct 2018	-		1.332	Continuing	Continuing	Continuing
System Engineering 9	C/FFP	JHU APL : Laurel, MD	-	-		-		2.500	Apr 2018	-		2.500	Continuing	Continuing	-
System Engineering 10	C/FFP	TBD - New Contract : TBD	-	-		-		1.342	Aug 2018	-		1.342	Continuing	Continuing	-
Subtotal			74.547	8.333		6.999		10.374		-		10.374	-	-	-
			Prior Years	FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			74.547	8.333		6.999		10.374		-		10.374	-	-	-
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: FY 2018 Defense Information Systems Agency

Date: May 2017

Appropriation/Budget Activity

0400 / 7

R-1 Program Element (Number/Name)

PE 0303131K / Minimum Essential
Emergency Communications Network
(MEECN)

Project (Number/Name)

T70 / Strategic C3 Support

	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
NLCC Program Tracking Report (formally known as NC3 Program Tracking Report)																												
NLCC Program Tracking Report																												
Systems Analysis Documents																												
Systems Analysis Documents																												
NLCC Reference Architecture (formally known as NC3 Reference Architecture)																												
NLCC Reference Architecture																												
Operational Assessments																												
Operational Assessments																												
NLCC Portfolio Roadmap																												
NLCC Portfolio Roadmap																												
NLCC System Engineering and Integration																												
NLCC System Engineering and Integration																												
NLCC Target Architecture																												
NLCC Target Architecture																												

	FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
NLCC Program Tracking Report (formally known as NC3 Program Tracking Report)																												
NLCC Program Tracking Report																												
Systems Analysis Documents																												
Systems Analysis Documents																												

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Exhibit R-4, RDT&E Schedule Profile: FY 2018 Defense Information Systems Agency																Date: May 2017			
Appropriation/Budget Activity 0400 / 7								R-1 Program Element (Number/Name) PE 0303131K / <i>Minimum Essential Emergency Communications Network (MEECN)</i>								Project (Number/Name) T70 / <i>Strategic C3 Support</i>			

	FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
NLCC Reference Architecture (formally known as NC3 Reference Architecture)																												
NLCC Reference Architecture																												
Operational Assessments																												
Operational Assessments																												
NLCC Portfolio Roadmap																												
NLCC Portfolio Roadmap																												
NLCC System Engineering and Integration																												
NLCC System Engineering and Integration																												
NLCC Target Architecture																												
NLCC Target Architecture																												

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Exhibit R-4A, RDT&E Schedule Details: FY 2018 Defense Information Systems Agency			Date: May 2017
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303131K / Minimum Essential Emergency Communications Network (MEECN)	Project (Number/Name) T70 / Strategic C3 Support	

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
NLCC Program Tracking Report (formally known as NC3 Program Tracking Report)				
NLCC Program Tracking Report	1	2015	3	2022
Systems Analysis Documents				
Systems Analysis Documents	1	2015	4	2022
NLCC Reference Architecture (formally known as NC3 Reference Architecture)				
NLCC Reference Architecture	1	2015	4	2022
Operational Assessments				
Operational Assessments	1	2015	4	2022
NLCC Portfolio Roadmap				
NLCC Portfolio Roadmap	1	2015	1	2022
NLCC System Engineering and Integration				
NLCC System Engineering and Integration	1	2015	1	2022
NLCC Target Architecture				
NLCC Target Architecture	4	2017	3	2019

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Defense Information Systems Agency **Date:** May 2017

Appropriation/Budget Activity 0400: Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development					R-1 Program Element (Number/Name) PE 0303150K / Global Command and Control System							
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	490.696	19.395	24.438	42.687	-	42.687	48.508	40.668	17.763	18.158	Continuing	Continuing
CC01: Global Command and Control System-Joint (GCCS-J)	490.696	19.395	24.438	42.687	-	42.687	48.508	40.668	17.763	18.158	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Global Command and Control System-Joint (GCCS-J) funds a Joint Command and Control (JC2) portfolio which includes: GCCS-J, Joint Planning and Execution Services (JPES), and JC2 Architecture.

The GCCS-J Program is the Department of Defense (DoD) Joint C2 system of record. It incorporates core planning and assessment tools required by Combatant Commanders and their subordinate Joint Task Force Commanders while meeting the readiness support requirements of the Services. GCCS-J is used by all nine Combatant Commands (COCOMs) at sites around the world, supporting joint and coalition operations. The Services rely heavily on GCCS-J components to reduce their command and control (C2) operational costs. It provides support for commanders and staffs as they conduct joint and multinational operations by providing a fused picture of the battle space within an integrated system that is supporting joint warfighter needs today. GCCS-J is currently focused on sustainment, synchronization, and modernization to meet emerging operational needs by modifying and enhancing elements or capabilities in order to implement new requirements, enhance functionality, increase efficiency and lower operating and deployment costs while taking advantage of the progress made by current operational systems and technologies. The GCCS-J program is also executing incremental modernization of C2 capabilities using the Joint Requirements Oversight Council (JROC) approved needs.

JPES is a portfolio of capabilities supporting joint policies, processes, procedures, and reporting structures. It is supported by communications and information technology used by the Joint Planning and Execution Community (JPEC). JPEC uses these capabilities to monitor the following activities: planning, execute mobilization, deployment, employment and sustainment, redeployment, and demobilization. At full maturity, the JPES capabilities will be integrated with other adaptive planning and execution systems to facilitate the rapid development and sustainment of plans and a seamless, dynamic transition to execution in a net-centric environment. One of the key capabilities residing within the JPES portfolio of sustaining the existing Joint Operational Planning and Execution System (JOPES) while modernization of JOPES is planned and implemented. The JPES portfolio also includes a core set of infrastructure services consisting of the JPES Framework (JFW) and a variety of mission applications to include Joint Force Projection (JFP), Joint Capabilities Requirements Manager (JCRM) and eventually the capabilities that will replace JOPES.

JC2 Architecture is a reference architecture that aligns closely to the DoD Information Enterprise Architecture. The JC2 Architecture describes architectural and operational concepts, technical constructs, and is a repository for valuable reference information relating to C2 standards and information security. It is the authoritative source of information and technical direction for the JC2 arena.

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Defense Information Systems Agency	Date: May 2017
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Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0303150K / <i>Global Command and Control System</i>
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B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	21.503	24.438	19.554	-	19.554
Current President's Budget	19.395	24.438	42.687	-	42.687
Total Adjustments	-2.108	0.000	23.133	-	23.133
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-2.108	-	23.133	-	23.133

Change Summary Explanation

The increase of +\$23.133 in FY 2018 will facilitate modernization of the GCCS-J system from an application to a services based architecture based on an enterprise cloud-based solution. This increase is partially offset by a decrease of -\$0.640 is attributed to the Services Requirements Review Board (SRRB) contract reduction.

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 0303150K / Global Command and Control System				Project (Number/Name) CC01 / Global Command and Control System-Joint (GCCS-J)			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
CC01: Global Command and Control System-Joint (GCCS-J)	490.696	19.395	24.438	42.687	-	42.687	48.508	40.668	17.763	18.158	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Global Command and Control System – Joint (GCCS-J) is DoD's Joint Command and Control (JC2) system of record and provides the foundation for migration of service-unique C2 systems into a Joint, interoperable environment. The Defense Information System Agency's (DISAs) portfolio includes funding to support GCCS-J, Joint Planning and Execution Services (JPES), and the development and sustainment of the JC2 Architecture. GCCS-J incorporates the core planning and assessment tools required by combatant commanders and their subordinate Joint Task Force Commanders while meeting the readiness support requirements of the Services. Adaptive Planning and Execution Joint Planning Services are being developed to modernize the adaptive planning functions in a net centric environment. DISA continues to provide support for the operational system to ensure continued access to information integration and decision-support capabilities that enable the exercise of authority and direction over assigned and attached forces, in a net-centric, collaborative information environment. Additionally, DISA provides critical C2 capabilities to the Commander-in-Chief, Secretary of Defense, National Military Command Center, Combatant Commands (COCOMs), Joint Force Commanders, and Service Component Commanders.

JPES is a set of capabilities that address components of the DOD's Adaptive Planning Roadmap (13 December 2005) and Adaptive Planning Roadmap II (5 March 2008). JPES produces enhancements to the Joint Operations Planning and Execution System (JOPES), focused adaptive planning capabilities, and provides a set of core infrastructure services necessary to provide the warfighter a fully interoperable environment where functionality can be easily added as mission needs dictate.

The JC2 Architecture is a foundational element of JC2 capabilities for the Department. The JC2 Architecture provides a set of net-centric tenets associated with data, functional service and the C2 infrastructure that describes architectural and operational concepts, technical constructs, and is a repository for valuable reference information relating to C2 standards and information security. Each year, the DISA architecture team, annually, produces a transitional architecture that documents the current state of C2 capabilities, anticipated changes/enhancements either in progress or planned by the JC2 community.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018
Title: Development and Strategic Planning	12.180	10.330	31.284
Description: Develop, publish, and execute a GCCS-J migration and modernization strategy that achieves the following GCCS-J Modernization objectives in accordance with Joint C2 Mission operational priorities and the DoD's JC2 Reference Architecture: <ul style="list-style-type: none"> • Continue to decompose applicable existing applications into services • Limit local deployment and move as much to the enterprise as possible • Continue to expose data and scale services to support an enterprise implementation 			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency			Date: May 2017		
Appropriation/Budget Activity 0400 / 7		R-1 Program Element (Number/Name) PE 0303150K / <i>Global Command and Control System</i>		Project (Number/Name) CC01 / <i>Global Command and Control System-Joint (GCCS-J)</i>	
B. Accomplishments/Planned Programs (\$ in Millions)			FY 2016	FY 2017	FY 2018
<ul style="list-style-type: none"> • Continue to evolve more economical hardware and software architecture without impact to the operational user or Family of Systems (FoS)/interface partners • Reduce overall sustainment cost through use of more cost effective and appropriate Commercial-off-the-Shelf (COTS) and Hardware (HW) products • Evolve to use of agile development practices • Consolidation of clients and tools <p>FY 2016 Accomplishments: The GCCS-J program will continue to update and execute the GCCS-J Modernization planning guidance based on lessons learned, operational priorities, and updated DoD guidance. These updates will support the Joint C2 Analysis of Alternatives (AoA) goals of reducing cost, providing additional capability to the warfighter and sustaining existing C2 capabilities. Planned activities include the fielding of Global 6.0, completion of Agile Client Release 7(R7), and significant forward progress on development of the Data Virtualization Layer (DVL) Modernization Architecture in MilCloud.</p> <p>FY 2017 Plans: The GCCS-J program will continue to update and execute the GCCS-J Modernization planning guidance based on lessons learned, operational priorities, and updated DoD guidance. These updates will support the Joint C2 Analysis of Alternatives (AoA) goals of reducing cost, providing additional capability to the warfighter and sustaining existing C2 capabilities. Planned activities include award of a Development and Modernization contract that will focus on transitioning the GCCS-J to an open standards architecture deployable in a variety of operational environments (i.e. local, cloud, mobile, etc). This effort will include development of GCCS-J capabilities to enhance functionality, implement new requirements, increase efficiency, and lower operating and deployment costs through the employment of new and emerging technologies.</p> <p>The decrease of -\$0.975 from FY 2016 to FY 2017 is the result of a reduction in performance benchmarking, information and knowledge engineering, custom application development, and product integration supporting GCCS-J Block V 6.0 development as it transitions into sustainment.</p> <p>FY 2018 Plans: The GCCS-J program will continue to update and execute the GCCS-J Modernization planning guidance based on operational priorities, and updated DoD guidance. These updates will support the Joint C2 Analysis of Alternatives (AoA) goals of reducing cost, providing additional capability to the warfighter and sustaining existing C2 capabilities. Planned activities include further prototype, proof of concept and experimental efforts that will focus on transitioning GCCS-J to an open standards architecture deployable in a variety of operational environments (i.e. local, cloud, mobile, etc). This effort will include development of GCCS-J capabilities to enhance functionality, modernize and enhance the security posture of the application, increase efficiency, and lower operating and deployment costs through the employment of new and emerging technologies.</p>					

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency		Date: May 2017	
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303150K / <i>Global Command and Control System</i>	Project (Number/Name) CC01 / <i>Global Command and Control System-Joint (GCCS-J)</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
The increase of +\$20.954 from FY 2017 to FY 2018 is due to recapitalization of the modernization of GCCS-J into a cloud-based, enterprise system which DISA will use to provide C2 as a service throughout DoD, including the services.			FY 2018
Title: Joint Planning and Execution Services (JPES)		7.215	11.403
Description: JPES is a collection of capabilities supporting joint policies, processes, procedures, and reporting structures, that are supported by communications and information technology used by the JPEC. JPEC uses these capabilities to monitor, plan, and execute: mobilization, deployment, employment, sustainment, redeployment, and demobilization activities associated with joint operations.		14.108	
FY 2016 Accomplishments: Continue improvements/expansion of JFW services providing additional data services to support integration with external systems, performance enhancements, reliability & maintainability, backwards compatibility for legacy systems, and replacement for the legacy newsgroups service. Development of the modernized JOPES user tools will begin in FY16.			
FY 2017 Plans: Continue improvements/expansion of JFW services providing enhanced system administration tools for monitoring and managing the JFW infrastructure, new data services in support of modernizing the JOPES user tools, support to legacy systems moving off of JOPES to the modernized JFW architecture, development of a business logic service and migration of JOPES legacy business logic into this new service.			
The increase of +\$3.910 from FY 2016 to FY 2017 is due to continued improvements/expansion of tools supporting JFW services that will allow the Joint Staff Support Center (JSSC) to increased functionality, including the ability to operate JFW independently and troubleshoot issues as they arrive.			
FY 2018 Plans: Continue improvements/expansion of JFW services providing enhanced system administration tools for monitoring and managing the JFW infrastructure, new data services in support of modernizing the JOPES user tools, continued streamlining of ported legacy interfaces to JFW for support legacy systems moving off JOPES to the modernized JFW architecture.			
The decrease of -\$2.705 from FY 2017 to FY 2018 will slow the velocity of JPES solution and JFW impacting schedule. Part of the overall decrease (-\$0.640) is attributed to the Service Requirements Review Board (SSRB) contract reduction.			
Accomplishments/Planned Programs Subtotals		19.395	42.687
		24.438	

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency										Date: May 2017	
Appropriation/Budget Activity 0400 / 7				R-1 Program Element (Number/Name) PE 0303150K / <i>Global Command and Control System</i>				Project (Number/Name) CC01 / <i>Global Command and Control System-Joint (GCCS-J)</i>			
C. Other Program Funding Summary (\$ in Millions)											
			<u>FY 2018</u>	<u>FY 2018</u>	<u>FY 2018</u>					<u>Cost To</u>	
<u>Line Item</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>Base</u>	<u>OCO</u>	<u>Total</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>Complete</u>	<u>Total Cost</u>
• PE 0303150K: <i>Operation & Maintenance, Defense-Wide</i>	78.620	83.416	86.219	-	86.219	92.415	93.315	95.142	-	Continuing	Continuing
Remarks											
D. Acquisition Strategy											
Use of performance-based contract awards is maximized while use of Time and Material contracts is minimized to those providing programmatic support versus software development, integration, or testing. All development, integration, and migration efforts within the portfolio are primarily supported through Cost Reimbursable Task Orders issued under competitively awarded contracts. Acquisition Strategies are structured to retain contractors capable of satisfying cost, schedule, and performance objectives. Contract awards incorporate provisions requiring contractors to establish and manage specific earned value data. This strategy mitigates risk by requiring monthly Contract Performance Reviews (CPRs) and utilizing award fee contracts where appropriate to incentivize performance. Both GCCS-J and JPES apply formal acquisition rigor to include reporting requirements, as appropriate, by acquisition program designation.											
E. Performance Metrics											
Activity: Effectively communicate with external command and control systems											
FY 2016 (Actual): 100% successful test of new critical system interfaces, as well as continued 100% successful test of critical current system interfaces.											
FY 2017 (Estimated): 100% successful test of new critical system interfaces, as well as continued 100% successful test of critical current system interfaces.											
FY 2018 (Estimated): 100% successful test of new critical system interfaces, as well as continued 100% successful test of critical current system interfaces.											
Activity: Fuse select C2 capabilities into a comprehensive, interoperable system eliminating the need for inflexible, duplicative, stovepipe C2 systems.											
FY 2016 (Actual): Successful fielding of Agile Client Release 7 (R7)											
FY 2017 (Estimated): Successful fielding of GCCS-J Global Release 6.0 to designated Critical Sites											
FY 2018 (Estimated): Successful fielding of GCCS-J Global Release 6.X											
Activity: Development of JOPES Modernization											
FY 2016 (Actual): Successfully completed the development of JFW data services for US Marine Corps Core C2 System and USTRANSCOM's primary infrastructure supporting eight programs of record. Additionally JFW made performance enhancements improving its reliability & maintainability and incorporated backwards compatibility for legacy systems. A prototype replacement for the legacy newsgroups service was stood up for user test and feedback. FY16 Estimated: 100%replacement for the legacy newsgroups service. FY16 Estimated: 100%											

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency		Date: May 2017
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303150K / <i>Global Command and Control System</i>	Project (Number/Name) CC01 / <i>Global Command and Control System-Joint (GCCS-J)</i>
<p>FY 2017 (Estimated): Sucessfully complete improvements/expansion of JPES Framework (JFW) services providing enhanced system administration tools for monitoring and managing the JFW infrastructure and new data services. FY 2017 Estimated: 50%</p> <p>FY 2018 (Estimated): Sucessfully complete improvements/expansion of JPES Framework (JFW) services providing enhanced system administration tools for monitoring and managing the JFW infrastructure and new data services. FY 2018 Estimated: 50%</p> <p>Activity: Modernize GCCS-J infrastructure components to reduce overall costs (COTS & HW), increase scalability and performance through shift to enterprise deployment. Reduce release cycles through agile development and deployment.</p> <p>FY 2016 (Actual): Successfully fielded Agile Client Release 7 (R7) FY16:100%</p> <p>FY 2017 (Estimated): Achieve Fielding Decision Review (FDR) for Agile Client Release 8 (R8). FY17 Estimated: 100%</p> <p>FY 2018 (Estimated): Achieve Fielding Decision Review (FDR) for Data Virtualization Layer Phase II. FY18 Estimated: 100%</p>		

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Exhibit R-3, RDT&E Project Cost Analysis: FY 2018 Defense Information Systems Agency												Date: May 2017			
Appropriation/Budget Activity 0400 / 7						R-1 Program Element (Number/Name) PE 0303150K / Global Command and Control System				Project (Number/Name) CC01 / Global Command and Control System-Joint (GCCS-J)					
Product Development (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Product Development 1	C/CPFF	NGMS : Reston, VA	20.289	-		-		-		-		-	0.00	20.289	20.289
Product Development 2	FFRDC	MITRE : McLean, VA	7.077	-		-		-		-		-	0.00	7.077	7.077
Product Development 3	SS/FFP	Dynamic Systems : Los Angeles, CA	3.189	-		-		-		-		-	0.00	3.189	3.189
Product Development 4	C/CPFF	Pragmatics : McLean, VA	31.239	-		-		-		-		-	0.00	31.239	31.239
Product Development 6	C/CPIF	BAH : McLean, VA	3.369	-		-		-		-		-	0.00	3.369	3.369
Product Development 7	C/CPIF	JPES Framework : Various	19.554	-		-		-		-		-	0.00	19.554	19.554
Product Development 8	C/CPFF	RTB Development : Various	13.116	-		-		-		-		-	0.00	13.116	13.116
Product Development 9	C/CPFF	IGS Development : Various	12.398	-		-		-		-		-	0.00	12.398	12.398
Product Development 10	C/CPFF	SAIC : Falls Church, VA	4.826	-		-		-		-		-	0.00	4.826	4.826
Product Development 11	MIPR	SSC : San Diego, CA	13.317	-		-		-		-		-	0.00	13.317	13.317
Product Development 12	C/CPFF	NGMS : Reston, VA	67.014	-		-		-		-		-	0.00	67.014	67.014
Product Development 13	MIPR	NGIT : Various	1.772	-		-		-		-		-	0.00	1.772	1.772
Product Development 14	C/CPFF	NGMS : Reston, VA	72.817	6.656	Feb 2016	8.718	Feb 2017	-		-		-	Continuing	Continuing	Continuing
Product Development 15	C/CPIF	Booz Allen Hamilton : McLean, VA	3.283	-		-		-		-		-	0.00	3.283	3.283
Product Development 16	C/CPFF	Booz Allen Hamilton : Various	3.685	-		-		-		-		-	0.00	3.685	3.685
Product Development 17	C/CPAF	Booz Allen Hamilton : Falls Church, VA	1.229	-		-		-		-		-	0.00	1.229	1.229
Product Development 18	C/CPAF	AB Floyd : Alexandria, VA	12.477	-		-		-		-		-	0.00	12.477	12.477
Product Development 19	C/CPAF	Femme Comp Inc : Chantilly, VA	7.249	-		-		-		-		-	0.00	7.249	7.249

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Exhibit R-3, RDT&E Project Cost Analysis: FY 2018 Defense Information Systems Agency												Date: May 2017			
Appropriation/Budget Activity 0400 / 7						R-1 Program Element (Number/Name) PE 0303150K / Global Command and Control System				Project (Number/Name) CC01 / Global Command and Control System-Joint (GCCS-J)					
Product Development (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Product Development 20	C/CPFF	SAIC : Falls Church, VA	5.876	-		-		-		-		-	0.00	5.876	5.876
Product Development 21	C/CPIF	Booz Allen Hamilton : McLean, VA	5.865	-		-		-		-		-	0.00	5.865	5.865
Product Development 22	MIPR	JDISS : Various	6.039	-		-		-		-		-	0.00	6.039	6.039
Product Development 23	C/FFP	NGMS : Reston, VA	4.790	-		-		-		-		-	0.00	4.790	4.790
Product Development 24	MIPR	SPAWAR : Charleston, SC	10.034	-		-		0.721	Sep 2018	-		0.721	0.00	10.755	10.755
Product Development 25	MIPR	Dept of Energy, Army Research Lab, PD Intelligence Fusion, GSA/FAS : Various	5.710	-		-		-		-		-	0.00	5.710	5.710
Product Development 26	C/CPAF	Tactical 3-D COP : Various	3.200	-		-		-		-		-	0.00	3.200	3.200
Product Development 27	SS/FFP	JITC : Various	20.400	-		-		-		-		-	0.00	20.400	20.400
Product Development 28	C/CPFF	TBD - JCRM : TBD	5.000	1.800	Apr 2016	1.800	Sep 2017	-		-		-	Continuing	Continuing	Continuing
Product Development 30	C/CPFF	TBD : TBD	4.422	1.000	Sep 2016	5.208	Sep 2017	4.400	Sep 2018	-		4.400	Continuing	Continuing	Continuing
Product Development 31	C/TBD	TBD : TBD	3.798	1.569	Apr 2016	-		-		-		-	Continuing	Continuing	Continuing
Product Development 32	C/CPFF	TBD : TBD	-	-		-		10.500	Feb 2018	-		10.500	Continuing	Continuing	Continuing
Product Development 33	C/TBD	TBD : TBD	4.673	-		-		-		-		-	0.00	4.673	4.673
Engineering Services and Integration 29	SS/FFP	TBD : Various	6.782	-		-		-		-		-	0.00	6.782	6.782
I3 Engineering Services & SW Development	C/TBD	NGIT : Various	1.811	-		-		-		-		-	0.00	1.811	1.811
Product Development 29	TBD	JOPES modernization : TBD	2.043	2.400	Sep 2016	5.805	Oct 2016	-		-		-	Continuing	Continuing	Continuing
Product Development 34	C/CPFF	TBD : TBD - JPES	0.000	-		-		7.400	Jan 2018	-		7.400	Continuing	Continuing	Continuing
Product Development	C/CPFF	TBD : TBD - GCCS-J	0.000	-		-		17.566	Feb 2018	-		17.566	Continuing	Continuing	Continuing
Subtotal			388.343	13.425		21.531		40.587		-		40.587	-	-	-

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Exhibit R-3, RDT&E Project Cost Analysis: FY 2018 Defense Information Systems Agency												Date: May 2017			
Appropriation/Budget Activity 0400 / 7						R-1 Program Element (Number/Name) PE 0303150K / <i>Global Command and Control System</i>						Project (Number/Name) CC01 / <i>Global Command and Control System-Joint (GCCS-J)</i>			
Support (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Support 1	C/T&M	Oracle : Various	1.003	-		-		-		-		-	0.00	1.003	1.003
Support 2	C/CPFF	JC2 Common Interface : Various	4.808	-		-		-		-		-	0.00	4.808	4.808
Support Costs - Engineering Support 3	FFRDC	MITRE : Various	0.754	-		-		-		-		-	0.00	0.754	0.754
Support Costs - Engineering Support 4	C/CPFF	Pragmatics : McLean, VA	3.799	-		-		-		-		-	0.00	3.799	3.799
Support Costs - Engineering Support 5	C/CPFF	IPA : College Park, MD	0.283	-		-		-		-		-	0.00	0.283	0.283
Support Cost 6	C/FFP	STA : Falls Church, VA	2.772	-		-		-		-		-	0.00	2.772	2.772
Support Costs	C/CPFF	TBD : TBD	3.700	-		0.857	Sep 2017	-		-		-	0.00	4.557	4.557
Support Cost 7	TBD	Pragmatics : McLean, VA	0.064	3.500	Sep 2016	-		-		-		-	Continuing	Continuing	Continuing
Subtotal			17.183	3.500		0.857		-		-		-	-	-	-
Test and Evaluation (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Test & Evaluation 1	C/TBD	SAIC : Falls Church, VA	0.744	-		-		-		-		-	0.00	0.744	0.744
Test & Evaluation 2	MIPR	JITC : Ft. Huachuca, AZ	28.365	1.200	Sep 2015	1.500	Sep 2017	1.500	Sep 2018	-		1.500	Continuing	Continuing	Continuing
Test & Evaluation 3	MIPR	DIA : Various	8.224	0.800	Jun 2016	0.080	Jun 2017	-		-		-	Continuing	Continuing	Continuing
Test & Evaluation 4	MIPR	DAA : Various	2.812	0.470	Jun 2016	0.470	Jun 2017	0.600	Sep 2018	-		0.600	Continuing	Continuing	Continuing
Test & Evaluation 5	C/CPFF	SAIC : Falls Church, VA	9.681	-		-		-		-		-	0.00	9.681	9.681
Test & Evaluation 6	C/CPAF	SAIC : Falls Church, VA	23.133	-		-		-		-		-	0.00	23.133	23.133

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Exhibit R-3, RDT&E Project Cost Analysis: FY 2018 Defense Information Systems Agency												Date: May 2017			
Appropriation/Budget Activity 0400 / 7						R-1 Program Element (Number/Name) PE 0303150K / Global Command and Control System				Project (Number/Name) CC01 / Global Command and Control System-Joint (GCCS-J)					
Test and Evaluation (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Test & Evaluation 7	C/CPFF	Pragmatics : McLean, VA	0.308	-		-		-		-		-	0.00	0.308	0.308
Test & Evaluation 8	MIPR	JITC : Various	0.005	-		-		-		-		-	0.00	0.005	0.005
Test & Evaluation 9	MIPR	JITC : Various	0.897	-		-		-		-		-	0.00	0.897	0.897
Test & Evaluation 10	MIPR	DISA FSO : Various	1.059	-		-		-		-		-	0.00	1.059	1.059
Test & Evaluation 11	MIPR	TEMC Test Support : Various	0.229	-		-		-		-		-	0.00	0.229	0.229
Test & Evaluation 12	MIPR	DISA TEMC : Falls Church, VA	0.971	-		-		-		-		-	0.00	0.971	0.971
Test & Evaluation 13	MIPR	STRATCOM : Offut, NE	1.155	-		-		-		-		-	0.00	1.155	1.155
Test & Evaluation 14	MIPR	DISA FSO : Falls Church, VA	1.200	-		-		-		-		-	0.00	1.200	1.200
Test & Evaluation 15	C/CPFF	TQI : Falls Church, VA	1.698	-		-		-		-		-	0.00	1.698	1.698
Test & Evaluation 16	C/CPFF	TQI : Falls Church, VA	0.494	-		-		-		-		-	0.00	0.494	0.494
Test & Evaluation 17	MIPR	Slidell : Various	0.436	-		-		-		-		-	0.00	0.436	0.436
Subtotal			81.411	2.470		2.050		2.100		-		2.100	-	-	-
Management Services (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Management Services	MIPR	SSC Atlantic : Charleston, SC	3.759	-		-		-		-		-	0.00	3.759	3.759
Subtotal			3.759	-		-		-		-		-	0.000	3.759	3.759

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Exhibit R-3, RDT&E Project Cost Analysis: FY 2018 Defense Information Systems Agency											Date: May 2017				
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 0303150K / Global Command and Control System					Project (Number/Name) CC01 / Global Command and Control System-Joint (GCCS-J)					
			Prior Years	FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			490.696	19.395		24.438		42.687		-		42.687	-	-	-

Remarks

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Exhibit R-4, RDT&E Schedule Profile: FY 2018 Defense Information Systems Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 0303150K / Global Command and Control System					Project (Number/Name) CC01 / Global Command and Control System-Joint (GCCS-J)		

	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Development and Strategic Planning																												
Integration and Test																												

	FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Development and Strategic Planning																												
Integration and Test																												

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Exhibit R-4A, RDT&E Schedule Details: FY 2018 Defense Information Systems Agency			Date: May 2017
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303150K / <i>Global Command and Control System</i>	Project (Number/Name) CC01 / <i>Global Command and Control System-Joint (GCCS-J)</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Development and Strategic Planning	1	2015	4	2022
Integration and Test	1	2015	4	2022

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Defense Information Systems Agency	Date: May 2017
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Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development</i>					R-1 Program Element (Number/Name) PE 0303153K / <i>Defense Spectrum Organization</i>							
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	152.272	19.307	13.197	8.750	-	8.750	9.073	9.128	9.352	9.574	Continuing	Continuing
JS1: <i>Joint Spectrum Center</i>	152.272	19.307	13.197	8.750	-	8.750	9.073	9.128	9.352	9.574	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Defense Spectrum Organization (DSO) provides a full array of electromagnetic spectrum services and capabilities, ranging from short notice on-the-ground operational support at the forward edge, to long range planning in pursuit of national strategic objectives. These services/capabilities are in direct support of Combatant Commanders, the Department of Defense (DoD) Chief Information Officer, Military Services, and Defense Agencies. The DSO is the focal point for electromagnetic spectrum analysis and the development of integrated spectrum plans and strategies to address current and future needs for DoD spectrum access. In addition, DSO serves as DoD's spectrum advocate at national and international forums and conducts extensive outreach to both industry and government. DSO also implements enterprise spectrum management capabilities to enhance spectrum efficiency and agility to improve spectrum-dependent capabilities in support of United States and Coalition operations. This includes acquiring, implementing and sustaining the Global Electromagnetic Spectrum Information System (GEMSIS) which provides an integrated catalog of joint net-centric spectrum management tools and services. Electromagnetic Spectrum Management enables information dominance through effective spectrum operations.

<u>B. Program Change Summary (\$ in Millions)</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018 Base</u>	<u>FY 2018 OCO</u>	<u>FY 2018 Total</u>
Previous President's Budget	20.298	13.197	9.539	-	9.539
Current President's Budget	19.307	13.197	8.750	-	8.750
Total Adjustments	-0.991	0.000	-0.789	-	-0.789
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-0.991	-	-0.789	-	-0.789

Change Summary Explanation

The decrease of -\$0.789 in FY 2018 is attributable to a reduced number of Hazards of Electromagnetic Radiation to Ordnance (HERO) surveys in support of forward deployed forces, number of ordnance susceptibility information updates and acquisition program reviews. Part of the overall decrease (-\$0.328) is attributed to the Service Requirements Review Board (SSRB) contract reduction.

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 0303153K / Defense Spectrum Organization				Project (Number/Name) JS1 / Joint Spectrum Center			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
JS1: Joint Spectrum Center	152.272	19.307	13.197	8.750	-	8.750	9.073	9.128	9.352	9.574	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Joint Spectrum Center (JSC), which is a division of Defense Spectrum Organization (DSO), designs, develops, and maintains Department of Defense (DoD) automated spectrum management systems, evaluation tools, and databases. The databases are the prime sources of information for DoD use of the electromagnetic (EM) spectrum. The JSC provides technical measurement and analysis in support of DoD spectrum policy decisions to ensure the development, acquisition, and operational deployment of systems are compatible with other spectrum dependent systems operating within the same EM environment (EME). Additional efforts focus on improving future warfighter EM spectrum utilization through technological innovation, and influencing research and development emerging technology efforts.

Improved spectrum support includes the Global Electromagnetic Spectrum Information System (GEMSIS), a net centric capability that will provide commanders with an increased common picture of spectrum situational awareness of friendly and hostile forces while transparently deconflicting competing mission requirements for spectrum use. This capability will enable the transformation from the current preplanned and static assignment strategy into autonomous and adaptive spectrum operations.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018
Title: Advanced Spectrum Tools	0.883	0.883	0.883
<p>Description: The Joint Spectrum Data Repository and Tools program supports development of spectrum management tools, spectrum modeling and simulation capabilities, spectrum database development, and spectrum data transformation and standardization. This program provides the Combatant Commands (COCOMs) and Military Services with the spectrum management tools and associated databases to manage spectrum resources at the strategic and operational level. It also provides the DoD acquisition community with analytical tools to conduct Electromagnetic Environmental Effects (E3) analyses and Spectrum Supportability Risk Assessments (SSRA).</p> <p>FY 2016 Accomplishments: Enhancements to Spectrum Technology and Test Initiative in support of Spectrum Engineering Analysis and Relocation efforts. Supports evaluation of future and existing spectrum analysis tools.</p> <p>FY 2017 Plans: Enhancements to Spectrum Technology and Testbed Initiative in support of Spectrum Engineering Analysis and Relocation efforts. Supports evaluation of future and existing spectrum analysis tools.</p> <p>FY 2018 Plans:</p>			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency		Date: May 2017	
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303153K / <i>Defense Spectrum Organization</i>	Project (Number/Name) JS1 / <i>Joint Spectrum Center</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
Enhancements to Spectrum Technology and Testbed Initiative in support of Spectrum Engineering Analysis and Relocation efforts. Supports evaluation of future and existing spectrum analysis tools.			
Title: DoD Electromagnetic Environmental Effects (E3) Program Description: The DoD E3 Program supports the Joint Capabilities Integration and Development System (JCIDS) process and the DoD acquisition process to ensure that E3 control and spectrum supportability are incorporated into the development, testing, and procurement of information technology and National Security Systems. The E3 Program also supports the development of the Joint Ordnance E3 Risk Assessment Database (JOERAD) and Hazards of Electromagnetic Radiation to Ordnance (HERO) electromagnetic environmental effects surveys in support of the COCOMs and Joint Task Forces. JOERAD develops algorithms and provides analytical capabilities to perform real-time risk assessments to evaluate platform/system safety and identify equipment limitations in the operational EM environment. JOERAD enables operators to make critical decisions about the hazards associated with the use of ordnance within complex EM environments. A SSRA is performed by program managers and materiel developers on all programs that are acquiring or incorporating spectrum-dependent systems or equipment per DoDI 4650.1. These assessments encompassed regulatory, technical, and operational spectrum and E3 issues and associated risks. FY 2016 Accomplishments: Will convert the JOERAD to a web-enabled application compliant with the Standard Spectrum Resource Format. Will conduct JOCG HERO Subgroup meetings, support the JOCG Executive Steering Committee and develop and maintain the Services' HERO susceptibility data records. Will conduct forward deployed base HERO surveys for the COCOMs/Services, and CONUS based emitter surveys for ordnance safety database validation and update the DoD ordnance RF safety requirements. Will update MIL-HDBK-235, "EME Profiles" and develop EME profiles to address blue force jammer and electronic warfare environments. Will conduct monthly DoD E3 Integrated Product Team (IPT) Meetings. Will provide technical support to DoD CIO, the Joint Staff, and other DoD Components on E3, spectrum, hazards of EM radiation matters. Will review JCIDS and ISP acquisition documents assigned by the Joint Staff and DoD CIO and update guidance instructions as necessary. Will provide E3 and SS training to the DoD Components and develop/maintain training curricula at the Defense Acquisition University. FY 2017 Plans: N/A The decrease of -\$4.009 from FY 2016 to FY 2017 is due to the elimination of the DoD E3 program. Hazards of HERO surveys will be eliminated for Forward Deployed Forces, Ordnance susceptibility information will not be updated, and acquisition program reviews will cease. DSO will no longer develop spectrum management techniques for emerging spectrum technologies. FY 2018 Plans:		4.009	0.000
			3.315

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency		Date: May 2017	
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303153K / <i>Defense Spectrum Organization</i>	Project (Number/Name) JS1 / <i>Joint Spectrum Center</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
<p>Will continue to conduct JOCG HERO Subgroup meetings, support the JOCG Executive Steering Committee and develop and maintain the Services' HERO susceptibility data records. Will conduct forward deployed base HERO surveys for the COCOMs/ Services, and CONUS based emitter surveys for ordnance safety database validation and update the DoD ordnance RF safety requirements. Will update MIL-HDBK-235, "EME Profiles" and develop EME profiles to address blue force jammer and electronic warfare environments. Will conduct monthly DoD E3 Integrated Product Team (IPT) Meetings. Will provide technical support to DoD CIO, the Joint Staff, and other DoD Components on E3, spectrum, hazards of EM radiation matters. Will review JCIDS and ISP acquisition documents assigned by the Joint Staff and DoD CIO and update guidance instructions as necessary. Will provide E3 and SS training to the DoD Components and develop/maintain training curricula at the Defense Acquisition University.</p> <p>The increase of +\$3.315 from FY 2017 to FY 2018 supports additional HERO surveys for Forward Deployed Forces, Ordnance susceptibility updates, and acquisition program E3 reviews and guidance.</p>			
<p>Title: Emerging Spectrum Technologies (EST)</p> <p>Description: DSO has the responsibility to investigate emerging spectrum related technologies and evaluate their applicability to improve future warfighter EM spectrum utilization through technological innovation. The goal of the EST program is to identify the opportunities and risks associated with emerging spectrum-related technologies in the early stages of the technology development, influence and lead technology development in order to maximize DoD spectrum utilization, and ensure that spectrum policies incorporate optimal technology to meet DoD mission requirements. Within EST there is an increased focus on Dynamic Spectrum Access (DSA). DSA is realized through wireless networking architectures and technologies that enable wireless devices to dynamically adapt their spectrum access according to criteria such as policy constraints, spectrum availability, propagation environment, and application performance requirements.</p> <p>FY 2016 Accomplishments:</p> <p>Will focus on collaboration with the Science and Technology community (including Assistant Security Defense for Research and Engineering (ASDR&E), Service Labs and Defense Advanced Research Projects Agency (DARPA)) to develop and begin execution of technology roadmaps and integration strategies that result in system flexibility and operational agility. Revisions will be made to the current spectrum management architecture to reflect transforming spectrum operations through application of EST in accordance with the new DoD EMS Spectrum Strategy. Prototype capabilities that provide increased operational agility will be developed and demonstrated. The DSA Spectrum Management Roadmap will be updated to include application of DSA in spectrum sharing scenarios. An initial set of Joint standard ontologies for spectrum operations will be developed.</p> <p>FY 2017 Plans:</p> <p>Will continue collaboration efforts with the Science and Technology community (including ASDR&E, Service Labs and DARPA) to develop and execute the technology roadmaps and integration strategies that result in system flexibility and operational agility. Revisions will be made to the current spectrum management architecture to reflect transforming spectrum operations</p>		3.318	3.251
			3.715

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency		Date: May 2017	
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303153K / <i>Defense Spectrum Organization</i>	Project (Number/Name) JS1 / <i>Joint Spectrum Center</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
<p>through application of EST in accordance with the new DoD EMS Spectrum Strategy. Prototype capabilities that provide increased operational agility will be developed and demonstrated. Continue to develop initiatives that include the roadmap, standards, architecture, and business processes to exploit and/or minimize the impact of emerging technologies on DoD spectrum operations.</p> <p>The decrease of -\$0.067 from FY 2016 to FY 2017 will slightly reduce collaboration efforts with Science and Technology communities in developing spectrum technology roadmaps.</p> <p>FY 2018 Plans: Will continue collaboration efforts with the Science and Technology community (including ASDR&E, Service Labs and DARPA) to develop and execute the technology roadmaps and integration strategies that result in system flexibility and operational agility. Revisions will be made to the current spectrum management architecture to reflect transforming spectrum operations through application of EST in accordance with the new DoD EMS Spectrum Strategy. Prototype capabilities that provide increased operational agility will be developed and demonstrated. Continue to develop initiatives that include the roadmap, standards, architecture, and business processes to exploit and/or minimize the impact of emerging technologies on DoD spectrum operations.</p> <p>The increase of +\$0.464 from FY 2017 to FY 2018 will begin examination and impact assessments of the most mature portions of the SAR&DP, STR, and AWS-3 SSTD efforts. Produce specific algorithmic and technique changes associated with specific tools and techniques in current use. Prototype implementations to verify viability and collect metrics on improvements.</p>			
<p>Title: Global Electromagnetic Spectrum Information System (GEMSIS)</p> <p>Description: The GEMSIS is a net centric capability that will provide operational commanders with an increased common picture of spectrum situational awareness of friendly and hostile forces while transparently deconflicting competing mission requirements for spectrum use. This capability will enable the transformation from the current preplanned and static assignment strategy into autonomous and adaptive spectrum operations.</p> <p>FY 2016 Accomplishments: GEMSIS Increment Two develops and implements the Integrated Spectrum Desktop enhanced capabilities with integration of improved frequency assignment and spectrum management tools and web services from JS DR, SXXI, End to End Spectrum Supportability (E2ESS), and Coalition Joint Spectrum Management Tool (CJSMP T). Will improve/enhance user interface and deliver the Spectrum dashboard to enable quick access to information and capabilities. Integration efforts will include implementation of E2ESS (Host Nation Spectrum Worldwide Database Online (HNSWDO) and Stepstone capabilities combined),</p>		11.097	9.063
			0.837

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency							Date: May 2017		
Appropriation/Budget Activity 0400 / 7				R-1 Program Element (Number/Name) PE 0303153K / <i>Defense Spectrum Organization</i>			Project (Number/Name) JS1 / <i>Joint Spectrum Center</i>		

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2016	FY 2017	FY 2018
<p>SXXI, JSDR, and CJSMPPT maintenance and version releases and other enterprise service integration into the Integrated Spectrum Desktop.</p> <p>FY 2017 Plans: Continue efforts to enhance the Integrated Spectrum Desktop capabilities and improve the JSDR, SXXI, E2ESS, and CJSMPPT to improve user interface within ISD. Integration efforts will continue with E2ESS, SXXI, JSDR, and CJSMPPT maintenance and version releases into the ISD.</p> <p>The decrease of -\$2.629 from FY 2016 to FY 2017 returns program to planned funding levels to support the development of the backward capable frequency assignment capability through the integration of SXXI and SXXI Legacy.</p> <p>FY 2018 Plans: Continue SXXI Legacy, E2ESS, and JSDR maintenance and version releases.</p> <p>The decrease of -\$7.898 in FY 2018 is due to completion of Increment 2 development efforts. Part of the overall decrease (-\$0.328) is attributed to the Service Requirements Review Board (SSRB) contract reduction.</p>			
Accomplishments/Planned Programs Subtotals	19.307	13.197	8.750

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
• O&M, DW/PE	33.135	33.014	36.408	-	36.408	35.707	36.072	36.067	-	Continuing	Continuing
0303153K: O&M, DW											
Remarks											
D. Acquisition Strategy											
Engineering support services are provided by the use of a contract. No in-house government capability exists, nor is it practical to develop one that can provide the expertise necessary to fulfill the mission and responsibilities of DSO. Full and open competition was used for the current contract with EXELIS, Inc. GEMSIS' acquisition approach is to obtain capabilities by adopting existing capabilities, buying commercial products, or developing new capabilities by delivering incrementally within the context of a streamlined and adaptive acquisition approach.											
E. Performance Metrics											
1. Provide engineering support to DoD Components to ensure E3 and spectrum supportability requirements are addressed during the acquisition life-cycle meeting at least 90% of program suspenses.											

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency		Date: May 2017
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303153K / <i>Defense Spectrum Organization</i>	Project (Number/Name) JS1 / <i>Joint Spectrum Center</i>
<p>2. Execute effective emerging spectrum technologies evaluation process that generates timely and relevant products evaluating at least 3 technologies per quarter.</p> <p>3. Provide technical E3 and spectrum engineering support upon request from the Combatant Commands, their components and the Military Services with a minimum 98% response rate.</p> <p>4. Develop an operational Joint spectrum management system that delivers at least 90% of products on schedule in accordance with objective scheduled events and deliverables as approved in the Acquisition Program Baseline- Schedule Status of systems.</p> <p>All metric results are classified.</p>		

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Defense Information Systems Agency	Date: May 2017
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Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 7: Operational Systems Development</i>					R-1 Program Element (Number/Name) PE 0303170K / <i>Net-Centric Enterprise Services (NCES)</i>							
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	248.666	0.426	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
T57: <i>Net-Centric Enterprise Services (NCES)</i>	248.666	0.426	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Program Executive Office Enterprise Services (PEO-ES) provides a portfolio of enterprise level services that enable communities of interest and mission applications to make their data and services visible, accessible, and understandable to other anticipated and unanticipated users. The continually expanding portfolio of enterprise services supports 100 percent of the active duty military and Government civilians; 258 thousand embedded contract personnel; 75 percent of the active Guard and Reserve; and 25 percent of the Guard and Reserve users. This meets the Department's requirement to support 2.5 million users on the Sensitive but Unclassified (SBU) Internet Protocol (IP) Data network and 300 thousand users on the Secret IP Data network. The portfolio of services continues to expand through the transition of local services to the Department of Defense (DoD) enterprise and providing enhanced functionality that allows DoD personnel to go anywhere within the DoD, login, and be productive, the implementation of an access control infrastructure that enables secure information sharing throughout the DoD, and the integration of pre-planned product improvements to existing enterprise services keeping them relevant to the end-users' missions.

<u>B. Program Change Summary (\$ in Millions)</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018 Base</u>	<u>FY 2018 OCO</u>	<u>FY 2018 Total</u>
Previous President's Budget	0.444	0.000	0.000	-	0.000
Current President's Budget	0.426	0.000	0.000	-	0.000
Total Adjustments	-0.018	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-0.018	-			
• SBIR/STTR Transfer	-	-			

Change Summary Explanation

N/A

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 0303170K / Net-Centric Enterprise Services (NCES)				Project (Number/Name) T57 / Net-Centric Enterprise Services (NCES)			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
T57: Net-Centric Enterprise Services (NCES)	248.666	0.426	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Program Executive Office Enterprise Services (PEO-ES) continues to expand their portfolio of services that currently includes the core capabilities delivered by the Net-Centric Enterprise Services (NCES) Program, with a resilient and flexible access control infrastructure that enables strong authentication for secure information sharing in the Department of Defense (DoD), and the identification, transitioning, and operationalization of local services into the larger DoD enterprise. Critical warfighter, Business, and Intelligence Mission Area services within the portfolio include an enterprise collaboration capability supporting over 900,000 DoD users, Enterprise Search that exposes data sources throughout the DoD, Service Oriented Architecture Foundation supporting a robust Enterprise Messaging service that provides producers the ability to publish one message that, in turn, can be distributed to hundreds of end-points supporting the subscribers to that information and a critical enterprise authoritative data source service that supports the user's need to identify and use authoritative data and services. The portfolio also includes the Strategic Knowledge Integration Web (SKIWeb) providing decision and event management support to all levels of a widespread user-base that ranges from the Combatant Commanders to the Joint Staff to Coalition partners on the Secret Internet Protocol (IP) Data network; DoD Visitor that allows personnel to "go anywhere within the DoD, login, and be productive;" the DoD Enterprise Portal Service that provides users with a flexible web-based hosting solution to create and manage mission, community, organization, and user focused sites; and privilege management Authentication Gateway Services (AGS) that is integrated with the Identity and Access Management services supporting brokered Public Key Infrastructure (PKI) authentication for DoD applications without a native PKI authentication capability. The individual suite of capabilities within the portfolio of services provides the user with the flexibility to couple the services in varying ways to support their mission needs. This flexibility provides unprecedented access to web and application content, critical imagery, intelligence and warfighter information, and temporarily stores critical data in a secure environment. The portfolio of enterprise services delivers tangible benefits to the Department by providing capabilities that are applied by US Forces, Coalition forces, and Allied forces to support full spectrum joint and expeditionary campaign operations. These enabling benefits include the ability to:

- Enhance collaborative decision-making processes
- Improve information sharing and integrated situational awareness
- Share and exchange knowledge and services between enterprise units and commands
- Share and exchange information between previously unreachable and unconnected sources
- Schedule and coordinate meetings with people across the DoD Components
- "Go anywhere in the DoD, login, and be productive"
- Create and manage mission, community, organization, and user-focused sites from global locations
- Exchange knowledge to enable situational awareness, determine the effects desired, select a course of action, the forces to execute it, and accurately assess the effects of that action

The portfolio contains capabilities that are also key enablers to the Defense Information Systems Agency's (DISA) mission of providing a global net-centric Enterprise infrastructure in direct support of joint Warfighter, National level leaders, and other mission and Coalition partners across the full spectrum of operations.

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency										Date: May 2017	
Appropriation/Budget Activity 0400 / 7				R-1 Program Element (Number/Name) PE 0303170K / <i>Net-Centric Enterprise Services (NCES)</i>				Project (Number/Name) T57 / <i>Net-Centric Enterprise Services (NCES)</i>			

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2016	FY 2017	FY 2018
Title: Test and Evaluation FY 2016 Accomplishments: Will provide support for the operational testing and evaluation of enterprise services and unified capabilities used in the Joint Information Environment and the transitioning of local services into the Department of Defense (DoD) enterprise infrastructure. Supports operational testing, modeling and simulation, or technical evaluation of technologies required to support source selection activities. Will also support the continuing analysis of industry standards and specifications for enhancements and added functionality to existing operational enterprise services to keep them current with evolving technologies. The decrease of -\$3.330 from FY 2015 to FY 2016 is the result of decreased testing requirements primarily due to completing the development, transition, and testing of the replacement Defense Enterprise Collaboration service. FY 2017 Plans: N/A The decrease of -\$0.426 from FY 2016 to FY 2017 is attributed to the reduction of contractor support due to the completion of Defense Enterprise Collaboration operational test and evaluation requirements.	0.426	0.000	-
Accomplishments/Planned Programs Subtotals	0.426	0.000	-

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
• O&M, DW/PE	91.033	36.400	38.074	-	38.074	37.734	38.110	38.857	-	Continuing	Continuing
0303170K: O&M, DW											
• Procurement, DW/PE	1.819	1.793	1.820	-	1.820	1.828	1.844	1.881	-	Continuing	Continuing
0303170K: Procurement, DW											
Remarks											
D. Acquisition Strategy											
The portfolio of services is leveraging portions of the acquisition approach approved for the NCES Program. Based on the approved NCES acquisition strategy, the portfolio will adopt proven specifications, best practices, and interface definitions to adopt or buy new network-based services or applications that are delivered, hosted, and managed in accordance with Service Level Agreements (SLAs) and that ensure available, reliable, and survivable services to support the warfighter's mission. The portfolio is using a streamlined acquisition approach to ensure that the required acquisitions contain only those requirements that are essential to meet the warfighter mission and that they can be acquired in a cost effective and time constrained manner that meets the defined mission need. This strategy will enable the											

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency		Date: May 2017
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303170K / <i>Net-Centric Enterprise Services (NCES)</i>	Project (Number/Name) T57 / <i>Net-Centric Enterprise Services (NCES)</i>
<p>rapid fielding of low to moderate risk capabilities to meet end-user operational needs through an agile requirements collection and engineering process that supports the acquisition, testing, and fielding of needed requirements in minimum time. The benefits provided by this acquisition approach include:</p> <ul style="list-style-type: none"> • Satisfy time-urgent needs of the warfighter or theater commander • Provide early and continual involvement of the user • Evaluate the portfolio to determine optimum funding approach to rapidly deploy urgently needed services within the funding profile • Effective control processes that lower cost and maintains schedule • Provide multiple, rapidly executed increments or releases of capability • Early dialogue between the requirements and acquisition communities to expedite technical, programmatic, and financial solutions • Enable “insight” not “oversight” to identify and resolve problems early and ensure both the acquisition process and deployed service meets performance goals • Enable agility in selecting modular, open-systems approach <p>This business strategy will strike a balance between ensuring accountability using acquisition best practices and deploying urgently needed services to the warfighter on a schedule that will support their mission requirements. The goal is to facilitate the DoD enterprise cloud vision where users and Programs of Record easily access enterprise services from maritime, airborne, and land-based locations worldwide through a federation of core data centers. The user community will guide how the portfolio of services must evolve to remain relevant to the Warfighter, Business, and Intelligence Mission Area mission requirements. By partnering with the DoD Components and Mission Areas, the Defense Information Systems Agency will rapidly deliver functionality and capability at the lowest possible cost and risk in the shortest possible timeframe.</p> <p><u>E. Performance Metrics</u></p> <p>E. Performance Metrics</p> <p>Net-Centric Enterprise Services (NCES) uses continuous monitoring to ensure the delivered and managed portfolio of services meets the mission needs of the stakeholders, are delivered, improved, and sustained in a cost effective manner and continues to add functionality that keeps the capability relevant to the missions supported, and is responsive to evolving mission requirements.</p> <p>Activity:</p> <ul style="list-style-type: none"> • Requirements Satisfaction <p>Continue to expand, modernize, and enhance the portfolio of enterprise services to ensure the functionality is kept current with warfighter needs, evolving technologies, and DoD policy. Delivery of modernized services and integration of new technologies are fully tested and delivered in a timely fashion to meet mission needs.</p> <p>Expected Outcome:</p> <p>FY2016 (Actual): Identified mission needs and candidate local services that cross Service and Combatant Command boundaries for their potential to transition into the enterprise infrastructure and the expanding portfolio. FY17: N/A</p>		

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency		Date: May 2017
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303170K / <i>Net-Centric Enterprise Services (NCES)</i>	Project (Number/Name) T57 / <i>Net-Centric Enterprise Services (NCES)</i>
<p>Activity:</p> <ul style="list-style-type: none"> Portfolio Evolution <p>Support the transition and integration of new and existing enterprise services and evolving technologies. Provide continuing analysis of industry standards and specifications for enhancements and added functionality to existing operational enterprise services to keep them current with evolving technologies and establish the strategic vision of enterprise services to ensure they evolve to support the user's missions.</p> <p>Expected Outcome:</p> <p>FY2016 (Actual): Evaluated Service-centric applications and technologies transitioning into the Joint Information Environment to identify candidates to “jump start” as potential enterprise services that can support other Services with similar mission needs. FY17: N/A</p> <p>Activity:</p> <ul style="list-style-type: none"> Enterprise Service Availability <p>Operational testing of modernized services or updated technologies into existing services validate that the validated customer requirement of $\geq .997$ availability/reliability is sustained. Operational availability/reliability requirement is met to ensure the modernized service or technologies updates supports the customer perspective of value to mission effectiveness and relevancy to evolving mission needs.</p> <p>Expected Outcome:</p> <p>FY2016 (Actual): Operational requirement met by all enterprise services. Supported the customer perspective that the services support mission effectiveness and is relevant to evolving mission needs. FY17: N/A</p> <p>The management areas are designed to ensure that problems can be identified rapidly for resolution, while providing maximum support to the warfighters’ mission. The metrics associated with these management areas provide quantitative data to show that the portfolio of enterprise services are secure, interoperable, and responsive to current and future warfighter missions in a cost-effective manner. The management areas and metrics will be used to continuously evaluate the value of services to the Warfighter. They will be used to determine the right time to scale and update services to keep them relevant to the warfighter’s mission. Also, when necessary, they provide the necessary artifacts to make decisions to continue, shutdown, or place in caretaker status capabilities that are not performing as expected or where the user demand has slipped or never grew to the level of keeping the service cost effective.</p>		

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Defense Information Systems Agency	Date: May 2017
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Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 7: Operational Systems Development</i>					R-1 Program Element (Number/Name) PE 0303228K <i>I Joint Information Environment</i>							
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	0.000	0.000	2.789	4.689	-	4.689	2.854	2.839	2.909	2.975	Continuing	Continuing
JE1: <i>Joint Regional Security Stacks</i>	0.000	0.000	2.789	4.689	-	4.689	2.854	2.839	2.909	2.975	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Joint Information Environment (JIE) construct is a consolidated secure and defensible environment across DoD. This is comprised of unified, consolidated and shared information technology (IT) infrastructure, enterprise services, and standardized security architectures throughout the Department of Defense Information Network (DODIN) to achieve full spectrum superiority, improve mission effectiveness, increase security and realize IT efficiencies.

The target objective state of JIE is a DODIN that optimizes the use of DoD's IT assets from the administrative and operational planning at the Pentagon to the tactical edge; to include our mission partners through converging communications, computing, enterprise services, and defense of the DODIN that can be leveraged for all Department missions.

When implemented, JIE will reduce DoD's Total Cost of Ownership (TCO), improved security by reducing the attack surface of our networks, and enable Combatant Commands/Services/Agencies (CC/S/A) to more efficiently access information to perform their missions from any authorized IT device, any time, from anywhere in the world.

B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	0.000	2.789	2.976	-	2.976
Current President's Budget	0.000	2.789	4.689	-	4.689
Total Adjustments	0.000	0.000	1.713	-	1.713
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustment	-	-	1.713	-	1.713

Change Summary Explanation

An increase of +\$1.820 in FY 2018 will support testing of additional enhancements to JRSS 2.0 capabilities for Break and Inspect, SIPR and Inline Intrusion Prevention System. This increase is partially offset by a decrease of (-\$0.107) is attributed to the Service Requirements Review Board (SSRB) contract reduction.

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 0303228K / Joint Information Environment				Project (Number/Name) JE1 / Joint Regional Security Stacks			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
JE1: Joint Regional Security Stacks	0.000	0.000	2.789	4.689	-	4.689	2.854	2.839	2.909	2.975	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Joint Regional Security Stack (JRSS) is a joint DoD security architecture deployed regionally throughout the world. Each of the 23 NIPR and 25 SIPR stacks is comprised of complementary defensive security solutions that remove redundant Information Assurance (IA) protections; leverages enterprise defensive capabilities with standardized security suites; protects the enclaves after the separation of server and user assets; and provides the tool sets necessary to monitor and control all security mechanisms throughout DoD's Joint Information Environment. The JRSS Management System (JMS) is the management and operational control suite/capability for the JRSS. While the JMS is treated as a related effort, it requires its own experience and evaluation strategy as the JMS is a selection of best of breed capabilities. The JMS is a system-of-systems designed to centralize and enhance the management of the JRSS components and achieve economies of scale by using DoD common suites/infrastructure. The savings are realized by coupling the JRSS and JMS. The JRSS collapses replicated IT security functionality for all Department of Defense (DoD) components into relatively few regionally located stacks. The JMS provides Centralized Network Management of the JRSS with a standard interoperable set of capabilities across DoD. JMS provides visibility and control over network transport and associated security systems. It enables monitoring and analysis of relevant fault and performance data to determine the impact on current operations and trend analysis. This centralized capability allows standardization of policies, procedures and configurations of critical network transport assets. The JMS enables DoD Components to maintain Title 10 required management and visibility of their IT security while providing high level visibility to CYBERCOM. Cyber Operations can take proactive actions to ensure the uninterrupted availability and protection of system and network information.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018
Title: Joint Regional Security Stacks	0.000	2.789	4.689
Description: The Joint Regional Security Stack (JRSS) is a joint DoD security architecture deployed regionally throughout the world. Each of the 23 NIPR and 25 SIPR stacks is comprised of complementary defensive security solutions that remove redundant Information Assurance (IA) protections; leverages enterprise defensive capabilities with standardized security suites; protects the enclaves after the separation of server and user assets; and provides the tool sets necessary to monitor and control all security mechanisms throughout DoD's Joint Information Environment.			
FY 2016 Accomplishments: N/A			
FY 2017 Plans:			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency		Date: May 2017	
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303228K / <i>Joint Information Environment</i>	Project (Number/Name) JE1 / <i>Joint Regional Security Stacks</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
<p>Will perform integration and testing of the pre-production capabilities for planned enhancements to JRSS 1.5. These efforts will lead into the initial testing of the production units. Will also provide systems engineering and testing support to integrate capabilities into the existing JRSS.</p> <p>The increase of +\$2.789 from FY 2016 to FY 2017 will provide test and evaluation activities for enhancement to JRSS 1.5 capabilities to better synch with planned 1.5 tech refresh.</p> <p>FY 2018 Plans: Provide integration, testing and development of next-generation JRSS 2.0 capabilities that will provide even greater situational awareness for the cyber operator.</p> <p>The increase of +\$2.007 from FY 2017 to FY 2018 is to support testing and Analytic development for medium complexity use cases and widget/application development. This increase is partially offset by a decrease of -\$0.107 attributed to the Service Requirements Review Board (SSRB) contract reduction.</p>			
Accomplishments/Planned Programs Subtotals		0.000	2.789
C. Other Program Funding Summary (\$ in Millions)			
N/A			
Remarks			
N/A			
D. Acquisition Strategy			
N/A			
E. Performance Metrics			
<p>The Joint Regional Security Stack (JRSS) is a joint DoD security architecture deployed regionally throughout the world. Each of the 23 NIPR and 25 SIPR stacks is comprised of complementary defensive security solutions that remove redundant Information Assurance (IA) protections; leverages enterprise defensive capabilities with standardized security suites; protects the enclaves after the separation of server and user assets; and provides the tool sets necessary to monitor and control all security mechanisms throughout DoD's Joint Information Environment. The JRSS Management System (JMS) is the management and operational control suite/capability for the JRSS. While the JMS is treated as a related effort, it requires its own experience and evaluation strategy as the JMS is a selection of best of breed capabilities. The JMS is a system-of-systems designed to centralize and enhance the management of the JRSS components and achieve economies of scale by using DoD common suites/infrastructure. The JMS provides Centralized Network Management of the JRSS with a standard interoperable set of capabilities across DoD. JMS provides visibility and control over network transport and associated security systems. It enables monitoring and analysis of relevant fault and performance data to determine the impact on current operations and trend analysis. This centralized capability allows standardization of policies, procedures and configurations of critical network</p>			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency		Date: May 2017
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303228K / <i>Joint Information Environment</i>	Project (Number/Name) JE1 / <i>Joint Regional Security Stacks</i>
<p>transport assets. The JMS enables DoD Components to maintain Title 10 required management and visibility of their IT security while providing high level visibility to CYBERCOM. Cyber Operations can take proactive actions to ensure the uninterrupted availability and protection of system and network information.</p> <p>FY 2016 (Estimated): N/A</p> <p>FY 2017 (Estimated): 100% successful testing of new pre-production capabilities for Full Packet Capture analytics (e.g. ArcSight and Splunk log); JMS 1.5 data orchestrator aggregation; and JRSS 1.5 active stack capabilities through the Joint Interoperability Test Command.</p> <p>FY 2018 Target: 100% successful testing of Break & Inspect SIPR capabilities and Inline Intrusion Prevention Systems (IPCS) in the development environment as well as testing of 6 medium complexity analytics.</p>		

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Defense Information Systems Agency	Date: May 2017
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Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 7: Operational Systems Development</i>					R-1 Program Element (Number/Name) PE 0303430K / <i>Federal Investigative Services Information Technology</i>							
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	0.000	0.000	75.000	50.000	-	50.000	10.280	10.000	10.000	10.250	Continuing	Continuing
KA1: <i>Federal Investigative Services Information Technology</i>	0.000	0.000	75.000	50.000	-	50.000	10.280	10.000	10.000	10.250	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Develop an enterprise Information Technology (IT) architecture and data strategy for modernizing Investigative capabilities supporting background investigations (BI) (replacing capabilities such as Office of Personnel Management (OPM's) eAdjudication and eApplication). Provides a new, secure infrastructure and investigative support system for DoD and Federal Agencies utilizing web/cloud based capabilities and robust cybersecurity. Leverages DoD's cybersecurity capabilities and national security focus to protect government and contractors' personal and investigative information. Supports the distributed adjudication processes with built-in security; active governance structure, and a new national security culture based on process improvement/change management.

B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	0.000	75.000	50.000	-	50.000
Current President's Budget	0.000	75.000	50.000	-	50.000
Total Adjustments	0.000	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			

Change Summary Explanation

No change statement required.

C. Accomplishments/Planned Programs (\$ in Millions)	FY 2016	FY 2017	FY 2018
Title: Background Investigation Information Technology Systems	-	75.000	50.000
Description: Implements the decision by the Interagency Deputies Committee and the Office of Management and Budget (OMB) to transfer responsibility for the development and sustainment of new Federal Government background investigation information technology (IT) system(s) from the OPM to the DoD beginning in FY 2017.			

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Defense Information Systems Agency								Date: May 2017		
Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 7: Operational Systems Development</i>					R-1 Program Element (Number/Name) PE 0303430K / <i>Federal Investigative Services Information Technology</i>					

C. Accomplishments/Planned Programs (\$ in Millions)	FY 2016	FY 2017	FY 2018
<u>FY 2017 Plans:</u> DoD will design, build and field a new Federal Government background investigation information technology system. The new system will defend against cyber attacks and improve defensibility. DoD will work and consult with the OMB, DNI and the OPM. This new system will provide a service to the whole federal government, not just DoD. An increase of +\$75.000 was received reflecting transfer of responsibility for development of a new IT Background Investigation Information Technology (IT) System(s) from the Office of Personnel Management (OPM) to the DoD.			
<u>FY 2018 Plans:</u> DoD will continue to design, build and field a new Federal Government background investigation information technology system. The new system will defend against cyber attacks and improve defensibility. DoD will work and consult with the OMB, DNI and the OPM. This new system will provide a service to the whole federal government, not just DoD. The decrease of -\$25.000 from FY 2017 to FY 2018 is due to the completion of initial advanced development capabilities and the planned transition to sustainment of initial capabilities delivered in FY 2017. Advanced development capabilities prototyped in FY 2017 included (not limited to): Case Management, Imaging, Workflow Management, Virtual System Access, Automated Records Check, and E-Application. These advanced capabilities will reduce overall program and technical risk with respect to delivery of the new National Background Investigation System.			
Accomplishments/Planned Programs Subtotals	-	75.000	50.000

D. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u> <u>Base</u>	<u>FY 2018</u> <u>OCO</u>	<u>FY 2018</u> <u>Total</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• 0303430K, O&M: <i>Background Investigation Information Technology Systems</i>	-	20.000	50.000	-	50.000	150.000	120.000	120.000	-	Continuing	Continuing
Remarks											
<u>E. Acquisition Strategy</u> Program office is in the process of developing an effective acquisition strategy.											
<u>F. Performance Metrics</u> Program office is in the process of developing performance metrics											

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Exhibit R-3, RDT&E Project Cost Analysis: FY 2018 Defense Information Systems Agency												Date: May 2017		
Appropriation/Budget Activity 0400 / 7						R-1 Program Element (Number/Name) PE 0303430K / <i>Federal Investigative Services Information Technology</i>				Project (Number/Name) KA1 / <i>Federal Investigative Services Information Technology</i>				

Product Development (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
TBD	TBD	TBD : TBD	-	-		75.000	Oct 2016	50.000	Oct 2017	-		50.000	Continuing	Continuing	-
Subtotal			-	-		75.000		50.000		-		50.000	-	-	-

			Prior Years	FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			-	-		75.000		50.000		-		50.000	-	-	-

Remarks

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Exhibit R-4, RDT&E Schedule Profile: FY 2018 Defense Information Systems Agency												Date: May 2017			
Appropriation/Budget Activity						R-1 Program Element (Number/Name)						Project (Number/Name)			
0400 / 7						PE 0303430K / Federal Investigative Services Information Technology						KA1 / Federal Investigative Services Information Technology			

	FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
TBD																												
TBD																												

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Exhibit R-4A, RDT&E Schedule Details: FY 2018 Defense Information Systems Agency			Date: May 2017
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303430K / <i>Federal Investigative Services Information Technology</i>	Project (Number/Name) KA1 / <i>Federal Investigative Services Information Technology</i>	

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>TBD</i>				
TBD	1	2017	1	2021

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Defense Information Systems Agency **Date:** May 2017

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0303610K / <i>Teleport Program</i>
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COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	43.688	1.665	0.657	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
NS01: <i>Teleport Generation 1/2</i>	41.675	0.434	0.657	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
NS02: <i>Teleport Generation 3</i>	2.013	1.231	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

Program MDAP/MAIS Code:
Project MDAP/MAIS Code(s): N81

A. Mission Description and Budget Item Justification

Department of Defense (DoD) Teleport system is a satellite communications (SATCOM) gateway that links the deployed warfighter to the Global Information Grid. The DoD Teleport program has fielded system capabilities incrementally using a multi-generational approach with Generation 1 and 2 Full Deployment authorized by DoD Chief Information Officer on February 18, 2011. DoD Teleport Generation 3 consists of three phases; Phases 1 and 2 are in Production and Deployment while Phase 3 is in Engineering and Manufacturing Development. Each DoD Teleport investment increases the warfighter's ability to communicate with a world-wide, net-centric set of information capabilities, which is vital for the DoD to maintain a persistent presence among its adversaries.

Currently, the Teleport system operates as an upgrade of SATCOM capabilities at selected DoD SATCOM gateways. This system provides deployed warfighters with seamless worldwide multi-band SATCOM connectivity to the Defense Information System Network (DISN) Service Delivery Nodes and legacy tactical command, control, communications, computers, and intelligence systems. It also provides centralized integration capabilities, contingency capacity, and common interfaces to access the DISN.

DoD Teleport's goal is to provide secure, seamless, interoperable, and economical upgrades to DoD SATCOM Gateways and meet the growing throughput requirements of the deployed warfighter.

The primary beneficiaries of the DoD Teleport investment are the DoD Combatant Commanders, Military Departments, Defense Agencies, and the warfighter. DoD Teleport Generation 3 is designed to meet the growing demands of the warfighter through the execution of the following phases:

Phase 1: Gateway Advanced Extremely High Frequency [Extended Data Rate] terminals provides tactical users with a 350% bandwidth increase in survivable, antijam communications through all peacetime and combat operations by installing Navy Multiband Terminals (NMT) at select Teleport sites. In addition to enhanced throughput, the NMT maintains compatibility with legacy waveforms and current tactical terminals.

Phase 2: Gateway Wideband Global SATCOM X/Ka-band terminals provide enhanced Wideband Global System (WGS) X/Ka capability to warfighters worldwide by installing terminals from the Modernization of Enterprise Terminal (MET) program at DoD Teleport and other gateway sites. This gateway enhancement allows Teleport to replace end-of-life Defense Satellite Communications System (DSCS) terminals while remaining interoperable with tactical WGS X/Ka-band users. The MET enhancement provides a 300% Ka-band capacity increase and an 1100% X-band capacity increase to current enterprise terminal X/Ka capabilities. Additionally, it

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Defense Information Systems Agency	Date: May 2017
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Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0303610K / <i>Teleport Program</i>
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enables the DoD Teleport system to maintain operational availability consistent with Generation 2 requirements and reduce the overall life-cycle cost of X/Ka capabilities across the DoD.

Phase 3: Mobile User Objective System (MUOS) to Legacy Ultra High Frequency (UHF) systems interoperability will provide interoperability between MUOS users and legacy UHF users by installing MUOS-to-Legacy UHF SATCOM Gateway Component (MLGC) suites of equipment at DoD Teleport sites. MUOS is the next generation DoD UHF SATCOM system that will provide the warfighter with modern worldwide mobile communication services, utilizing the Wideband Code Division Multiple Access waveform for use in the military UHF SATCOM band. MLGC suites will provide critical continuity and interoperability as DoD tactical satellite users transition from legacy waveforms and radios to the Joint Tactical Radio System.

B. Program Change Summary (\$ in Millions)	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018 Base</u>	<u>FY 2018 OCO</u>	<u>FY 2018 Total</u>
Previous President's Budget	1.736	0.657	0.000	-	0.000
Current President's Budget	1.665	0.657	0.000	-	0.000
Total Adjustments	-0.071	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-0.071	-	0.000	-	0.000

Change Summary Explanation

The decrease of -\$0.657 in FY 2018 is attributed to the funding be moved to a new program element for Teleport.

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 0303610K / Teleport Program				Project (Number/Name) NS01 / Teleport Generation 1/2			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
NS01: Teleport Generation 1/2	41.675	0.434	0.657	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Teleport program will implement an integrated test approach that will combine the objectives from multiple testing disciplines (e.g., developmental test, operational test, interoperability, and information assurance) throughout the testing lifecycle to support needed system evaluations. The Teleport program executes its own test events to achieve this integrated approach, but will partner with each phase's respective program office generated test activities to leverage the data needed to satisfy Teleport program test objectives. An approach summary for Teleport Gen 1/2 follows:

Generation 1/2 Technology Refresh/Technology Insertion: Funding will be used to maintain the Joint Interoperability Certification of the DoD Teleport System as the system is upgraded and refreshed with new components.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018
Title: Teleport Program	0.434	0.657	0.000
FY 2016 Accomplishments: Will conduct interoperability testing and evaluations on the DoD Teleport system as Commercial-off-the-shelf components and software are replaced to ensure the system is capable to meet our intended operational environment.			
FY 2017 Plans: Funding will be used to support the Joint Interoperability Certification of the DoD Teleport System.			
The increase of +\$0.223 from FY 2016 to FY 2017 is attributed to an increase in contract labor for interoperability certification testing. The Teleport system supports multiple baseband security enclaves for both defense and civil authorities.			
FY 2018 Plans: The decrease of -\$0.657 from FY 2017 to FY 2018 is attributed to the funding be moved to a new program element for Teleport.			
Accomplishments/Planned Programs Subtotals	0.434	0.657	0.000

C. Other Program Funding Summary (\$ in Millions)

Line Item	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
• O&M, DW/ PE0303610K: O&M, DW	3.140	3.275	3.498	-	3.498	3.828	3.846	3.913	10.986	Continuing	Continuing

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency	Date: May 2017
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Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303610K / <i>Teleport Program</i>	Project (Number/Name) NS01 / <i>Teleport Generation 1/2</i>
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C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u> <u>Base</u>	<u>FY 2018</u> <u>OCO</u>	<u>FY 2018</u> <u>Total</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• Procurement, DW/ PE0303610K: <i>Procurement, DW</i>	7.740	20.291	20.927	-	20.927	21.387	21.582	22.012	22.408	Continuing	Continuing

Remarks

D. Acquisition Strategy

The Teleport Program Office (TPO) uses the DoD preferred evolutionary acquisition approach to acquire Commercial off the Shelf (COTS) and modified COTS equipment when possible. The three TPO procuring agencies, Program Manager Defense Communications and Army Transmission Systems, the Space and Naval Warfare Systems Command, and Defense Information Technology Contracting Organization (DITCO) provide direct contracting support. Assistance from other Departments including Army, Navy, and Air Force is acquired via Military Interdepartmental Purchase Request for both organic and contracted support. The TPO maximizes the use of performance-based contracts and requires contractors to establish and manage specific earned value data to mitigate risk and monitor deviations from cost, schedule, and performance objectives. Performance is evaluated thorough post-award contract reviews, performance assessment during quarterly program reviews. The MLGC program will use various contract types to employ the vendor best suited to deliver the program's capabilities to the warfighter.

E. Performance Metrics

Teleport Cost and Schedule Performance Metrics:

Teleport manages and tracks its cost and schedule performance parameters using a tailored Earned Value Management System (EVMS) process, integrating the program plan, the program schedule, Work Breakdown Structure (WBS), and financial data. Progress is monitored/documented monthly showing percentages complete for schedule and cost. Formal updates with changes to the schedule are documented against the program baseline.

Teleport Program Metrics:

RDT&E funds will be used to maintain an interoperability certification of the fielded DoD Teleport system in light of required/desired system changes. These changes are certified in standalone test events or as part of DoD Interoperability Communications Exercises (DICE). Percentage will be computed by dividing the number of changes under test by the number deemed DoD Interoperable.

Performance metrics have been established in four measurement areas: 1) customer results, 2) mission and business results, 3) processes and activities, and 4) technology. Specific measurement indicators and units of measure vary by measurement area, and metrics in each of the aforementioned areas are measured annually. Teleport will use the same measurement areas for performance metrics in FY 2016, FY 2017 and FY 2018.

Generation 1/2 Metric:

Percentage of system changes resulting in interoperability certification

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency		Date: May 2017
Appropriation/Budget Activity	R-1 Program Element (Number/Name)	Project (Number/Name)
0400 / 7	PE 0303610K / <i>Teleport Program</i>	NS01 / <i>Teleport Generation 1/2</i>
FY 2016 Actual: 100% FY 2017 Target: 100%		

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 0303610K / Teleport Program				Project (Number/Name) NS02 / Teleport Generation 3			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
NS02: Teleport Generation 3	2.013	1.231	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
Project MDAP/MAIS Code: N81												
A. Mission Description and Budget Item Justification												
The Teleport program will implement an integrated test approach that will combine the objectives from multiple testing disciplines (e.g., developmental test, operational test, interoperability, and information assurance) throughout the testing lifecycle to support needed system evaluations. The Teleport program executes its own test events to achieve this integrated approach, but will partner with each phase’s respective program office generated test activities to leverage the data needed to satisfy Teleport program test objectives. An approach summary for Teleport Generation 3 follows:												
Generation 3: Funding will be used to execute Pre-Milestone C documentation preparation and acquisition activities for Generation 3 Phase 3.												
B. Accomplishments/Planned Programs (\$ in Millions)										FY 2016	FY 2017	FY 2018
Title: Teleport Program										1.231	0.000	0.000
Description: Generation 3: Funding will be used to execute Pre-Milestone C documentation preparation and acquisition activities for Generation 3 Phase 3.												
FY 2016 Accomplishments: Will conduct operational testing and evaluations on the DoD Teleport Generation 3 Phase 3 implementation.												
FY 2017 Plans: N/A												
The decrease of -\$1.231 from FY 2016 to FY 2017 is due to the completion of Generation 3 operational test and evaluation requirements (specifically contract labor and associated lab support).												
FY 2018 Plans: N/A												
Accomplishments/Planned Programs Subtotals										1.231	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency	Date: May 2017
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Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303610K / <i>Teleport Program</i>	Project (Number/Name) NS02 / <i>Teleport Generation 3</i>
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C. Other Program Funding Summary (\$ in Millions)

			<u>FY 2018</u>	<u>FY 2018</u>	<u>FY 2018</u>					<u>Cost To</u>	
<u>Line Item</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>Base</u>	<u>OCO</u>	<u>Total</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>Complete</u>	<u>Total Cost</u>
• O&M, DW/ PE0303610K: <i>O&M, DW</i>	6.962	6.107	6.680	-	6.680	6.898	6.991	7.135	-	Continuing	Continuing
• Procurement, DW/ PE0303610K: <i>Procurement, DW</i>	25.034	7.706	1.887	-	1.887	0.000	0.000	0.000	-	Continuing	Continuing
• MILCON, DW/ PE0303610K: <i>MILCON, DW</i>	-	-	-	-	-	-	-	-	-		

Remarks

D. Acquisition Strategy

The Teleport Program Office (TPO) uses the DoD preferred evolutionary acquisition approach to acquire Commercial off the Shelf (COTS) and modified COTS equipment when possible. The three TPO procuring agencies, Program Manager Defense Communications and Army Transmission Systems, the Space and Naval Warfare Systems Command, and Defense Information Technology Contracting Organization (DITCO) provide direct contracting support. Assistance from other Departments including Army, Navy, and Air Force is acquired via Military Interdepartmental Purchase Request for both organic and contracted support. The TPO maximizes the use of performance-based contracts and requires contractors to establish and manage specific earned value data to mitigate risk and monitor deviations from cost, schedule, and performance objectives. Performance is evaluated thorough post-award contract reviews, performance assessment during quarterly program reviews. The MLGC program will use various contract types to employ the vendor best suited to deliver the program's capabilities to the warfighter.

E. Performance Metrics

Generation 3 Cost and Schedule Performance Metrics:

Teleport manages and tracks its cost and schedule performance parameters using a tailored Earned Value Management System (EVMS) process, integrating the program plan, the program schedule, Work Breakdown Structure (WBS), and financial data. Progress is monitored/documented monthly showing percentages complete for schedule and cost. Formal updates with changes to the schedule are documented against the program baseline.

Generation 3 Program Metrics:

RDT&E funds will be used to perform acquisition testing.

Across appropriations, performance metrics have been established in four measurement areas: 1) customer results, 2) mission and business results, 3) processes and activities, and 4) technology. Specific measurement indicators and units of measure vary by measurement area, and metrics in each of the aforementioned areas are measured annually. Teleport will use the same measurement areas for performance metrics in FY 2015, FY 2016 and FY 2017.

Number of G3P3 Operational Test Events

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency		Date: May 2017
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303610K / <i>Teleport Program</i>	Project (Number/Name) NS02 / <i>Teleport Generation 3</i>
<p>FY 2016: 1 Planned/1 Required FY 2017: N/A FY 2018: N/A</p>		

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Exhibit R-3, RDT&E Project Cost Analysis: FY 2018 Defense Information Systems Agency **Date:** May 2017

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303610K / <i>Teleport Program</i>	Project (Number/Name) NS02 / <i>Teleport Generation 3</i>
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Support (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Office Support	C/FFP	BAH : McLean, VA	0.492	0.700	Oct 2015	-		-		-		-	0.00	1.192	Continuing
Testing Support Services	MIPR	JITC : Fort Huachuca	0.601	0.531	Jan 2016	-		-		-		-	0.00	1.132	1.132
Systems Engineering	MIPR	SSC-A : Charleston, SC	0.920	-		-		-		-		-	-	-	-
Subtotal			2.013	1.231		-		-		-		-	-	-	-
			Prior Years	FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			2.013	1.231		0.000		-		-		-	-	-	-

Remarks

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Exhibit R-4, RDT&E Schedule Profile: FY 2018 Defense Information Systems Agency	Date: May 2017
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Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303610K / <i>Teleport Program</i>	Project (Number/Name) NS02 / <i>Teleport Generation 3</i>
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FY 2009				FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

Teleport Generation 3	
Generation Three - Phase 3 FDD MUOS	

FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

Teleport Generation 3	
Generation Three - Phase 3 FDD MUOS	

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Exhibit R-4A, RDT&E Schedule Details: FY 2018 Defense Information Systems Agency	Date: May 2017
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Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0303610K / <i>Teleport Program</i>	Project (Number/Name) NS02 / <i>Teleport Generation 3</i>
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Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Teleport Generation 3</i>				
Generation Three - Phase 3 FDD MUOS	1	2015	2	2016

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Defense Information Systems Agency	Date: May 2017
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Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0305103K / <i>Cybersecurity Initiative</i>
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COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	14.086	2.881	1.553	1.686	-	1.686	1.862	1.846	1.918	1.936	Continuing	Continuing
XXX: <i>Cybersecurity Initiative</i>	14.086	2.881	1.553	1.686	-	1.686	1.862	1.846	1.918	1.936	Continuing	Continuing

A. Mission Description and Budget Item Justification

Classified

B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	2.976	1.553	1.749	-	1.749
Current President's Budget	2.881	1.553	1.686	-	1.686
Total Adjustments	-0.095	0.000	-0.063	-	-0.063
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustment	-0.095	-	-0.063	-	-0.063

Change Summary Explanation

Classified

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 0305103K / <i>Cybersecurity Initiative</i>				Project (Number/Name) XXX / <i>Cybersecurity Initiative</i>			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
XXX: <i>Cybersecurity Initiative</i>	14.086	2.881	1.553	1.686	-	1.686	1.862	1.846	1.918	1.936	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
A. Mission Description and Budget Item Justification Classified												
B. Accomplishments/Planned Programs (\$ in Millions)										FY 2016	FY 2017	FY 2018
Title: Cyber Security Range FY 2016 Accomplishments: NA FY 2017 Plans: Classified FY 2018 Plans: Classified										2.881	1.553	1.686
Accomplishments/Planned Programs Subtotals										2.881	1.553	1.686
C. Other Program Funding Summary (\$ in Millions) N/A Remarks D. Acquisition Strategy N/A E. Performance Metrics Classified												

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Defense Information Systems Agency	Date: May 2017
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Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 7: Operational Systems Development</i>					R-1 Program Element (Number/Name) PE 0305208K I <i>Distributed Common Ground/Surface Systems</i>							
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	46.899	3.239	3.030	3.049	-	3.049	3.056	3.073	3.142	3.224	Continuing	Continuing
NF1: <i>Distributed Common Ground/Surface Systems</i>	46.899	3.239	3.030	3.049	-	3.049	3.056	3.073	3.142	3.224	Continuing	Continuing

A. Mission Description and Budget Item Justification

As the sole joint interoperability certification agent, the Joint Interoperability Test Command established and maintains a Distributed Development and Test Enterprise for the Department of Defense (DoD) Distributed Common Ground/Surface System (DCGS) program, as directed by the Office of the Under Secretary of Defense (Intelligence). DCGS is an integral and critical component of the overall DoD Intelligence, Surveillance, and Reconnaissance interoperability and data integration strategy which provides world-wide capabilities to receive, process, exploit, and disseminate data from airborne and national reconnaissance sensors/platforms and commercial sources.

B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	3.239	3.030	3.323	-	3.323
Current President's Budget	3.239	3.030	3.049	-	3.049
Total Adjustments	0.000	0.000	-0.274	-	-0.274
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-	-	-0.274	-	-0.274

Change Summary Explanation

The decrease of -\$0.160 in FY 2018 is attributed to a reduction in life-cycle test infrastructure upgrades and replacement of the Distributed Development and Test Enterprise (DDTE). Part of the overall decrease (-\$0.114) is attributed to the Service Requirements Review Board (SSRB) contract reduction.

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 0305208K / <i>Distributed Common Ground/Surface Systems</i>				Project (Number/Name) NF1 / <i>Distributed Common Ground/Surface Systems</i>			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
NF1: <i>Distributed Common Ground/Surface Systems</i>	46.899	3.239	3.030	3.049	-	3.049	3.056	3.073	3.142	3.224	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Joint Interoperability Test Command (JITC) coordinates with the Military Services and Defense Intelligence Agencies to conduct Joint/Distributed Common Ground/Surface System (DCGS) testing and analysis, including event coordination, configuration, instrumentation and integration functions on the Distributed Development and Test Enterprise (DDTE). Under the DCGS Governance, this effort, referred to as the DCGS Test and Evaluation (T&E) Focus Team (FT), is composed of three parts: the DDTE Focus Group, providing and sustaining a distributed development network; the Strategy Focus Group, looking at current and future net-enabled enterprise T&E methods; and the Execution Focus Group, which leverages the Strategy Focus Group's methodologies in executing DCGS Enterprise assessment events, such as the annual DCGS demonstration, ENTERPRISE CHALLENGE. These efforts improve systems engineering and T&E throughout all phases of the DCGS life-cycle, resulting in improved capabilities to share net-centric data and services between the DCGS Programs of Record (PoRs) and the overarching Defense Intelligence Information Enterprise (DI2E).

Operates and maintains the DDTE, providing DCGS PoRs a virtual, operationally-relevant assessment environment maintaining connectivity between Service facilities, National Agency capabilities, and Coalition partners. DDTE allows robust integration of modeling and simulation T&E capabilities across Joint DCGS events without introducing vulnerabilities to operational Command and Control networks and has enabled improvements in systems engineering, instrumentation and T&E throughout all phases of the DCGS life cycle.

DCGS PoRs and Coalition partners use the DDTE network, which supports the net-centric maturity assessment of the DCGS Enterprise under the DCGS Governance, to integrate architecture, standards, and capabilities for implementation of the DCGS Integration Backbone and support the migration to net-centricity, including DCGS Enterprise services for the Military Departments, DCGS-Special Operations Forces and the DCGS Intelligence Community. National Agency capabilities supporting DCGS include Geospatial Intelligence, Signals Intelligence, Measurement and Signature Intelligence and Human Intelligence, which are integrated and tested in the DDTE domain.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018
Title: Distributed Common Ground/Surface Systems (DCGS)	3.239	3.030	3.049
FY 2016 Accomplishments:			
Continuing to support DDTE and to provide enhanced functionality with expanding T&E capability, with a focus on increasingly automated evaluations of net-centric data and web services. Incorporating new technologies such as cloud computing, mobile technology, and "big data" in assessment methodologies and practices. To further DCGS Enterprise and associated Defense Intelligence Information Enterprise (DI2E) capabilities, conducting compliance testing of data, metadata, and services			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency			Date: May 2017		
Appropriation/Budget Activity 0400 / 7		R-1 Program Element (Number/Name) PE 0305208K / <i>Distributed Common Ground/Surface Systems</i>		Project (Number/Name) NF1 / <i>Distributed Common Ground/Surface Systems</i>	
B. Accomplishments/Planned Programs (\$ in Millions)			FY 2016	FY 2017	FY 2018
<p>against established standards to enhance the sharing and promote reuse of net centric capabilities. Enhancing “Testing as a Service” (TaaS) capabilities that enable DCGS entities and other communities of interest (COIs), such as industry partners, to test for standards compliance early and often during the development and acquisition processes. Enterprise T&E support continues to include enterprise-level assessment events such as ENTERPRISE CHALLENGE for the DCGS PoRs, National Agencies and Coalition Partners. Continuing development and instrumentation for data collection and testing support on the DCGS network domains and enclaves; with the number of active DDTE nodes increasing from 19 to 21 as the DCGS PoRs participate in assessment venues with other DI2E entities. Developing and implementing passive instrumentation on operational networks that can gather data on capabilities not instantiated on the DDTE test domain to provide a more robust evaluation of the net-centric maturity of the DCGS Enterprise. Data collected by these assessment efforts are reflected in the Enterprise Maturity Model (EMM) and documented in an annual DCGS Enterprise Assessment Report.</p> <p>FY 2017 Plans: Continuing to support DDTE, provide enhanced functionality, expand T&E capability, and perform automated evaluations of net-centric data and web services with improved assessment methodologies and practices due to incorporating new technologies such as cloud computing, mobile technology, and “big data”. Continuing to conduct compliance testing of data, metadata, and services against established standards to enhance the sharing and promote reuse of net centric capabilities and to enhance “Testing as a Service” (TaaS) capabilities that enable DCGS entities and other communities of interest (COIs) to test for standards compliance during the development and acquisition processes. enterprise T&E support, such as enterprise-level assessment events i.e., ENTERPRISE CHALLENGE). Development of and improvements to instrumentation for data collection and testing support on the DCGS network domains and enclaves for the DCGS PoRs, National Agencies and Coalition Partners continues; with the number of active DDTE nodes expected to increase as the DCGS Programs of Record (PoRs) participate in assessment venues with other DI2E entities. Developing and implementing passive instrumentation on operational networks that can gather data on capabilities not instantiated on the DDTE test domain to provide a more robust evaluation of the net-centric maturity of the DCGS Enterprise. Data collected by these assessment efforts are reflected in the Enterprise Maturity Model (EMM) and documented in an annual DCGS Enterprise Assessment Report.</p> <p>The decrease of -\$0.209 from FY 2016 to FY 2017 is due to reduced testing costs following automation improvements, reduction in the number of testing events and delay in end of life hardware replacement.</p> <p>FY 2018 Plans: Continue to support DDTE, provide enhanced functionality, expand T&E capability, and perform automated evaluations of net-centric capabilities with improved assessment methodologies and practices due to incorporating new technologies such as cloud computing, mobile technology, and “big data”; the number of active DDTE nodes is expected to increase as the DCGS Programs of Record (PoRs) participate in assessment venues with other DI2E entities. Continue to conduct compliance testing of data, metadata, and web services against established standards to enhance the sharing and promote reuse of net centric</p>					

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency		Date: May 2017	
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0305208K / <i>Distributed Common Ground/Surface Systems</i>	Project (Number/Name) NF1 / <i>Distributed Common Ground/Surface Systems</i>	

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2016	FY 2017	FY 2018
<p>solutions. Continuing to expand TaaS capabilities that enable DCGS entities and other COIs to test for standards compliance during the development and acquisition processes. Continue enhancement of instrumentation and automated data collection tools to support testing on multiple network domains and enclaves where the DCGS PoRs, National Agencies and Coalition Partners test and operate. Plan and conduct testing of enterprise cybersecurity solutions to determine if they comply with standards, support interoperability between the DCGS PoRs, and meet the DCGS Enterprise cybersecurity requirements. Data collected by these assessment efforts are reflected in an annual DCGS Enterprise Assessment Report that delineates how well the DCGS Enterprise shows progress over time in meeting the capabilities and closing the gaps reflected in the 2016 DCGS Enterprise Initial Capabilities Document.</p> <p>The increase of +\$0.133 in FY 2018 will provide for the implementation of enhanced data analytics for DCGS. This increase is partially offset by a decrease of -\$0.114 attributed to the Service Requirements Review Board (SSRB) contract reduction.</p>			
Accomplishments/Planned Programs Subtotals	3.239	3.030	3.049

C. Other Program Funding Summary (\$ in Millions)
N/A

Remarks

D. Acquisition Strategy
A T&E Mission Support Services (MSS) cost plus fixed fee contract provides T&E support by performing a wide range of non-personal services to encompass testing, scientific, engineering, logistic, administrative, and ancillary support of the DISA T&E missions.

E. Performance Metrics
The DCGS T&E FT performs a minimum of six DCGS Enterprise assessments per year, and the results are consolidated into the T&E FT Enterprise Assessment Report annually. The T&E FT also provides input to the DCGS Enterprise Focus Team's State of the Enterprise (SoE) Report, which includes the Enterprise Maturity Model (EMM) and shows measurable DCGS Enterprise net-centric maturity progress over time.

The T&E FT also leverages Joint Interoperability Certification testing to support the evaluation of DCGS Enterprise maturity. In FY 2016, T&E FT performed twelve (12) DCGS Enterprise assessments. This trend is expected to continue in FY2017. Of the six DCGS PoR systems, two hold current Joint Staff (JS), Command, Control, Communications, & Computers/Cyber (J6) Interoperability (IOP) Certifications and continue to conduct IOP testing on emerging releases. One DCGS PoR has completed interoperability testing, and the joint IOP certification is pending. Of the three remaining PoRs, two are not required to be JS J6 certified, but the T&E FT leverages data collected during periodic IOP assessments of these programs during enterprise-level demonstrations and test events. Due to increased automation for data collection, parsing and analysis, in addition to advances in PoR and Enterprise maturity, the T&E FT increases the cumulative number of net-centric capability evaluations each year.

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency		Date: May 2017
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0305208K / <i>Distributed Common Ground/Surface Systems</i>	Project (Number/Name) NF1 / <i>Distributed Common Ground/Surface Systems</i>
<p>In FY 2016, T&E FT conducted twelve (12) DCGS Enterprise assessments.</p> <p>In FY 2017, T&E FT will perform a minimum of ten (10) DCGS Enterprise assessments.</p> <p>In FY 2018, T&E FT will perform a minimum of nine (9) DCGS Enterprise assessments.</p>		

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Defense Information Systems Agency **Date:** May 2017

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 1203610K / <i>Teleport Program</i>
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COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	0.000	0.000	0.000	0.642	0.000	0.642	2.334	2.333	2.403	2.445	Continuing	Continuing
NS01: <i>Teleport Generation 1/2</i>	0.000	0.000	0.000	0.642	0.000	0.642	2.334	2.333	2.403	2.445	Continuing	Continuing

A. Mission Description and Budget Item Justification

Department of Defense (DoD) Teleport system is a satellite communications (SATCOM) gateway that links the deployed warfighter to the Global Information Grid. The DoD Teleport program has fielded system capabilities incrementally using a multi-generational approach with Generation 1 and 2 Full Deployment authorized by DoD Chief Information Officer on February 18, 2011. DoD Teleport Generation 3 consists of three phases; Phases 1 and 2 are in Production and Deployment while Phase 3 is in Engineering and Manufacturing Development. Each DoD Teleport investment increases the warfighter's ability to communicate with a world-wide, net-centric set of information capabilities, which is vital for the DoD to maintain a persistent presence among its adversaries.

Currently, the Teleport system operates as an upgrade of SATCOM capabilities at selected DoD SATCOM gateways. This system provides deployed warfighters with seamless worldwide multi-band SATCOM connectivity to the Defense Information System Network (DISN) Service Delivery Nodes and legacy tactical command, control, communications, computers, and intelligence systems. It also provides centralized integration capabilities, contingency capacity, and common interfaces to access the DISN.

DoD Teleport's goal is to provide secure, seamless, interoperable, and economical upgrades to DoD SATCOM Gateways and meet the growing throughput requirements of the deployed warfighter.

The primary beneficiaries of the DoD Teleport investment are the DoD Combatant Commanders, Military Departments, Defense Agencies, and the warfighter. DoD Teleport Generation 3 is designed to meet the growing demands of the warfighter through the execution of the following phases:

Phase 1: Gateway Advanced Extremely High Frequency [Extended Data Rate] terminals provides tactical users with a 350% bandwidth increase in survivable, antijam communications through all peacetime and combat operations by installing Navy Multiband Terminals (NMT) at select Teleport sites. In addition to enhanced throughput, the NMT maintains compatibility with legacy waveforms and current tactical terminals.

Phase 2: Gateway Wideband Global SATCOM X/Ka-band terminals provide enhanced Wideband Global System (WGS) X/Ka capability to warfighters worldwide by installing terminals from the Modernization of Enterprise Terminal (MET) program at DoD Teleport and other gateway sites. This gateway enhancement allows Teleport to replace end-of-life Defense Satellite Communications System (DSCS) terminals while remaining interoperable with tactical WGS X/Ka-band users. The MET enhancement provides a 300% Ka-band capacity increase and an 1100% X-band capacity increase to current enterprise terminal X/Ka capabilities. Additionally, it enables the DoD Teleport system to maintain operational availability consistent with Generation 2 requirements and reduce the overall life-cycle cost of X/Ka capabilities across the DoD.

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Defense Information Systems Agency	Date: May 2017
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Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 1203610K / <i>Teleport Program</i>
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Phase 3: Mobile User Objective System (MUOS) to Legacy Ultra High Frequency (UHF) systems interoperability will provide interoperability between MUOS users and legacy UHF users by installing MUOS-to-Legacy UHF SATCOM Gateway Component (MLGC) suites of equipment at DoD Teleport sites. MUOS is the next generation DoD UHF SATCOM system that will provide the warfighter with modern worldwide mobile communication services, utilizing the Wideband Code Division Multiple Access waveform for use in the military UHF SATCOM band. MLGC suites will provide critical continuity and interoperability as DoD tactical satellite users transition from legacy waveforms and radios to the Joint Tactical Radio System.

B. Program Change Summary (\$ in Millions)	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018 Base</u>	<u>FY 2018 OCO</u>	<u>FY 2018 Total</u>
Previous President's Budget	0.000	0.000	0.708	-	0.708
Current President's Budget	0.000	0.000	0.642	-	0.642
Total Adjustments	0.000	0.000	-0.066	-	-0.066
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-	-	-0.066	-	-0.066

Change Summary Explanation

The decrease of -\$0.066 in FY 2018 is due to a reduction in testing requirements.

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 1203610K / Teleport Program				Project (Number/Name) NS01 / Teleport Generation 1/2			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
NS01: Teleport Generation 1/2	0.000	0.000	0.000	0.642	0.000	0.642	2.334	2.333	2.403	2.445	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Teleport program will implement an integrated test approach that will combine the objectives from multiple testing disciplines (e.g., developmental test, operational test, interoperability, and information assurance) throughout the testing lifecycle to support needed system evaluations. The Teleport program executes its own test events to achieve this integrated approach, but will partner with each phase's respective program office generated test activities to leverage the data needed to satisfy Teleport program test objectives. An approach summary for Teleport Gen 1/2 follows:

Generation 1/2 Technology Refresh/Technology Insertion: Funding will be used to maintain the Joint Interoperability Certification of the DoD Teleport System as the system is upgraded and refreshed with new components.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Title: Teleport Program	0.000	0.000	0.642	0.000	0.642
Description: N/A					
FY 2016 Accomplishments: N/A					
FY 2017 Plans: N/A					
FY 2018 Base Plans: Funding will be used to support the Joint Interoperability Certification of the DoD Teleport System.					
The increase of \$0.642 from FY 2017 to FY 2018 is attributed to the funding be moved from program element 0303610K for Teleport.					
FY 2018 OCO Plans: N/A					
Accomplishments/Planned Programs Subtotals	0.000	0.000	0.642	0.000	0.642

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency								Date: May 2017			
Appropriation/Budget Activity 0400 / 7				R-1 Program Element (Number/Name) PE 1203610K / Teleport Program				Project (Number/Name) NS01 / Teleport Generation 1/2			

C. Other Program Funding Summary (\$ in Millions)

Line Item	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
• O&M, DW/ PE0303610K: O&M, DW	0.000	0.000	3.498	0.000	3.498	3.828	3.846	3.913	10.986	Continuing	Continuing
• Procurement, DW/ PE0303610K: Procurement, DW	0.000	0.000	20.927	0.000	20.927	21.387	21.582	22.012	22.408	Continuing	Continuing

Remarks

D. Acquisition Strategy

The Teleport Program Office (TPO) uses the DoD preferred evolutionary acquisition approach to acquire Commercial off the Shelf (COTS) and modified COTS equipment when possible. The three TPO procuring agencies, Program Manager Defense Communications and Army Transmission Systems, the Space and Naval Warfare Systems Command, and Defense Information Technology Contracting Organization (DITCO) provide direct contracting support. Assistance from other Departments including Army, Navy, and Air Force is acquired via Military Interdepartmental Purchase Request for both organic and contracted support. The TPO maximizes the use of performance-based contracts and requires contractors to establish and manage specific earned value data to mitigate risk and monitor deviations from cost, schedule, and performance objectives. Performance is evaluated thorough post-award contract reviews, performance assessment during quarterly program reviews. The MLGC program will use various contract types to employ the vendor best suited to deliver the program's capabilities to the warfighter.

E. Performance Metrics

Teleport Cost and Schedule Performance Metrics:

Teleport manages and tracks its cost and schedule performance parameters using a tailored Earned Value Management System (EVMS) process, integrating the program plan, the program schedule, Work Breakdown Structure (WBS), and financial data. Progress is monitored/documented monthly showing percentages complete for schedule and cost. Formal updates with changes to the schedule are documented against the program baseline.

Teleport Program Metrics:

RDT&E funds will be used to maintain an interoperability certification of the fielded DoD Teleport system in light of required/desired system changes. These changes are certified in standalone test events or as part of DoD Interoperability Communications Exercises (DICE). Percentage will be computed by dividing the number of changes under test by the number deemed DoD Interoperable.

Performance metrics have been established in four measurement areas: 1) customer results, 2) mission and business results, 3) processes and activities, and 4) technology. Specific measurement indicators and units of measure vary by measurement area, and metrics in each of the aforementioned areas are measured annually. Teleport will use the same measurement areas for performance metrics in FY 2016, FY 2017 and FY 2018.

Generation 1/2 Metric:

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Information Systems Agency		Date: May 2017
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1203610K / Teleport Program	Project (Number/Name) NS01 / Teleport Generation 1/2
<p>Percentage of system changes resulting in interoperability certification</p> <p>FY 2016 Actual: 100%</p> <p>FY 2017 Target: 100%</p> <p>FY 2018 Target: 100%</p>		

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**Department of Defense
Fiscal Year (FY) 2018 Budget Estimates**

May 2017



Defense Logistics Agency

Defense-Wide Justification Book Volume 5 of 5

Research, Development, Test & Evaluation, Defense-Wide

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Department of Defense
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

18 May 2017

Appropriation	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO
Research, Development, Test & Eval, DW	214,251	188,241	188,070				
Total Research, Development, Test & Evaluation	214,251	188,241	188,070				

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Department of Defense
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

18 May 2017

Appropriation	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Research, Development, Test & Eval, DW	188,241	188,070		188,070	319,796		319,796
Total Research, Development, Test & Evaluation	188,241	188,070		188,070	319,796		319,796

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Department of Defense
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

18 May 2017

	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO
<u>Summary Recap of Budget Activities</u>							
Advanced Technology Development	133,321	140,096	140,096				
System Development And Demonstration	51,854	44,237	44,066				
Management Support	5,524						
Operational System Development	23,552	3,908	3,908				
Total Research, Development, Test & Evaluation	214,251	188,241	188,070				
<u>Summary Recap of FYDP Programs</u>							
Research and Development	190,699	184,333	184,162				
Central Supply and Maintenance	23,552	3,908	3,908				
Total Research, Development, Test & Evaluation	214,251	188,241	188,070				

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Department of Defense
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

18 May 2017

	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total
<u>Summary Recap of Budget Activities</u>							
Advanced Technology Development	140,096	140,096		140,096	270,925		270,925
System Development And Demonstration	44,237	44,066		44,066	44,177		44,177
Management Support							
Operational System Development	3,908	3,908		3,908	4,694		4,694
Total Research, Development, Test & Evaluation	188,241	188,070		188,070	319,796		319,796
<u>Summary Recap of FYDP Programs</u>							
Research and Development	184,333	184,162		184,162	315,102		315,102
Central Supply and Maintenance	3,908	3,908		3,908	4,694		4,694
Total Research, Development, Test & Evaluation	188,241	188,070		188,070	319,796		319,796

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Defense-Wide
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

18 May 2017

	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO
<u>Summary Recap of Budget Activities</u>							
Advanced Technology Development	133,321	140,096	140,096				
System Development And Demonstration	51,854	44,237	44,066				
Management Support	5,524						
Operational System Development	23,552	3,908	3,908				
Total Research, Development, Test & Evaluation	214,251	188,241	188,070				
<u>Summary Recap of FYDP Programs</u>							
Research and Development	190,699	184,333	184,162				
Central Supply and Maintenance	23,552	3,908	3,908				
Total Research, Development, Test & Evaluation	214,251	188,241	188,070				

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Defense-Wide
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

18 May 2017

	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total
<u>Summary Recap of Budget Activities</u>							
Advanced Technology Development	140,096	140,096		140,096	270,925		270,925
System Development And Demonstration	44,237	44,066		44,066	44,177		44,177
Management Support							
Operational System Development	3,908	3,908		3,908	4,694		4,694
Total Research, Development, Test & Evaluation	188,241	188,070		188,070	319,796		319,796
<u>Summary Recap of FYDP Programs</u>							
Research and Development	184,333	184,162		184,162	315,102		315,102
Central Supply and Maintenance	3,908	3,908		3,908	4,694		4,694
Total Research, Development, Test & Evaluation	188,241	188,070		188,070	319,796		319,796

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Defense-Wide
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

18 May 2017

Appropriation	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO
Defense Logistics Agency	214,251	188,241	188,070				
Total Research, Development, Test & Evaluation	214,251	188,241	188,070				

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Defense-Wide
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

18 May 2017

Appropriation	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total
-----	-----	-----	-----	-----	-----	-----	-----
Defense Logistics Agency	188,241	188,070		188,070	319,796		319,796
Total Research, Development, Test & Evaluation	188,241	188,070		188,070	319,796		319,796

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Defense-Wide
FY 2018 President's Budget Request
Exhibit R-1 FY 2018 President's Budget Request
Total Obligational Authority
(Dollars in Thousands)

18 May 2017

Appropriation: 0400D Research, Development, Test & Eval, DW

Line	Program Element No Number	Item	Act	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO	S e c
33	0603264S	Agile Transportation for the 21st Century (AT21) - Theater Capability	03	1,508							U
49	0603680S	Manufacturing Technology Program	03		31,259	31,259					U
51	0603712S	Generic Logistics R&D Technology Demonstrations	03	15,093	11,011	11,011					U
52	0603713S	Deployment and Distribution Enterprise Technology	03	29,888							U
54	0603720S	Microelectronics Technology Development and Support	03	86,832	97,826	97,826					U
		Advanced Technology Development		133,321	140,096	140,096					
128	0605070S	DOD Enterprise Systems Development and Demonstration	05	11,501	12,631	5,660					U
130	0605080S	Defense Agency Initiatives (DAI) - Financial System	05	30,568	26,657	30,457					U
131	0605090S	Defense Retired and Annuitant Pay System (DRAS)	05	9,785	4,949	7,949					U
		System Development And Demonstration		51,854	44,237	44,066					
159	0605502S	Small Business Innovative Research	06	5,524							U
		Management Support		5,524							
244	0708011S	Industrial Preparedness	07	21,843							U
245	0708012S	Pacific Disaster Centers	07	1,709	1,754	1,754					U

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(Dollars in Thousands)

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Appropriation: 0400D Research, Development, Test & Eval, DW

Line	Program Element No Number	Item	Act	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total	S e c
33	0603264S	Agile Transportation for the 21st Century (AT21) - Theater Capability	03								U
49	0603680S	Manufacturing Technology Program	03	31,259	31,259		31,259	40,511		40,511	U
51	0603712S	Generic Logistics R&D Technology Demonstrations	03	11,011	11,011		11,011	10,611		10,611	U
52	0603713S	Deployment and Distribution Enterprise Technology	03								U
54	0603720S	Microelectronics Technology Development and Support	03	97,826	97,826		97,826	219,803		219,803	U
		Advanced Technology Development		140,096	140,096		140,096	270,925		270,925	
128	0605070S	DOD Enterprise Systems Development and Demonstration	05	12,631	5,660		5,660	6,266		6,266	U
130	0605080S	Defense Agency Initiatives (DAI) - Financial System	05	26,657	30,457		30,457	24,436		24,436	U
131	0605090S	Defense Retired and Annuitant Pay System (DRAS)	05	4,949	7,949		7,949	13,475		13,475	U
		System Development And Demonstration		44,237	44,066		44,066	44,177		44,177	
159	0605502S	Small Business Innovative Research	06								U
		Management Support									
244	0708011S	Industrial Preparedness	07								U
245	0708012S	Pacific Disaster Centers	07	1,754	1,754		1,754	1,770		1,770	U

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Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO	S e c -
246	0708047S	Defense Property Accountability System	07		2,154	2,154					U
		Operational System Development		23,552	3,908	3,908					
Total Research, Development, Test & Eval, DW				214,251	188,241	188,070					

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 (Dollars in Thousands)

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Appropriation: 0400D Research, Development, Test & Eval, DW

Line	Program Element No Number	Item	Act	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total	S e c
246	0708047S	Defense Property Accountability System	07	2,154	2,154		2,154	2,924		2,924	U
		Operational System Development		3,908	3,908		3,908	4,694		4,694	
				188,241	188,070		188,070	319,796		319,796	

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Defense Logistics Agency
 FY 2018 President's Budget Request
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 (Dollars in Thousands)

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Appropriation: 0400D Research, Development, Test & Eval, DW

Program Line Element No Number	Item	Act	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO	S e c
33 0603264S	Agile Transportation for the 21st Century (AT21) - Theater Capability	03	1,508							U
49 0603680S	Manufacturing Technology Program	03		31,259	31,259					U
51 0603712S	Generic Logistics R&D Technology Demonstrations	03	15,093	11,011	11,011					U
52 0603713S	Deployment and Distribution Enterprise Technology	03	29,888							U
54 0603720S	Microelectronics Technology Development and Support	03	86,832	97,826	97,826					U
	Advanced Technology Development		133,321	140,096	140,096					
128 0605070S	DOD Enterprise Systems Development and Demonstration	05	11,501	12,631	5,660					U
130 0605080S	Defense Agency Initiatives (DAI) - Financial System	05	30,568	26,657	30,457					U
131 0605090S	Defense Retired and Annuitant Pay System (DRAS)	05	9,785	4,949	7,949					U
	System Development And Demonstration		51,854	44,237	44,066					
159 0605502S	Small Business Innovative Research	06	5,524							U
	Management Support		5,524							
244 0708011S	Industrial Preparedness	07	21,843							U
245 0708012S	Pacific Disaster Centers	07	1,709	1,754	1,754					U
246 0708047S	Defense Property Accountability System	07		2,154	2,154					U
	Operational System Development		23,552	3,908	3,908					

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Line	Program Element No Number	Item	Act	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total	S e c
33	0603264S	Agile Transportation for the 21st Century (AT21) - Theater Capability	03								U
49	0603680S	Manufacturing Technology Program	03	31,259	31,259		31,259	40,511		40,511	U
51	0603712S	Generic Logistics R&D Technology Demonstrations	03	11,011	11,011		11,011	10,611		10,611	U
52	0603713S	Deployment and Distribution Enterprise Technology	03								U
54	0603720S	Microelectronics Technology Development and Support	03	97,826	97,826		97,826	219,803		219,803	U
		Advanced Technology Development		140,096	140,096		140,096	270,925		270,925	
128	0605070S	DOD Enterprise Systems Development and Demonstration	05	12,631	5,660		5,660	6,266		6,266	U
130	0605080S	Defense Agency Initiatives (DAI) - Financial System	05	26,657	30,457		30,457	24,436		24,436	U
131	0605090S	Defense Retired and Annuitant Pay System (DRAS)	05	4,949	7,949		7,949	13,475		13,475	U
		System Development And Demonstration		44,237	44,066		44,066	44,177		44,177	
159	0605502S	Small Business Innovative Research	06								U
		Management Support									
244	0708011S	Industrial Preparedness	07								U
245	0708012S	Pacific Disaster Centers	07	1,754	1,754		1,754	1,770		1,770	U
246	0708047S	Defense Property Accountability System	07	2,154	2,154		2,154	2,924		2,924	U
		Operational System Development		3,908	3,908		3,908	4,694		4,694	

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Line No	Program Element Number	Item	Act	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req S with CR Adj OCO	e c
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Total Defense Logistics Agency				214,251	188,241	188,070					

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Defense Logistics Agency
 FY 2018 President's Budget Request
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 Total Obligational Authority
 (Dollars in Thousands)

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Appropriation: 0400D Research, Development, Test & Eval, DW

Program			FY 2017	FY 2017	FY 2017	FY 2017					
Line	Element		Total	Total	Less Enacted	Remaining Req					
No	Number	Item	Act	PB Requests** with CR Adj Base+OCO+SAA	PB Requests* with CR Adj Base + OCO	Div B P.L.114-254** OCO	with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total	S e c
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Total Defense Logistics Agency				188,241	188,070		188,070	319,796		319,796	

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Defense Logistics Agency • Budget Estimates FY 2018 • RDT&E Program

Program Element Table of Contents (by Budget Activity then Line Item Number)

Appropriation 0400: Research, Development, Test & Evaluation, Defense-Wide

Line #	Budget Activity	Program Element Number	Program Element Title	Page
33	03	0603264S	Agile Transportation for the 21st Century (AT21) Theater Capability.....	Volume 5 - 297
49	03	0603680S	Manufacturing Technology Program (ManTech).....	Volume 5 - 301
51	03	0603712S	Generic Logistics R&D Technology Demonstrations (Log R&D).....	Volume 5 - 311
52	03	0603713S	Deployment and Distribution Enterprise Technology.....	Volume 5 - 321
54	03	0603720S	Microelectronics Technology Development and Support (DMEA).....	Volume 5 - 337

Appropriation 0400: Research, Development, Test & Evaluation, Defense-Wide

Line #	Budget Activity	Program Element Number	Program Element Title	Page
128	05	0605070S	DoD Enterprise Systems Development and Demonstration.....	Volume 5 - 347
130	05	0605080S	Defense Agency Initiatives (DAI) - Financial System.....	Volume 5 - 357
131	05	0605090S	Defense Retired and Annuitant Pay System (DRAS).....	Volume 5 - 373

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Appropriation 0400: Research, Development, Test & Evaluation, Defense-Wide

Line #	Budget Activity	Program Element Number	Program Element Title	Page
159	06	0605502S	Small Business Innovative Research (SBIR).....	Volume 5 - 381

Appropriation 0400: Research, Development, Test & Evaluation, Defense-Wide

Line #	Budget Activity	Program Element Number	Program Element Title	Page
244	07	0708011S	Industrial Preparedness.....	Volume 5 - 385
245	07	0708012S	Pacific Disaster Centers.....	Volume 5 - 395
246	07	0708047S	Defense Property Accountability System (DPAS).....	Volume 5 - 401

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Program Element Title	Program Element Number	Line #	BA	Page
Agile Transportation for the 21st Century (AT21) Theater Capability	0603264S	33	03.....	Volume 5 - 297
Defense Agency Initiatives (DAI) - Financial System	0605080S	130	05.....	Volume 5 - 357
Defense Property Accountability System (DPAS)	0708047S	246	07.....	Volume 5 - 401
Defense Retired and Annuitant Pay System (DRAS)	0605090S	131	05.....	Volume 5 - 373
Deployment and Distribution Enterprise Technology	0603713S	52	03.....	Volume 5 - 321
DoD Enterprise Systems Development and Demonstration	0605070S	128	05.....	Volume 5 - 347
Generic Logistics R&D Technology Demonstrations (Log R&D)	0603712S	51	03.....	Volume 5 - 311
Industrial Preparedness	0708011S	244	07.....	Volume 5 - 385
Manufacturing Technology Program (ManTech)	0603680S	49	03.....	Volume 5 - 301
Microelectronics Technology Development and Support (DMEA)	0603720S	54	03.....	Volume 5 - 337
Pacific Disaster Centers	0708012S	245	07.....	Volume 5 - 395
Small Business Innovative Research (SBIR)	0605502S	159	06.....	Volume 5 - 381

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Defense Logistics Agency	Date: May 2017
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Appropriation/Budget Activity					R-1 Program Element (Number/Name)							
0400: Research, Development, Test & Evaluation, Defense-Wide / BA 3: Advanced Technology Development (ATD)					PE 0603264S / Agile Transportation for the 21st Century (AT21) Theater Capability							
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	10.435	1.508	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	11.943
1: Agile Transportation for the 21st Century (AT21) Theater Capability	10.435	1.508	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	11.943

A. Mission Description and Budget Item Justification

Through the Theater Enterprise Deployment and Distribution (TED2) analysis, the Geographic Combatant Commanders (GCC) identified several gaps between United States Transportation Command's strategic lift processes and GCCs' distribution processes. Highlighted is a lack of capability to (1) manage transportation planning and execution processes for cargo/passenger movement within their respective theaters of operation or (2) match global movement requirements against available lift assets to produce an optimized transportation schedule that meets delivery requirements. AT21 Theater Capability, through the implementation of process improvements, integration of commercial transportation management/optimization tools, and the development of deployment/distribution supporting technologies, will provide the capability for Combatant Commanders to manage theater transportation operations from the port of debarkation to the point of need.

B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	1.706	0.000	0.000	-	0.000
Current President's Budget	1.508	0.000	0.000	-	0.000
Total Adjustments	-0.198	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.198	-			

Change Summary Explanation

In FY 2017, PE 0603264S (BA3) Agile Transportation for the 21st Century (AT21) Theater Capability was transferred to a single PE in the Air Force budget (PE 0604776F) in order to support auditability, increase management efficiency, and reduce administrative actions.

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Logistics Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 3					R-1 Program Element (Number/Name) PE 0603264S / Agile Transportation for the 21st Century (AT21) Theater Capability				Project (Number/Name) 1 / Agile Transportation for the 21st Century (AT21) Theater Capability			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
1: Agile Transportation for the 21st Century (AT21) Theater Capability	10.435	1.508	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	11.943
A. Mission Description and Budget Item Justification												
Through the Theater Enterprise Deployment and Distribution (TED2) analysis, the Geographic Combatant Commanders (GCC) identified several gaps between United States Transportation Command's strategic lift processes and GCCs' distribution processes. Highlighted is a lack of capability to (1.) manage transportation planning and execution processes for cargo/passenger movement within their respective theaters of operation or (2.) match global movement requirements against available lift assets to produce an optimized transportation schedule that meets delivery requirements. AT21 Theater Capability, through the implementation of process improvements, integration of commercial transportation management/optimization tools, and the development of deployment/distribution supporting technologies, will provide the capability for Combatant Commanders to manage theater transportation operations from the port of debarkation to the point of need.												
B. Accomplishments/Planned Programs (\$ in Millions)									FY 2016	FY 2017	FY 2018	
Title: Agile Transportation for the 21st Century (AT21) Theater Capability									1.508	-	-	
Description: AT21 Theater will, in conjunction with the GCCs, continue business process analysis, business process automation development, and business process technology integration to improve the integration/transition of business processes between the strategic and theater segments, as well as improve theater deployment and distribution business processes. Theater business process analysis will identify opportunities for insertion of industry best practices and technology to improve the efficiency/effectiveness of managing theater deployment and distribution operations. Based on operational requirements emerging from the theater business processes, AT21 will develop, prototype, adapt and transition technologies to enable theater deployment and distribution capabilities.												
FY 2016 Accomplishments: Continue data architecture analysis/services work to support reengineered business processes to ensure the seamless transition of deployment and distribution information between strategic & theater legs. Complete development of an AT21 theater optimization tool that automates the Joint Operational Support Airlift Center scheduling process and optimizes airlift mission schedules for operational support airlift requirements												
Accomplishments/Planned Programs Subtotals									1.508	-	-	
C. Other Program Funding Summary (\$ in Millions)												
N/A												
Remarks												

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Logistics Agency		Date: May 2017
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603264S / <i>Agile Transportation for the 21st Century (AT21) Theater Capability</i>	Project (Number/Name) 1 / <i>Agile Transportation for the 21st Century (AT21) Theater Capability</i>
D. Acquisition Strategy N/A		
E. Performance Metrics Development of core integrated strategic and theater process maps delineating gaps in information flow and prototype systems to facilitate synchronized transportation management and execution capabilities to improve performance in theater transportation operations. >80% transition rate of proven technologies/capabilities.		

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Defense Logistics Agency **Date:** May 2017

Appropriation/Budget Activity 0400: Research, Development, Test & Evaluation, Defense-Wide / BA 3: Advanced Technology Development (ATD)					R-1 Program Element (Number/Name) PE 0603680S / Manufacturing Technology Program (ManTech)							
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	0.000	0.000	31.259	40.511	-	40.511	39.658	39.638	40.113	40.837	Continuing	Continuing
7: Improving Industrial Base Manufacturing Processes (formerly Material Availability)	0.000	0.000	10.924	16.227	-	16.227	16.251	16.827	16.675	17.034	Continuing	Continuing
8: Maintaining Viable Supply Sources (formerly High Quality Sources)	0.000	0.000	16.923	17.103	-	17.103	17.568	18.010	18.460	18.886	Continuing	Continuing
9: Improving Technical and Logistics Information (formerly Industry and Customer Collaboration)	0.000	0.000	3.412	7.181	-	7.181	5.839	4.801	4.978	4.917	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Defense Logistics Agency (DLA) Manufacturing Technology (ManTech) Program supports the development of a responsive, world-class manufacturing capability to affordably meet the warfighters' needs throughout the defense system life cycle. IP ManTech: Provides the crucial link between invention and product application to speed technology transitions. The program matures and validates emerging manufacturing technologies to support low-risk implementation in industry and Department of Defense (DoD) facilities, e.g. depots and shipyards. It addresses production issues early by providing timely solutions, thereby reducing risk and positively impacting system life cycle affordability by providing solutions to manufacturing problems before they occur.

Beginning in FY 16 DLA ManTech was realigned into three Strategic Focus Areas (SFA): 1) Improving Industrial base Manufacturing Processes; 2) Maintaining Viable Sources of Supply; and 3) Improving Technical and Logistics Information.

- The Improving Industrial Base Manufacturing Processes SFA includes efforts to reduce industrial base material costs and production lead-times, while improving the quality of DLA managed products. This SFA subsumed the former supply chain oriented efforts in Subsistence Network (formerly Combat Rations Network for Technology Implementation), Procurement Readiness Optimization—Advanced Casting Technology (PRO-ACT), Procurement Readiness Optimization—Forging Advance System Technology (PRO-FAST), and Battery Network (BATTNET). New manufacturing processes within the scope of this SFA include emerging technologies such as Additive Manufacturing.

- Maintaining Viable Supply Sources includes efforts to assure the commercial industrial base can satisfy DLA materiel requirements. This SFA subsumed the Material Acquisition Electronics ManTech efforts. In the future it will include other DLA efforts to maintain a viable industrial capability in areas such as Strategic Materials.

- The Improving Technical and Logistics Information SFA include efforts to improve and facilitate the exchange of engineering and logistics information among DLA industry partners and customers. It includes the MANTECH program Military Uniform System Technology (MUST) (formerly Customer Driven Uniform Manufacturing) and the Defense Logistics Information Research Program from P.E. 0603712S. A primary focus of this SFA is to capitalize on the emerging "Model Based Enterprise" paradigm and the semantic web as an enabler to a logistics system that is smart and connected.

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Defense Logistics Agency	Date: May 2017
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Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 3: Advanced Technology Development (ATD)</i>	R-1 Program Element (Number/Name) PE 0603680S / <i>Manufacturing Technology Program (ManTech)</i>
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Over the FY 18- FY 22 Planning Period, funds were realigned within the ManTech PE, from the DLA Log R&D PE (0603712S) and DLA Procurement Defense-Wide Fund. These funds will address critical shortfalls in the Improving Industrial Base Manufacturing Processes and Maintaining Viable Supply Sources. The largest requirement was in the Maintaining Viable Supply Sources to develop a long-term, reliable source of linear microcircuits. These devices are critical to maintaining the readiness of front line weapon system electronics. High priority requirements in the Improving Industrial Base Manufacturing Processes SFA included additional funding for battery technology, castings and forging manufacturing technology.

B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	0.000	31.259	36.483	-	36.483
Current President's Budget	0.000	31.259	40.511	-	40.511
Total Adjustments	0.000	0.000	4.028	-	4.028
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Internal Funds Realignment	-	-	4.023	-	4.023
• Pay Increase Assumption	-	-	0.005	-	0.005

Change Summary Explanation

MANTECH was realigned from BA 07 to BA 03 in FY 2017.

A full-year FY 2017 appropriation for this account was not enacted at the time the budget was prepared; therefore, the budget assumes this account is operating under the Continuing Appropriations Resolution, 2017 (P.L. 114-254). The amounts included for 2017 reflect the annualized level provided by the continuing resolution. BASE: FY17PB (\$31.259M) + Request for Additional Appropriations (\$0.000M).

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Logistics Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 3					R-1 Program Element (Number/Name) PE 0603680S / Manufacturing Technology Program (ManTech)				Project (Number/Name) 7 / Improving Industrial Base Manufacturing Processes (formerly Material Availability)			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
7: Improving Industrial Base Manufacturing Processes (formerly Material Availability)	0.000	0.000	10.924	16.227	-	16.227	16.251	16.827	16.675	17.034	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Material Availability (MA) Strategic Focus Area (SFA) is an R&D effort undertaken with DLA's industrial base to reduce material costs, reduce the length and variability of Production Lead-Times, assure the DLA managed products meet requirements, and continuously improve quality and reliability. Benefits of this SFA include lower material costs, lower inventory levels and more predictable Customer Wait Times, fewer quality deficiencies, and lower customer support costs. This strategic focus area includes within its scope the Subsistence Network, the Battery Network, the Castings/Forging Programs and Additive Manufacturing programs.

The Battery network objective is to develop the next generation of battery manufacturing technologies for cost and price efficiency, longer shelf life, and lighter batteries with higher energy. BATTNET conducts R&D initiatives to address sustainment gaps and bridge technical solutions into higher MRLs for specific groups of batteries. BATTNET also focuses on projects to develop the production capability for advanced lithium-based non-rechargeable and rechargeable batteries to ensure the prompt and sustained availability, quality, and affordability of batteries. Desired outcomes include: streamlined inventory and associated cost reductions through standardization and improved distribution practices; resolved obsolescence issues; addressed surge and sustainment issues; enhanced security of supply chain; increased competition and manufacturing base; reduced per unit battery cost; and leveraged Service-level (Army, Navy, Air Force) and other governmental (DOE, DOT, NASA) R&D efforts to insert new technology and practices into the existing DLA battery inventory.

DLA is also conducting some short-term (FY17-FY18) manufacturing improvements in the Vacuum Electron Tube supply chain within this Budget Project. Electron tubes are still an essential product in Defense and National Security radar systems. included will be value-added studies and tests of alternative materials for tungsten wire and microwave quality glass to address obsolescence in these material supply chains.

The Subsistence Network (SUBNET) Program is a Manufacturing Technology Program and is the successor to the CORANET R&D program. SUBNET focuses on solutions to develop and promote manufacturing improvements in the subsistence supply chain. The program's expanded areas of interest includes: combat rations, food equipment, field feeding solutions, food footprint, food innovations, food safety and defense developments, garrison feeding, nutrition and health, storage and packing solutions, surge and sustainment support, and water security. SUBNET forms a community of practice with Military Services, U.S. Department of Agriculture, Natick Soldier Research Development, and Engineering Center; Academia, and Industry to research and promote manufacturing improvements in the Subsistence Supply Chain with the goals of maximizing capability and capacity to produce, and to encourage innovation and modernization needed to leverage the latest technologies. Desired outcomes include measures such as reduced cost, increased efficiencies, enhanced quality, and improved surge demand capabilities.

The Castings consortium objective is to develop new materials and technologies for the metalcasting industry to help DLA improve the supply of parts that contain castings. Weapon system spare parts managed by DLA that contain castings are responsible for a disproportionate share of DLA's backorders or unfilled orders (UFOs). Cast parts are ~2% of National Stock Numbered Class IX parts but represent ~5% of all backorders, and when only the oldest backorders are considered up to 10%

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Logistics Agency		Date: May 2017	
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603680S / <i>Manufacturing Technology Program (ManTech)</i>	Project (Number/Name) 7 / <i>Improving Industrial Base Manufacturing Processes (formerly Material Availability)</i>	
<p>are castings. This program includes tasks to develop new capabilities in the areas of inspection, materials, processes, modeling, and design. Once developed these capabilities will support the foundry industry, where the technologies will be tested and implemented in conjunction with the industry associations. These advancements will improve the metalcasting supply chains for the DOD and the DLA to better support the warfighter. This is achieved through investments in projects aimed at reducing lead-time, reducing cost, and improving quality of castings critical to DOD weapon systems.</p> <p>The Forgings consortium objective is to develop new materials and technologies for the forging industry to help DLA improve the supply of parts that contain forgings. Weapon system spare parts managed by DLA that contain Forgings are responsible for a disproportionate share of DLA's backorders or unfilled orders (UFOs). Forged parts are ~2% of National Stock Numbered Class IX parts but represent ~5% of all backorders, and when only the oldest backorders are considered up to 10% are forgings. This program includes tasks to develop new capabilities in the areas of inspection, materials, processes, modeling, and design. Once developed these capabilities will support the forging industry, where the technologies will be tested and implemented in conjunction with the industry associations. These advancements will improve the forging supply chains for the DOD and the DLA to better support the warfighter. This is achieved through investments in projects aimed at reducing lead-time, reducing cost, and improving quality of forgings critical to DOD weapon systems.</p> <p>The Additive Manufacturing (AM) objective is to establish AM as an effective alternative to conventional manufacturing and document the process for AM benefits. DLA needs to exploit AM technology as a lead-time and inventory reduction enabler.</p>			
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
Title: Improving Industrial Base Manufacturing Processes (formerly Material Availability)		-	10.924
<p>FY 2017 Plans:</p> <p>The Subsistence Network plan in FY17 is to expand to the broader subsistence network; having awarded the Broad Agency Announcement in 2016. DLA will work short term projects (STPs) with the community of practice partners of the military services, industry and academia. SUBNET plans to improve process capabilities by identifying targets for product, automation and business operation changes, and implementing solutions in the Subsistence Supply Chain to produce such improvements as shorter lead times, higher throughput, reduced inventory and overhead cost, and improved quality. The STPs are required to have a business case, developed in advance to include specific metrics for success as well as return on investment where applicable to ensure that all SUBNET STPs are fully documented, all projects have the potential for implementation in industry; and all projects address a specific DoD/DLA need.</p> <p>The Castings program will receive a significant increase in funding starting in FY17 to cover most of the unfunded requirements identified during the PBR 17 process. Projects identified will investigate, develop and deploy innovative enterprise and technical solutions to improve casting supply chains for the Department of Defense and the Defense Logistics Agency to support the warfighter. Contracts will be competitively awarded in FY17. Proposals are required to include a business case with specific metrics and transition plan for success.</p>			16.227

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Logistics Agency			Date: May 2017		
Appropriation/Budget Activity 0400 / 3		R-1 Program Element (Number/Name) PE 0603680S / <i>Manufacturing Technology Program (ManTech)</i>		Project (Number/Name) 7 / <i>Improving Industrial Base Manufacturing Processes (formerly Material Availability)</i>	
B. Accomplishments/Planned Programs (\$ in Millions)			FY 2016	FY 2017	FY 2018
<p>The Forging program will receive an increase in funding to cover most of the unfunded requirements identified during the PBR17 process. Proposals are required to include a business case with specific metrics and transition plan for success. The Forging consortium will also pursue additional forging manufacturing advances from successful DLA SBIR projects selected in FY2014.</p> <p>The Battery Network funding will be applied to pursue additional projects including production readiness of lithium conformable soldier batteries, military ground vehicle batteries, and aviation batteries; manufacturing transition of legacy and obsolete lead acid and nickel cadmium batteries to advanced lithium-ion batteries; and battery manufacturing automation and optimization technologies. These projects will address pressing supply chain issues by migrating from declining manufacturing to a high growth industrial base, and will achieve cost reduction by optimizing the manufacturing design, assembly, and test processes.</p> <p>The Additive Manufacturing plan is for DLA to partner with the Military Services to use AM to produce parts. DLA and the Services will identify candidate parts, convert technical data to 3D format to facilitate AM, procure the parts, and document the process for AM benefits. The Services will review newly created technical data packages (TDP), test the parts, and qualify AM as an acceptable process to produce the parts.</p> <p>FY 16 – FY 20: Funding for Additive projects will be reallocated from other MA SFA thrusts and classified into the Additive Manufacturing Thrust.</p> <p>FY 2018 Plans:</p> <p>The Battery Network will initiate new projects and continue efforts from FY17 for improving the production readiness, transition, and standardization of soldier and system batteries within the DLA supply chain. The Program will also leverage new battery manufacturing technologies for the supply chain that have been developed in SBIR - electrode laser cutting, solvent-free electrode production, low cost materials production or recycling, advanced performance cells. DLA will also complete the initial investments in manufacturing and material improvements for the vacuum electron tube supply base (used in microwave and radar systems) and pursue additional opportunities.</p> <p>The Subsistence Network program plans to initiate and execute short-term projects in FY18, and continue efforts from FY17. SUBNET will also continue to pursue Small Business Innovation Research Topics in Subsistence. The Subsistence Network will also continue to work with community partners (military services, industry, and academia) to leverage the latest technologies, encourage innovation and modernization, and promote manufacturing improvements in the subsistence supply chain.</p> <p>The Castings program plans to investigate, develop and deploy innovative enterprise and technical solutions to improve casting supply chains for the Department of Defense and the Defense Logistics Agency to support the warfighter. Contracts will be</p>					

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Logistics Agency		Date: May 2017	
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603680S / <i>Manufacturing Technology Program (ManTech)</i>	Project (Number/Name) 7 / <i>Improving Industrial Base Manufacturing Processes (formerly Material Availability)</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
<p>competitively awarded to fulfill those requirements. Projects will be required to include a business case with specific metrics and a transition plan for success. The Casting program will also continue executing projects approved and awarded in prior years.</p> <p>The Forging program will also continue executing projects approved and awarded in prior years. In addition, the Forging program will receive an increase in funding to cover the unfunded requirements identified during the PBR17 process. Projects identified will investigate, develop and deploy innovative enterprise and technical solutions to improve casting supply chains for the Department of Defense and the Defense Logistics Agency to support the warfighter. Contracts will be competitively awarded to fulfill those requirements. Project will be required to include a business case with specific metrics and transition plan for success. The Forging program will also continue executing projects that are approved and awarded in FY17.</p> <p>DLA R&D plans to leverage Industry and the Military Service Engineering Support Activities (via Service-level agreements with the Army, Navy, Marine Corps, Air Force) and the Department of Energy by providing funding for AM work identified under the respective agreements. Desired outcomes include: acceleration of rapid qualification and certification methodologies for AM, identification of AM applications for castings and forging preforms, rapid cast production and repair of castings using AM, exploration of conversion of recyclable materials to AM material, improved reverse engineering processes for AM purposes, and optimization of metal AM production to obtain land, air and sea platform spare parts. These efforts seek to increase the number of AM parts qualified for procurement and achieve savings from the associated lead-time, storage costs, transportation costs, in some cases reduction of fuel consumption due to lighter design and material options. Overall AM efforts will provide alternatives in product realization in order to address unfulfilled Warfighter readiness needs.</p>			
Accomplishments/Planned Programs Subtotals		-	10.924
C. Other Program Funding Summary (\$ in Millions)			
N/A			
Remarks			
D. Acquisition Strategy			
N/A			
E. Performance Metrics			
40% of applicable projects (ex. non-studies) will transition.			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Logistics Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 3					R-1 Program Element (Number/Name) PE 0603680S / <i>Manufacturing Technology Program (ManTech)</i>				Project (Number/Name) 8 / <i>Maintaining Viable Supply Sources (formerly High Quality Sources)</i>			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
8: <i>Maintaining Viable Supply Sources (formerly High Quality Sources)</i>	0.000	0.000	16.923	17.103	-	17.103	17.568	18.010	18.460	18.886	Continuing	Continuing

A. Mission Description and Budget Item Justification

The High Quality Sources SFA are projects undertaken to assure that the industrial base can respond to DLA requirements and DLA can fill military customers' material requirements reliably and consistently. Benefits include eliminating cancelled requisitions returned to customers as "non-procurable." This strategic focus area includes within its scope the former Material Acquisition Electronics program.

The Material Acquisition Electronics roadmap has four major thrusts in Digital Microcircuits: Advanced Schottky TTL, TTL Compatible CMOS, 512 Kilobit RAM/ROM and Mega Gate ASIC. The Roadmap also includes a new major thrust area: Linear Microcircuits. Over the past several years, obsolescence in this class of microcircuits has greatly increased and has become a significant concern. These are classes of microcircuits that are expected to become non-procurable in FY 17 and beyond. Without the technologies planned on the MAE Roadmap, DLA will not be able to support DoD's requirements for high quality spare parts for critical electronic systems and subsystems.

Strategic Materials is a new area for the DLA Mantech program. It is designed to ensure that critical strategic materials are available from domestic sources and that process innovations are in place to efficiently process or recover strategic materials. Domestic capabilities can enhance national security and potentially reduce Defense Stockpile requirements. Targeted requirements will be determined with DLA Strategic Materials.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018
Title: Maintaining Viable Supply Sources (formerly High Quality Sources)	-	16.923	17.103
FY 2017 Plans: MAE will continue planning for the specific emulation technology implementations to support specific device family groups in consonance with Customer and Agency requirements. MAE will begin a major new thrust in emulation to address Linear Microcircuits in addition to its traditional focus on Digital. Several efforts will address basic design, manufacturing, electrical test and quality/reliability requirements for establishing a basis for product-oriented developments across the FYDP. MAE will also complete development and transition Advanced Schottky TTL Digital Microcircuit Emulation capability into full-scale production increasing DLA's ability to re-establish sourcing of non-procurable microcircuit NSNs. The newly transitioned emulation capabilities will address several discontinued device families and will increase the potential emulation production envelope by several hundred NSNs. MAE will also continue development of additional emulation capabilities including TTL-Compatible CMOS. MAE will also initiate several new implementations including development of a 1 million gate Application-			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Logistics Agency		Date: May 2017	
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603680S / <i>Manufacturing Technology Program (ManTech)</i>	Project (Number/Name) 8 / <i>Maintaining Viable Supply Sources (formerly High Quality Sources)</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
<p>Specific Integrated Circuit (ASIC) and 512K Read-Only and Random-Access Memory Emulation Capabilities. It will complete prototyping 350 nanometer emulation circuitry, bringing emulation capability that re-establishes sources for additional NSNs.</p> <p>Strategic Materials: A request for white paper proposals was recently added to DLA's Emerging R&D Requirements BAA for critical initial manufacturing technology requirements in domestic high strength carbon fibers. Additional targeted requirements will be determined with DLA Strategic Materials. Targeted requests for proposals will be conducted to address specific needs and opportunities to ensure that critical strategic materials are available from domestic sources and that process innovations are in place to efficiently produce strategic materials. Manufacturing technologies and capabilities are expected to transition to Title III or specific Weapon System Program funds for industrial base qualification.</p> <p><i>FY 2018 Plans:</i></p> <p>MAE will continue planning for the specific emulation technology implementations to support specific device family groups in consonance with Customer and Agency requirements. MAE will continue a major new thrust in emulation to address Linear Microcircuits in addition to its traditional focus on Digital. Several efforts will address basic design, manufacturing, electrical test and quality/reliability requirements for establishing a basis for product-oriented developments across the FYDP. MAE will also complete development and transition TTL-Compatible CMOS Microcircuit Emulation capability into full-scale production increasing DLA's ability to re-establish sourcing of non-procurable microcircuit NSNs. The newly transitioned emulation capabilities will address several discontinued device families and will increase the potential emulation production envelope by several hundred NSNs. MAE will also continue development of additional emulation capabilities including development of a 1 million gate Application-Specific Integration Circuit (ASIC) and 256K Read-Only and Random-Access Memory Emulation Capabilities. It will begin applying 350 nanometer emulation technology to specific part families for additional NSNs.</p>			
Accomplishments/Planned Programs Subtotals		-	16.923
C. Other Program Funding Summary (\$ in Millions)			
N/A			
Remarks			
D. Acquisition Strategy			
N/A			
E. Performance Metrics			
40% of applicable projects (ex. non-studies) will transition.			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Logistics Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 3					R-1 Program Element (Number/Name) PE 0603680S / Manufacturing Technology Program (ManTech)				Project (Number/Name) 9 / Improving Technical and Logistics Information (formerly Industry and Customer Collaboration)			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
9: Improving Technical and Logistics Information (formerly Industry and Customer Collaboration)	0.000	0.000	3.412	7.181	-	7.181	5.839	4.801	4.978	4.917	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Improving Technical and Logistics Information Strategic Focus Area (SFA) projects improve and facilitate the communication of technical and logistics information among industry, DLA’s military customers and DLA. This SFA includes Military Unique Sustainment Technology (MUST) and the Defense Logistics Information Research (DLIR) (P.E. 0603712S) within its scope. The movement of the DLIR related work from P.E. 0603712S to the DOD ManTech Program aligns the funding to the critical interface between DLA and industry and away from internal DLA operations.

The MUST focus addresses GAO Report 12-707 recommendations that DOD to establish a “knowledge-based approach” to collaborate on define and communicate of military unique requirements. DLA has the responsibility to communicate and manage the technical requirements among the Services and the Defense Industrial Base. Currently there is no common environment for collaborating on new requirements among the stakeholders. The strategic objective of the DLA MUST program is to identify, develop and adopt technologies that can significantly reduce the lead-time between Individual Item and Equipment (IIE) development and sustainment from years to months. The Program focuses on technologies that will transform the military IIE supply chain from an “electronic paper” (i.e. PDF/MS Word) based, manual environment into a knowledge based automated environment. The resulting approach will be a neutral platform that will seamlessly communicate military unique technical requirements throughout the end to end supply chain.

The DLIR Model Based Enterprise effort will develop capabilities to systematically accept engineering and design data from the Military Services, validate and store item technical data in 3D models. There are two classes of data that must be addressed: newly designed parts for systems still in development and legacy parts for systems that are in sustainment. The problem with newly designed parts is capturing the complete and accurate designs. The legacy parts do not have digital engineering models which recreating the design in contemporary engineering systems.

The Technical and Logistical Data Interoperability will pioneer methods to capture data from military Services, Original Equipment Manufacturers (OEMs), and suppliers to form a seamless thread of interoperable and linked data models.

The Emerging Manufacturing Technology program addresses emerging and out of cycle requirements that always occur as DLA strives to maintain readiness of the aging weapon systems.

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2016	FY 2017	FY 2018
Title: Improving Technical and Logistics Information (formerly Industry and Customer Collaboration)	-	3.412	7.181

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Logistics Agency		Date: May 2017	
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603680S / <i>Manufacturing Technology Program (ManTech)</i>	Project (Number/Name) 9 / <i>Improving Technical and Logistics Information (formerly Industry and Customer Collaboration)</i>	

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2016	FY 2017	FY 2018
<p><i>FY 2017 Plans:</i> Continue the distributed pilots and begin transition of the technology into the supply chain. Expand the number of companies participating in the pilots and validating the benefits of the knowledge based approach to IIE development.</p> <p><i>FY 2018 Plans:</i> MUST program will continue pilots, process reengineering and transition of the technology into the supply chain. Begin a schedule for implementations to be initiated in FY19.</p> <p>DLIR program will continue moving DLA from PDF Tech Data to Smart Data and Engineering Models and leveraging semantic technology to improve logistics data across the DLA Enterprise.</p> <p>Emerging Manufacturing Technologies addresses the opportunities to start new manufacturing technology developments that occur out of the budget cycle. It is a new start in FY18. Having an Emerging Technologies line allows DLA to get a head start undertaking new technological advances without disrupting ongoing programs. In other programs DLA R&D has been able to cut 12 to 24 months off project start-up lead-times. Saving the startup lead-time allows the Agency to get advanced technology into the hands of the warfighter earlier that would otherwise be the case and begin to realize the benefits of implementing new technology sooner than would otherwise be the case. It also allows ongoing programs to maintain continuity of funding and activity. SBIR phase III efforts (which can't be funded with SBIR funds) are a prime example of activities that will be funded with these funds, examples include emerging battery technologies, and technologies to address strategic materials shortage/risk.</p>			
Accomplishments/Planned Programs Subtotals	-	3.412	7.181

C. Other Program Funding Summary (\$ in Millions) N/A
Remarks
D. Acquisition Strategy N/A
E. Performance Metrics 40% of applicable projects (ex. non-studies) will transition.

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Defense Logistics Agency	Date: May 2017
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Appropriation/Budget Activity 0400: Research, Development, Test & Evaluation, Defense-Wide / BA 3: Advanced Technology Development (ATD)					R-1 Program Element (Number/Name) PE 0603712S / Generic Logistics R&D Technology Demonstrations (Log R&D)							
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	0.000	15.093	11.011	10.611	-	10.611	10.881	11.182	11.475	11.716	Continuing	Continuing
7: Enhancing Analysis, Modeling, and Decision Support (formerly Analytic & Decision Support)	0.000	3.471	2.371	4.062	-	4.062	4.167	4.262	4.361	4.454	Continuing	Continuing
8: Improving Logistics Processes (formerly Logistics Process)	0.000	5.413	5.236	3.849	-	3.849	3.938	4.052	4.166	4.253	Continuing	Continuing
9: Emergent Logistics R&D Requirements (formerly Innovative Products & Services for DLA Customers)	0.000	6.209	3.404	2.700	-	2.700	2.776	2.868	2.948	3.009	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Defense Logistics Agency is responsible for providing to the Military Services, and other Federal Agencies, and combined and allied forces the full spectrum of logistics, acquisition and technical services. DLA sources and provides nearly 100 percent of the consumable items the military forces need to operate – including food, fuel and energy, uniforms, medical supplies as well as construction and barrier equipment. DLA supplies more than 85 percent of the military's spare parts, provides logistics information data and products, manages the reutilization of military equipment, and offers document automation and production services. DLA's Generic Logistics R&D Technology Demonstrations (Log R&D) program helps ensure that advanced logistics concepts and business processes are available to accomplish the agency's mission with the leanest possible infrastructure, using the best commercial and government sources and applying the most effective business processes. The Logistics R&D program develops and demonstrates high risk, high payoff technology that provides a significantly higher level of support at lower costs. The program has a proven track record of implementation and benefits.

In December 2013, the DLA Director called for greater flexibility within the R&D program in support of the agency's mission. As a result, the R&D program evolved from single supply chain efforts to Strategic Focus Areas (SFAs). The SFAs support DLA's efforts to make the improvements needed to maintain mission readiness rates in a constrained budget environment.

The three Strategic Focus Areas were renamed in FY 2021 to more clearly capture their focus and scope:

1. Enhancing Analysis, Modeling, and Decision Support (formerly Analytic and Decision Support): R&D efforts to develop decision support tools, such as modeling, simulation, and other analytics to improve operational strategy decision-making, forecasting, and procurement, which support more effective and efficient responses to emerging market and customer requirements.

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Defense Logistics Agency	Date: May 2017
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Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 3: Advanced Technology Development (ATD)</i>	R-1 Program Element (Number/Name) PE 0603712S / <i>Generic Logistics R&D Technology Demonstrations (Log R&D)</i>
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2. Improving Logistics Processes (formerly Logistics Processes): R&D efforts to develop and implement advanced technology in logistics processes over and above current baseline systems.

3. Emergent Logistics R&D Requirements (formerly Innovative Products and Services for Customers): R&D Efforts to support emergent Logistics R&D requirements arising outside the budget cycle, a frequent occurrence. The SFA begins new projects promptly without the disruption of ongoing projects by funds reallocation. This SFA includes all DLA supply chains and logistics processes.

NOTE: The single supply chain exhibits were removed as they are now included within the SFA exhibits.

B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	15.537	11.011	10.607	-	10.607
Current President's Budget	15.093	11.011	10.611	-	10.611
Total Adjustments	-0.444	0.000	0.004	-	0.004
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.444	-			
• Pay Raise Assumption	-	-	0.004	-	0.004

Change Summary Explanation

During FY 2017 – FY 2021 funds were realigned from PE LOG R&D (0603712S) to the Industrial Preparedness – Manufacturing Technology Program (PE 0708011S). This realignment was needed to accommodate high priority requirements within DLA to improve the industrial base that supports critical weapon systems. In FY17, \$4.646M was realigned from LOG R&D to MANTECH for these high priority requirements.

A full-year FY 2017 appropriation for this account was not enacted at the time the budget was prepared; therefore, the budget assumes this account is operating under the Continuing Appropriations Resolution, 2017 (P.L. 114-254). The amounts included for 2017 reflect the annualized level provided by the continuing resolution. BASE: FY17PB (\$11.011M) + Request for Additional Appropriations (\$0.000M).

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Logistics Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 3					R-1 Program Element (Number/Name) PE 0603712S / <i>Generic Logistics R&D Technology Demonstrations (Log R&D)</i>				Project (Number/Name) 7 / <i>Enhancing Analysis, Modeling, and Decision Support (formerly Analytic & Decision Support)</i>			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
7: <i>Enhancing Analysis, Modeling, and Decision Support (formerly Analytic & Decision Support)</i>	0.000	3.471	2.371	4.062	-	4.062	4.167	4.262	4.361	4.454	Continuing	Continuing

A. Mission Description and Budget Item Justification

R&D efforts to develop and implement advanced analytical tools, modeling, and simulation of logistics and supply chain processes. These tools will improve DLA forecasting and procurement strategy decisions and lead to faster and more flexible responsiveness to emerging market and customer requirements. Currently, there are three major analytical thrusts: Planning Processes, Medical Supply Chain, and Distribution/Disposition. Planning processes model simulates item and customer demand patterns to improve customer support, lower inventories, acquisition costs, and acquisition lead-times for hardware (Class IX items). Medical Supply Chain Modeling will provide DLA the capability to integrate DLA logistics data and commercial data with satellite and political maps; it will automate for DLA Medical planners the ability to identify entities such as suppliers, customers and vendor distribution centers to enhance spatial awareness of incidents such as catastrophic events and military contingencies. The Strategic Distribution and Disposition (SDD) thrust will develop and implement analytical tools, models, and simulations of logistics and supply chain processes related to distribution and disposition.

The Medical Logistics Network will expand efforts in medical informatics, a growing area of health information systems that combines information science, computer science and health care to improve health systems to manage the healthcare supply chain more efficiently.

The mission of the SDD program is to assist DLA Distribution and Disposition Services in anticipating, assessing, and meeting current and future Warfighter requirements by leveraging R&D to infuse innovative solutions. Current R&D thrusts include finalizing a simulation study for the Eastern Distribution Center (EDC), battery desulfation and lithium battery upgrade projects in support of DLA Distribution, and a Hazardous Waste (HW) disposal feasibility study in support of DLA Disposition Services

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2016	FY 2017	FY 2018
Title: Enhancing Analysis, Modeling, and Decision Support	3.471	2.371	4.062
FY 2016 Accomplishments: Weapon System Support (WSS) initiated efforts to develop a tool for early identification of problem parts and to develop more effective techniques to manage Production Lead Time (PLT).			
Medical Logistics Network (MLN) Supply Chain transitioned the Fair and Reasonable Evaluation (FRE) capability.			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Logistics Agency			Date: May 2017		
Appropriation/Budget Activity 0400 / 3		R-1 Program Element (Number/Name) PE 0603712S / Generic Logistics R&D Technology Demonstrations (Log R&D)	Project (Number/Name) 7 / Enhancing Analysis, Modeling, and Decision Support (formerly Analytic & Decision Support)		
B. Accomplishments/Planned Programs (\$ in Millions)			FY 2016	FY 2017	FY 2018
<p>Strategic Distribution and Disposition (SDD) conducted a state simulation of DLA’s East Coast Distribution Center (EDC). The current state simulation was compared to new potential redesigns of the EDC. The most promising new designs were simulated and compared to the current state for labor savings, reduction in fulfillment time/cycle, and reduction of Material Handling Equipment (MHE).</p> <p>SDD completed the Warehouse Automation and Robotics Exploratory Project (WAREP) and provided a Gap Analysis and an initial ROM BCA. Subsequently, J6 assumed responsibility for the initiative.</p> <p>FY 2017 Plans: Planning Process will focus on initial capabilities of Supply chain risk management, examine the potential benefits of alternative ownership strategies for inventory and address ways to improve collaboration among DLA, its suppliers and its customers for more effective inventory management. Collaborative efforts will be continued with the Planning Process Owner and his team to develop new projects for FY 2017 awards.</p> <p>Medical Logistics Network (MLN) will transition the Clinical Standardization application to sustainment. A new project in Medical 3D Printing could be undertaken this year.</p> <p>SDD will complete the East Coast Distribution Center (EDC) study and continue supporting DLA Distribution with projects focused on lead-acid and new Lithium-Ion battery technology. Additionally, SDD will finalize an Exploratory Concept project and provide Courses of Action (COAs) on deployable Hazardous Waste (HW) disposal capabilities in support of DLA Disposition.</p> <p>FY 2018 Plans: SDD will complete the lead-acid and Lithium-Ion battery technology projects in support DLA Distribution and initiate a Hazardous Waste (HW) disposal capabilities proof of concept.</p> <p>The Medical Logistics Network will expand efforts in medical informatics, a growing area of health information systems that combines information science, computer science and health care to improve health systems to manage the healthcare supply chain more efficiently.</p>					
Accomplishments/Planned Programs Subtotals			3.471	2.371	4.062
C. Other Program Funding Summary (\$ in Millions)					
N/A					
Remarks					

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Logistics Agency		Date: May 2017
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603712S / <i>Generic Logistics R&D Technology Demonstrations (Log R&D)</i>	Project (Number/Name) 7 / <i>Enhancing Analysis, Modeling, and Decision Support (formerly Analytic & Decision Support)</i>
D. Acquisition Strategy N/A		
E. Performance Metrics 40% of applicable projects (ex. non-studies) will transition.		

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Logistics Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 3					R-1 Program Element (Number/Name) PE 0603712S / <i>Generic Logistics R&D Technology Demonstrations (Log R&D)</i>				Project (Number/Name) 8 / <i>Improving Logistics Processes (formerly Logistics Process)</i>			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
8: <i>Improving Logistics Processes (formerly Logistics Process)</i>	0.000	5.413	5.236	3.849	-	3.849	3.938	4.052	4.166	4.253	Continuing	Continuing

A. Mission Description and Budget Item Justification

Logistics Processes are R&D efforts within the Weapon System Sustainment Program (WSS) undertaken to develop and implement advanced technology in the internal DLA logistics processes. To qualify for R&D funding, the R&D effort must develop and apply technology and processes over and above current baseline IT systems and continuous improvements efforts.

This strategic focus area has 2 thrusts: Technical/Quality (T/Q) Process Improvements and Selected Process Improvements

T/Q Process Improvements to reduce material and internal costs and improve support to warfighters. Services have engineering responsibility for most Class IX parts. Many T/Q sub-processes involve interactions with Service engineering functions, which often are time-consuming and costly. Other key T/Q sub-processes are essential to the procurement function, such as analysis of parts content, source capabilities and problem resolution.

Selected Process Improvements cover processes outside the scope of the Technical/Quality (T/Q) function. Although all DLA processes are in scope, the focus for FY 2016 is on the Procurement process, especially aspects driving internal costs and delays in awards.

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2016	FY 2017	FY 2018
Title: Improving Logistics Processes (LP)	5.413	5.236	3.849
FY 2016 Accomplishments: Selected WSS Process initiatives for FY 16 in the T/Q area include Cost of Quality in Procurement, Technical Data Availability, processes for Service approval of substituting Additive Manufacturing for selected parts, and Vendor Network Linkage Analysis for improved visibility into potential bad actors. Initiatives in the Procurement area include Reducing Manual Reviews to cut cost and time, Proactive No-Bid Modeling to reduce time to award and improve support to warfighters, and eCommerce to cut internal and parts costs and reduce Production Lead Time.			
Medical Logistics Network (MLN) transitioned the Fair and Reasonable Evaluation (FRE) capability.			
Strategic Distribution and Disposition (SDD) completed a feasibility study of using self-service unmanned kiosk type collection points in support of DLA Disposition. Additionally, SDD finalized the DLA Distribution Automation/Robotics exploratory efforts and transitioned them to the Distribution Modernization Program Office and J6.			
FY 2017 Plans:			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Logistics Agency			Date: May 2017		
Appropriation/Budget Activity 0400 / 3		R-1 Program Element (Number/Name) PE 0603712S / Generic Logistics R&D Technology Demonstrations (Log R&D)	Project (Number/Name) 8 / Improving Logistics Processes (formerly Logistics Process)		
B. Accomplishments/Planned Programs (\$ in Millions)			FY 2016	FY 2017	FY 2018
<p>T/Q efforts will include transition of the Cost of Quality in Procurement project. An Agile Logistics for Acquisition and Regulated Materials Project will be initiated. Additionally, new efforts will begin to improve the acquisition of 3D technical data during provisioning and to assess the potential impact of a standards-based approach to simplify approval of substitute alloys. Additional new projects will be awarded as a result of collaborative planning efforts during FY16. Collaborative efforts will be continued with the Procurement and T/Q Process Owners and their teams to develop new projects for FY 2017 awards.</p> <p>Medical Processes will continue to execute projects that support ACCM. Additionally, a new project in Medical 3D Printing could be undertaken this year.</p> <p>Strategic Distribution and Disposition (SDD) will support the Distribution Modernization Program as necessary to identify, evaluate, and test disruptive technologies and continue with forklift battery projects in support of DLA Distribution.</p> <p>FY 2018 Plans: WSS will begin an initiative to work with DLA’s Center of Planning Excellence (CoPE) for co-experimentation and innovation to improve planning processes. WSS efforts initiated in FY17 will be continued or completed, and transition activities initiated where appropriate. Potential projects under development include Improving the Solicitation Process, Commercially available Parts, and Warfighter Impact-Based Parts Support.</p>					
Accomplishments/Planned Programs Subtotals			5.413	5.236	3.849
C. Other Program Funding Summary (\$ in Millions)					
N/A					
Remarks					
D. Acquisition Strategy					
N/A					
E. Performance Metrics					
40% of applicable projects (ex. non-studies) will transition.					

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Logistics Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 3					R-1 Program Element (Number/Name) PE 0603712S / Generic Logistics R&D Technology Demonstrations (Log R&D)				Project (Number/Name) 9 / Emergent Logistics R&D Requirements (formerly Innovative Products & Services for DLA Customers)			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
9: Emergent Logistics R&D Requirements (formerly Innovative Products & Services for DLA Customers)	0.000	6.209	3.404	2.700	-	2.700	2.776	2.868	2.948	3.009	Continuing	Continuing

A. Mission Description and Budget Item Justification

Emergent Logistics R&D Strategic Focus Area includes R&D efforts to develop new products and services for DLA customers. The Energy Roadmap helps to achieve the operational energy strategy goals of increasing sources of supply, developing and implementing alternative fuels under the Energy Readiness Program (ERP). The Supply Chain Management (SCM) Roadmap addresses emerging and out of cycle requirements that always occur and new products and services developed by DLA to include investments to qualify domestic, ultra-high modulus, carbon fiber material for Defense and National Security space systems in order to mitigate the supply chain costs and risks of this strategic material.

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2016	FY 2017	FY 2018
<div><div>Title: Emergent Logistics R&D Requirements</div><div><div>FY 2016 Accomplishments:</div><p>Supply Chain Management continued to fund the exploration of 2 areas, Additive Manufacturing and Sourcing Ultra High Modulus Carbon Fiber, to allow DLA to get a head start on the technological advantages it offers without disrupting ongoing programs. DLA Additive Manufacturing (AM) partnered with the Military Services to accelerate product realization methods for AM producing parts. For Ultra-High Modulus Carbon Fiber, DLA completed materials characterization and qualification of a domestically produced, ultra-high modulus, carbon fiber system for Defense and National Security space systems in order to mitigate the supply chain costs and risks of this strategic material.</p></div><div><div>ERP continued to focus on providing additional alternatives for military unique fuels, working with the Service customers to improve specifications and standards for fuel quality, engaging in modeling and simulation of the energy supply chain and identifying alternative energy sources for Military Customers.</div><div><div>FY 2017 Plans:</div><p>Supply Chain Management addresses the emerging technology opportunities that occur out of the budget cycle. This allows DLA to get a head start undertaking new technological advances without disrupting ongoing programs. In the past DLA R&D has been able to cut 12 to 24 months off the project starting lead-times. Saving the lead-time allows the Agency to begin to realize the</p></div></div></div>	6.209	3.404	2.700

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Logistics Agency		Date: May 2017	
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603712S / <i>Generic Logistics R&D Technology Demonstrations (Log R&D)</i>	Project (Number/Name) 9 / <i>Emergent Logistics R&D Requirements (formerly Innovative Products & Services for DLA Customers)</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
<p>benefits of implementing new technology sooner than would otherwise be the case and maintain continuity of funding and activity for baseline programs.</p> <p>DLA and the Military Services will identify lists of candidate parts for AM to be used for vendor solicitation. DLA R&D has established AM Memorandums of Agreement (MOA) with Naval Sea Systems Command (NAVSEA), Naval Air Systems Command (NAVAIR), and U.S. Army Research, Development and Engineering Command (RDECOM), and currently developing MOAs with Kansas City National Security Campus (KCNSC), Air Force Materiel Command (AFMC) and Marine Corps Systems Command (MARCORSYSCOM). These MOAs will allow the Agency to begin the transition of AM as a new alternative into its procurements activities.</p> <p>Energy Readiness will continue to focus on providing additional alternatives for military unique fuels, working with the Service customers to improve specifications and standards for fuel quality, engage in modeling and simulation of the energy supply chain and identifying alternative energy sources for Military Customers.</p> <p>FY 2018 Plans:</p> <p>SCM will continue to address the emerging technology opportunities that occur out of the budget cycle. This allows DLA to get a head start undertaking new technological advances without disrupting ongoing programs. In the past DLA R&D has been able to cut 12 to 24 months off the project starting lead-times. Saving the lead-time allows the Agency to begin to realize the benefits of implementing new technology sooner than would otherwise be the case and maintain continuity of funding and activity for baseline programs. Augmented reality is an emerging technology that has potential to advance to the forefront. Complete the Advanced Thermoelectric Technology project to improve the current thermoelectric heater technology so it is more fuel-efficient, has an increased heating range, reduced maintenance requirements, and a longer service life. The Advanced Thermoelectric Heater will replace the existing Space Heater Convective standard heaters currently stocked at DLA, and will provide DoD a single, versatile heater that reduces the logistics footprint and satisfies the space heating requirements of expeditionary forces.</p> <p>In FY18, the AM project will be funded under PE 0603680S / Manufacturing Technology Program (ManTech) Project 7 - Improving Industrial Base Manufacturing Processes (formerly Material Availability). This realignment will maintain continuity of funding and activity for this program.</p> <p>ERP will continue to focus on providing additional alternatives for military unique fuels, working with the Service customers to improve specifications and standards for fuel quality, engage in modeling and simulation of the energy supply chain and identifying alternative energy sources for Military Customers.</p>			
Accomplishments/Planned Programs Subtotals		6.209	3.404
			2.700

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Logistics Agency		Date: May 2017
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603712S / <i>Generic Logistics R&D Technology Demonstrations (Log R&D)</i>	Project (Number/Name) 9 / <i>Emergent Logistics R&D Requirements (formerly Innovative Products & Services for DLA Customers)</i>

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

40% of applicable projects (ex. non-studies) will transition

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Defense Logistics Agency	Date: May 2017
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Appropriation/Budget Activity	R-1 Program Element (Number/Name)											
0400: Research, Development, Test & Evaluation, Defense-Wide / BA 3: Advanced Technology Development (ATD)	PE 0603713S / Deployment and Distribution Enterprise Technology											
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	145.998	29.888	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	175.886
1: Capabilities Based Logistics	7.342	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	7.342
2: Deployment and Distribution Velocity Management	6.869	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	6.869
3: Cross Domain Intuitive Planning	2.408	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	2.408
4: End-to-End Visibility	6.639	0.400	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	7.039
5: Distribution Planning and Forecasting	8.504	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	8.504
6: Joint Transportation Interface	14.917	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	14.917
7: Distribution Protection/Safety/Security	15.135	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	15.135
8: Command and Control/Optimization/Modeling and Simulation	57.459	16.492	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	73.951
9: Cyber	5.780	5.436	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	11.216
10: Global Access	20.945	7.560	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	28.505

Note

NOTE: In FY 2017, PE 0603713S (BA3) Deployment and Distribution Enterprise Technology and PE 0603264S (BA3) Agile Transportation for the 21st Century Theater were transferred to a single PE in the Air Force budget (PE 0604776F) in order to support auditability, increase management efficiency, and reduce administrative actions.

A. Mission Description and Budget Item Justification

USTRANSCOM is tasked to provide globally integrated, agile deployment and distribution solutions as well as related enabling capabilities to support national security, force readiness and sustainability within an increasingly constrained defense budget. Unpredictable/extended global distribution routes, limited visibility of sustainment requirements, force packaging limitations, lift constraints, anti-access/area denial concerns, complex supply chains, as well as non-networked battlefield command and control, planning, and decision support tools impede timely customer logistical support. To project unimpeded global power and influence, USTRANSCOM must have access to relevant, real-time information, invest in enabling capabilities that contribute to mission success, ensure the viability of our capabilities, and implement a relevant transportation strategy. Effective knowledge sharing, decision support and transparency across the joint logistics enterprise, facilitated by secure enterprise-

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Defense Logistics Agency	Date: May 2017
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Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 3: Advanced Technology Development (ATD)</i>	R-1 Program Element (Number/Name) PE 0603713S / <i>Deployment and Distribution Enterprise Technology</i>
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wide visibility into logistical processes as well as the ability to effectively collaborate/operate in a contested cyberspace, is required to promote the effective/efficient/responsive global management of force projection and sustainment resources.

B. Program Change Summary (\$ in Millions)	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018 Base</u>	<u>FY 2018 OCO</u>	<u>FY 2018 Total</u>
Previous President's Budget	29.888	0.000	0.000	-	0.000
Current President's Budget	29.888	0.000	0.000	-	0.000
Total Adjustments	0.000	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			

Change Summary Explanation

NOTE: In FY 2017, PE 0603713S (BA3) Deployment and Distribution Enterprise Technology and PE 0603264S (BA3) Agile Transportation for the 21st Century Theater were transferred to a single PE in the Air Force budget (PE 0604776F) in order to support auditability, increase management efficiency, and reduce administrative actions.

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Logistics Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 3					R-1 Program Element (Number/Name) PE 0603713S / Deployment and Distribution Enterprise Technology				Project (Number/Name) 1 / Capabilities Based Logistics			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
1: Capabilities Based Logistics	7.342	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	7.342

Note

Projects 1-3, 5-7 repackaged into new Projects 8-10 starting in FY2013 per ASD (R&E) recommendation.

A. Mission Description and Budget Item Justification

The Department requires procedures and technologies which provide enterprise-level capabilities critical to the distribution system to improve performance of the end-to-end DOD supply chain in direct support of the full range of military operations. Ability to rapidly respond to customers' changing demands, with a reliably high level of service. These needs include: capabilities which enhance any supply or transportation mission (aeromedical, air refueling, joint logistics over-the-shore, and seabasing); analysis, tailoring and implementation of selected best enterprise-level practices from industry; and tools/procedures to optimize transportation plus supply (distribution) plans and schedules in support of an entire operation. This project addresses the required mission support to combatant commanders and other customers in the area of capability-based logistics.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018
Title: Capabilities Based Logistics	0.000	-	-
FY 2016 Accomplishments: N/A			
Accomplishments/Planned Programs Subtotals	0.000	-	-

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Critical enterprise-level distribution system capabilities to improve DOD supply chain performance. Plus focus on research and development to address warfighting requirements.

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Logistics Agency										Date: May 2017																		
Appropriation/Budget Activity 0400 / 3					R-1 Program Element (Number/Name) PE 0603713S / <i>Deployment and Distribution Enterprise Technology</i>				Project (Number/Name) 2 / <i>Deployment and Distribution Velocity Management</i>																			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost																
2: <i>Deployment and Distribution Velocity Management</i>	6.869	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	6.869																
<p>Note Projects 1-3, 5-7 repackaged into new Projects 8-10 starting in FY2013 per ASD (R&E) recommendation.</p> <p>A. Mission Description and Budget Item Justification DOD requires procedures/technologies targeted at optimizing throughput at the nodes and through the conduits of the deployment and distribution supply chains, from origin to point of use and return to include: inventory management enhancers (includes node cargo management/tracking); materiel handling innovations (including methods of reducing handling); improved physical access to nodes (includes aircraft all-weather visual systems); port throughput enhancements (includes in-port time reduction methods); and innovative delivery methods (for example, precision airlift, autonomous re-supply). This project addresses required mission support to combatant commanders and other customers of DOD's distribution and transportation systems in the area of deployment/distribution velocity management.</p> <p>B. Accomplishments/Planned Programs (\$ in Millions)</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td></td> <td align="center">FY 2016</td> <td align="center">FY 2017</td> <td align="center">FY 2018</td> </tr> <tr> <td>Title: Deployment and Distribution Velocity Management</td> <td align="center">0.000</td> <td align="center">-</td> <td align="center">-</td> </tr> <tr> <td>FY 2016 Accomplishments: N/A</td> <td></td> <td></td> <td></td> </tr> <tr> <td align="right">Accomplishments/Planned Programs Subtotals</td> <td align="center">0.000</td> <td align="center">-</td> <td align="center">-</td> </tr> </table> <p>C. Other Program Funding Summary (\$ in Millions) N/A</p> <p>Remarks</p> <p>D. Acquisition Strategy N/A</p> <p>E. Performance Metrics Increase force projection and sustainment velocity. Plus focus on research and development to address warfighting requirements.</p>														FY 2016	FY 2017	FY 2018	Title: Deployment and Distribution Velocity Management	0.000	-	-	FY 2016 Accomplishments: N/A				Accomplishments/Planned Programs Subtotals	0.000	-	-
	FY 2016	FY 2017	FY 2018																									
Title: Deployment and Distribution Velocity Management	0.000	-	-																									
FY 2016 Accomplishments: N/A																												
Accomplishments/Planned Programs Subtotals	0.000	-	-																									

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Logistics Agency										Date: May 2017																		
Appropriation/Budget Activity 0400 / 3					R-1 Program Element (Number/Name) PE 0603713S / Deployment and Distribution Enterprise Technology				Project (Number/Name) 3 / Cross Domain Intuitive Planning																			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost																
3: Cross Domain Intuitive Planning	2.408	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	2.408																
<p>Note Projects 1-3, 5-7 repackaged into new Projects 8-10 starting in FY2013 per ASD (R&E) recommendation.</p> <p>A. Mission Description and Budget Item Justification Procedures/technologies which improve decision-making and collaboration within the supply chain, from the planning stage to real-time execution and retrograde operations, without need for highly specialized operators of the tools. Projects in this area address following areas: decision support tools for any echelon of the supply chain or decision-maker, distribution process simulations and models for analysis and training, distribution demand forecasting/execution monitoring tools, on-line training, automated decision-maker support (e.g., queuing, alerting, recommended courses of action), automated status monitoring with information fusion and drilldown capability, and resilient C2 infrastructure capabilities. This project will provide required mission support to combatant commanders and other distribution/transportation customers in the area of collaborative planning/execution/information sharing/decision support tools.</p> <table border="1"> <tr> <td>B. Accomplishments/Planned Programs (\$ in Millions)</td> <td>FY 2016</td> <td>FY 2017</td> <td>FY 2018</td> </tr> <tr> <td>Title: Cross Domain Intuitive Planning</td> <td>0.000</td> <td>-</td> <td>-</td> </tr> <tr> <td>FY 2016 Accomplishments: N/A</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Accomplishments/Planned Programs Subtotals</td> <td>0.000</td> <td>-</td> <td>-</td> </tr> </table> <p>C. Other Program Funding Summary (\$ in Millions) N/A</p> <p>Remarks</p> <p>D. Acquisition Strategy N/A</p> <p>E. Performance Metrics Improve decision-making and collaboration within the supply chain and focus on research and development to address warfighting requirements.</p>													B. Accomplishments/Planned Programs (\$ in Millions)	FY 2016	FY 2017	FY 2018	Title: Cross Domain Intuitive Planning	0.000	-	-	FY 2016 Accomplishments: N/A				Accomplishments/Planned Programs Subtotals	0.000	-	-
B. Accomplishments/Planned Programs (\$ in Millions)	FY 2016	FY 2017	FY 2018																									
Title: Cross Domain Intuitive Planning	0.000	-	-																									
FY 2016 Accomplishments: N/A																												
Accomplishments/Planned Programs Subtotals	0.000	-	-																									

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Logistics Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 3					R-1 Program Element (Number/Name) PE 0603713S / <i>Deployment and Distribution Enterprise Technology</i>				Project (Number/Name) 4 / <i>End-to-End Visibility</i>			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
4: <i>End-to-End Visibility</i>	6.639	0.400	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	7.039

Note

NOTE: In FY 2017, PE 0603713S (BA3) Deployment and Distribution Enterprise Technology and PE 0603264S (BA3) Agile Transportation for the 21st Century Theater were transferred to a single PE in the Air Force budget (PE 0604776F) in order to support auditability, increase management efficiency, and reduce administrative actions.

A. Mission Description and Budget Item Justification

Enhanced end-to-end visibility of all aspects of power projection/sustainment spectrum is required to improve the effectiveness/efficiency of deployment/distribution/redeployment operations to ensure warfighter support and confidence. This requires investigation into next generation Automated Information Technology (AIT)/Total Asset Visibility (TAV) technologies and/or container security to improve end-to-end distribution visibility, enhance planning/execution, and transform sustainment operations. Includes the ability to determine immediate, reliable, and accurate shipment status through system access or event management. Develop an over-arching process/system architecture which will integrate existing and innovative new programs across the supply chain to provide complete In Transit Visibility (ITV) data, to include visibility of non-DoD cargo during humanitarian/disaster relief operations. The ability of USTRANSCOM to supply transportation support for homeland defense and/or disaster relief depends on effective ways to link with other governmental and civilian agencies. Additionally need to explore the many barriers across the Joint Deployment and Distribution Enterprise (JDDE), to include non-DoD government entities, coalition partners, non-government organizations, and commercial industry, which can create confusion/conflict or detract from the optimization of the JDDE.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018
Title: End-to-End Visibility	0.400	-	-
FY 2016 Accomplishments: Completed the development of an advanced predictive forecasting capability for better visibility and forecasting of Class IX (spare parts) demands, anticipated lift needs, and established / measured lift priorities in terms of the operational availability implications of those demands on planned military operations.			
Accomplishments/Planned Programs Subtotals	0.400	-	-

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Logistics Agency		Date: May 2017
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603713S / <i>Deployment and Distribution Enterprise Technology</i>	Project (Number/Name) 4 / <i>End-to-End Visibility</i>
E. Performance Metrics <p>Project performance metrics are specific to each effort and include measures identified in the metric project plans. Project completions/success are monitored against schedules and deliverables stated in the statements of work. >80% transition rate of proven technologies to increase force projection and sustainment velocity. Ability to enhance the effectiveness and efficiency of DoD logistics/supply chain operations.</p>		

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Logistics Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 3					R-1 Program Element (Number/Name) PE 0603713S / <i>Deployment and Distribution Enterprise Technology</i>				Project (Number/Name) 5 / <i>Distribution Planning and Forecasting</i>			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
5: <i>Distribution Planning and Forecasting</i>	8.504	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	8.504

Note
Projects 1-3, 5-7 repackaged into new Projects 8-10 starting in FY2013 per ASD (R&E) recommendation.

A. Mission Description and Budget Item Justification
There is a lack of collaborative distribution planning, based on an understanding of aggregated customer requirements, for optimizing the end-to-end distribution process. Planning, forecasting and collaboration are insufficiently advanced to fully synchronize people, processes and assets to execute planned operations. Automated tools should be able to dynamically analyze/predict demand and provide input to advanced distribution planning systems. Project investigates the need for flexible end-to-end enhanced modeling and simulation and collaborative decision support tools.

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2016	FY 2017	FY 2018
Title: Distribution Planning and Forecasting	0.000	-	-
FY 2016 Accomplishments: N/A			
Accomplishments/Planned Programs Subtotals	0.000	-	-

C. Other Program Funding Summary (\$ in Millions)
N/A

Remarks

D. Acquisition Strategy
N/A

E. Performance Metrics
Planning based on an understanding of customer requirements for optimizing the distribution process. Plus focus on research and development to address warfighting requirements.

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Logistics Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 3					R-1 Program Element (Number/Name) PE 0603713S / <i>Deployment and Distribution Enterprise Technology</i>				Project (Number/Name) 6 / <i>Joint Transportation Interface</i>			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
6: <i>Joint Transportation Interface</i>	14.917	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	14.917

Note

Projects 1-3, 5-7 repackaged into new Projects 8-10 starting in FY2013 per ASD (R&E) recommendation.

A. Mission Description and Budget Item Justification

Synchronizing strategic/theater delivery capabilities to meet increasingly dynamic customer needs. Transportation information exchange across the DOD is inhibited by the disparity of systems, differing data standards, and insufficient interfaces. Queries and retrieval of status and shipment information cannot be executed due to lack of connectivity between the various components of the supply chain. The ability to maintain situational awareness of movements at macro/micro (drill down) levels, with associated force and sustainment cargo on board; to track force packages progress, and rapidly determine the impact of any delays or changes to sailing progress and arrival at port of debarkation; and to conduct "what -if" impact assessment of possible changes to delivery asset's course, speed or departure/arrival information as it relates to force or force package delivery/impact of any change on the closure of force packages in theater is required. The ability of USTRANSCOM to supply transportation support for homeland defense and/or disaster relief depends on effective ways to link with other governmental and civilian agencies. Also need to explore the many barriers across the Joint Deployment and Distribution Enterprise (JDDE), to include non-DOD government entities, coalition partners, non-government organizations, and commercial industry, which can create confusion/conflict or detract from the optimization of the JDDE.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018
Title: Joint Transportation Interface	0.000	-	-
FY 2016 Accomplishments: N/A			
Accomplishments/Planned Programs Subtotals	0.000	-	-

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Synchronizing, through information exchange, strategic/theater delivery capabilities to meet warfighter needs. Plus focus on research and development to address warfighting requirements.

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Logistics Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 3					R-1 Program Element (Number/Name) PE 0603713S / <i>Deployment and Distribution Enterprise Technology</i>				Project (Number/Name) 7 / <i>Distribution Protection/Safety/Security</i>			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
7: <i>Distribution Protection/Safety/Security</i>	15.135	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	15.135

Note
Projects 1-3, 5-7 repackaged into new Projects 8-10 starting in FY2013 per ASD (R&E) recommendation.

A. Mission Description and Budget Item Justification
The Theater Commander has not always been able to provide the appropriate security in a timely manner during deployment. In some cases there are insufficient security assets to oversee convoy security in-country; therefore, all movement requirements are competing for the same limited resources. Additionally need to explore new, portable methods of detecting hazardous/asymmetric materials in very small quantities to support safe logistics operations. Also explore technologies to enhance the capability to deliver personnel/materiel to anti-access/austere airfields and seaports.

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2016	FY 2017	FY 2018
Title: Distribution Protection/Safety/Security	0.000	-	-
FY 2016 Accomplishments: N/A			
Accomplishments/Planned Programs Subtotals	0.000	-	-

C. Other Program Funding Summary (\$ in Millions)
N/A

Remarks

D. Acquisition Strategy
N/A

E. Performance Metrics
Providing the appropriate security in a timely manner during deployment and distribution operations. Plus focus on research and development to address warfighting requirements.

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Logistics Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 3					R-1 Program Element (Number/Name) PE 0603713S / <i>Deployment and Distribution Enterprise Technology</i>				Project (Number/Name) 8 / <i>Command and Control/Optimization/Modeling and Simulation</i>			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
8: <i>Command and Control/Optimization/Modeling and Simulation</i>	57.459	16.492	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	73.951

A. Mission Description and Budget Item Justification

Capabilities which improve deployment, distribution and supply chain decision-making/collaboration (e.g., planning stage to real-time execution/retrograde operations) without need for highly specialized operators. Projects in this area address the following: decision support tools, distribution process simulations/analytics, distribution demand forecasting/execution monitoring, training, automated decision-maker support (e.g., queuing, alerting, courses of action), automated status monitoring with information fusion to include drilldown capability, and resilient C2 infrastructure capabilities. Current planning/forecasting/collaboration capabilities do not permit full synchronization of people, processes and assets to execute planned operations. Automated tools must be able to dynamically analyze/predict demand and provide input to advanced distribution planning systems to include the capability for Combatant Commanders to manage theater transportation operations from the port of debarkation to the point of need. Transportation information exchange across the DOD is inhibited by disparate systems, multiple data standards and insufficient interfaces. The ability to rapidly determine the impact of any delays/changes and conduct "what -if" impact assessments on the closure of force packages is required. This project addresses the required mission support to combatant commanders and other customers in the area of C2, Optimization, and Modeling and Simulations.

B. Accomplishments/Planned Programs (\$ in Millions)

		FY 2016	FY 2017	FY 2018
Title: Command and Control/Optimization/Modeling and Simulation		16.492	0.000	-
FY 2016 Accomplishments: Began a comprehensive account of strategies, optional implementations & recommendations for enterprise-wide management of metadata. Continued the development of robust modeling solutions in the face of uncertainty, provided the capability to model detailed enhanced business rules without major "surgery" or software development, and provided the ability to utilize sub-network modeling to streamline the modeling and analysis process. Continued effort to provide ability to rapidly develop, assess, adapt, and execute plans in a dynamic environment. Continued partnership with Air Force Institute of Technology to develop Modeling and Simulation Decision Support technologies. Continued partnership with Lincoln Labs for information technology system integration and prototype development. Continued effort to increase shared awareness, operational agility and optimize the use of the active duty AR fleet, during the short notice planning process, from a worldwide/fleet-wide perspective, as well as providing the ability to plan, if desired, using allied/coalition/international AR aircraft to refuel DoD aircraft. Continued the effort to develop the ability to effectively and efficiently schedule missions from all known sources of airlift requirements. Completed effort to plan and executing theater distribution of fuel and water. Completed effort to identify ways, at military installation Entry Control Facilities, to reduce threat vehicle speeds and mitigate or defeat the threat through design changes. Completed effort to plan and executing theater distribution of fuel and water.				
FY 2017 Plans:				

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Logistics Agency		Date: May 2017	
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603713S / <i>Deployment and Distribution Enterprise Technology</i>	Project (Number/Name) 8 / <i>Command and Control/Optimization/Modeling and Simulation</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
NOTE: In FY 2017, PE 0603713S (BA3) Deployment and Distribution Enterprise Technology and PE 0603264S (BA3) Agile Transportation for the 21st Century Theater were transferred to a single PE in the Air Force budget (PE 0604776F) in order to support auditability, increase management efficiency, and reduce administrative actions.			
Accomplishments/Planned Programs Subtotals		16.492	0.000
C. Other Program Funding Summary (\$ in Millions) N/A			
Remarks			
D. Acquisition Strategy N/A			
E. Performance Metrics Project performance metrics are specific to each effort and include measures identified in the metric project plans. Project completions/success are monitored against schedules and deliverables stated in the statements of work. >80% transition rate of proven technologies to increase force projection and sustainment velocity. Ability to enhance the effectiveness and efficiency of DoD logistics/supply chain operations.			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Logistics Agency										Date: May 2017																		
Appropriation/Budget Activity 0400 / 3					R-1 Program Element (Number/Name) PE 0603713S / <i>Deployment and Distribution Enterprise Technology</i>				Project (Number/Name) 9 / <i>Cyber</i>																			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost																
9: <i>Cyber</i>	5.780	5.436	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	11.216																
<p>Note</p> <p>NOTE: In FY 2017, PE 0603713S (BA3) Deployment and Distribution Enterprise Technology and PE 0603264S (BA3) Agile Transportation for the 21st Century Theater were transferred to a single PE in the Air Force budget (PE 0604776F) in order to support auditability, increase management efficiency, and reduce administrative actions.</p> <p>A. Mission Description and Budget Item Justification</p> <p>USTRANSCOM requires mission assurance in a persuasive/dynamic cyber environment. USTRANSCOM requires the procedures/technologies to improve cyber surveillance and control of networks across multiple domains and the ability to continue critical network operations in contested unclassified and classified network environments. The Command also needs the ability to differentiate between valid/unauthorized users and determine/quantify the trustworthiness of hardware/software systems. Additionally must have the ability to rapidly analyze & correlate data regarding malicious activities, select/evoke real-time defense actuators, perform automated reasoning capabilities that address data quality issues, and the ability to rapidly return to a known/safe operating state.</p> <p>B. Accomplishments/Planned Programs (\$ in Millions)</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:75%;">Title: Cyber</td> <td align="right">FY 2016</td> <td align="right">FY 2017</td> <td align="right">FY 2018</td> </tr> <tr> <td>FY 2016 Accomplishments: Continued development of a prototype custom attribute solution with extensive documentation for open standards based identity providers. Continued effort to identify and tailor best business practices, process improvement, knowledge management, and technology transition to operationalize cyber security. Continued partnership with Massachusetts Institute of Technology Lincoln Labs in developing cyber secure enclave. Completed development and delivery of a set of services that will enable USTRANSCOM to recognize disruptive events or potential disruptive events, understand their impact, determine a response as well as choose and implement the response that best balances addressing the cyber threat while minimizing mission impact.</td> <td align="right">5.436</td> <td align="right">0.000</td> <td align="center">-</td> </tr> <tr> <td>FY 2017 Plans: NOTE: In FY 2017, PE 0603713S (BA3) Deployment and Distribution Enterprise Technology and PE 0603264S (BA3) Agile Transportation for the 21st Century Theater were transferred to a single PE in the Air Force budget (PE 0604776F) in order to support auditability, increase management efficiency, and reduce administrative actions.</td> <td></td> <td></td> <td></td> </tr> <tr> <td align="right">Accomplishments/Planned Programs Subtotals</td> <td align="right">5.436</td> <td align="right">0.000</td> <td align="center">-</td> </tr> </table> <p>C. Other Program Funding Summary (\$ in Millions) N/A</p>													Title: Cyber	FY 2016	FY 2017	FY 2018	FY 2016 Accomplishments: Continued development of a prototype custom attribute solution with extensive documentation for open standards based identity providers. Continued effort to identify and tailor best business practices, process improvement, knowledge management, and technology transition to operationalize cyber security. Continued partnership with Massachusetts Institute of Technology Lincoln Labs in developing cyber secure enclave. Completed development and delivery of a set of services that will enable USTRANSCOM to recognize disruptive events or potential disruptive events, understand their impact, determine a response as well as choose and implement the response that best balances addressing the cyber threat while minimizing mission impact.	5.436	0.000	-	FY 2017 Plans: NOTE: In FY 2017, PE 0603713S (BA3) Deployment and Distribution Enterprise Technology and PE 0603264S (BA3) Agile Transportation for the 21st Century Theater were transferred to a single PE in the Air Force budget (PE 0604776F) in order to support auditability, increase management efficiency, and reduce administrative actions.				Accomplishments/Planned Programs Subtotals	5.436	0.000	-
Title: Cyber	FY 2016	FY 2017	FY 2018																									
FY 2016 Accomplishments: Continued development of a prototype custom attribute solution with extensive documentation for open standards based identity providers. Continued effort to identify and tailor best business practices, process improvement, knowledge management, and technology transition to operationalize cyber security. Continued partnership with Massachusetts Institute of Technology Lincoln Labs in developing cyber secure enclave. Completed development and delivery of a set of services that will enable USTRANSCOM to recognize disruptive events or potential disruptive events, understand their impact, determine a response as well as choose and implement the response that best balances addressing the cyber threat while minimizing mission impact.	5.436	0.000	-																									
FY 2017 Plans: NOTE: In FY 2017, PE 0603713S (BA3) Deployment and Distribution Enterprise Technology and PE 0603264S (BA3) Agile Transportation for the 21st Century Theater were transferred to a single PE in the Air Force budget (PE 0604776F) in order to support auditability, increase management efficiency, and reduce administrative actions.																												
Accomplishments/Planned Programs Subtotals	5.436	0.000	-																									

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Logistics Agency		Date: May 2017
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603713S / <i>Deployment and Distribution Enterprise Technology</i>	Project (Number/Name) 9 / <i>Cyber</i>
C. Other Program Funding Summary (\$ in Millions)		
Remarks		
D. Acquisition Strategy N/A		
E. Performance Metrics Project performance metrics are specific to each effort and include measures identified in the metric project plans. Project completions/success are monitored against schedules and deliverables stated in the statements of work. >80% transition rate of proven technologies to increase force projection and sustainment velocity. Ability to enhance the effectiveness and efficiency of DoD logistics/supply chain operations.		

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Logistics Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 3					R-1 Program Element (Number/Name) PE 0603713S / <i>Deployment and Distribution Enterprise Technology</i>				Project (Number/Name) 10 / <i>Global Access</i>			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
10: <i>Global Access</i>	20.945	7.560	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	28.505
Note												
NOTE: In FY 2017, PE 0603713S (BA3) Deployment and Distribution Enterprise Technology and PE 0603264S (BA3) Agile Transportation for the 21st Century Theater were transferred to a single PE in the Air Force budget (PE 0604776F) in order to support auditability, increase management efficiency, and reduce administrative actions.												
A. Mission Description and Budget Item Justification												
DoD requires procedures/technologies targeted at optimizing throughput at the nodes as well as across the conduits of the deployment and distribution supply chains, from origin to point of use as well as return. Needed capabilities include inventory/cargo management, materiel handling innovations, improved physical node access, port throughput enhancements, innovative delivery methods (e.g., precision airlift, autonomous re-supply), and cargo/container security. This project addresses required mission support to combatant commanders and other customers of DoD's distribution and transportation systems in the area of deployment/distribution velocity management, manned/unmanned systems to the point of effect, and increased global reach in austere/anti-access environments.												
B. Accomplishments/Planned Programs (\$ in Millions)										FY 2016	FY 2017	FY 2018
Title: Global Access										7.560	0.000	-
FY 2016 Accomplishments: Began building a prototype modular petroleum pumping system that will provide a development path for Navy/USMC ship-to-shore technology. Began development and integration of Large Aircraft Infrared Countermeasures (LAIRCM) Enhanced Situational Awareness capability. Started development of a capability to rapidly assess degraded/damaged ports in strategic locations. Began effort to develop precision, on-demand air drop resupply of small units in remote/austere locations based on request from unit in need. Commenced effort to provide visual/guidance technologies to use when global positioning systems are not available. Completed development of an operational prototype real-time monitoring and display system of local wave/current/wind conditions. Completed effort to deliver an appliqué system that can be added onto currently fielded Rough Terrain Cargo Handlers. Completed effort to remotely access and retrieve containers and vehicles at sea.												
FY 2017 Plans: NOTE: In FY 2017, PE 0603713S (BA3) Deployment and Distribution Enterprise Technology and PE 0603264S (BA3) Agile Transportation for the 21st Century Theater were transferred to a single PE in the Air Force budget (PE 0604776F) in order to support auditability, increase management efficiency, and reduce administrative actions.												
Accomplishments/Planned Programs Subtotals										7.560	0.000	-

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Logistics Agency		Date: May 2017
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603713S / <i>Deployment and Distribution Enterprise Technology</i>	Project (Number/Name) 10 / <i>Global Access</i>
C. Other Program Funding Summary (\$ in Millions) N/A		
Remarks		
D. Acquisition Strategy N/A		
E. Performance Metrics Project performance metrics are specific to each effort and include measures identified in the metric project plans. Project completions/success are monitored against schedules and deliverables stated in the proposals and statements of work. >80% transition rate of proven technologies to increase force projection and sustainment velocity. Ability to enhance the effectiveness and efficiency of DoD logistics/supply chain operations.		

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Defense Logistics Agency **Date:** May 2017

Appropriation/Budget Activity 0400: Research, Development, Test & Evaluation, Defense-Wide / BA 3: Advanced Technology Development (ATD)					R-1 Program Element (Number/Name) PE 0603720S / Microelectronics Technology Development and Support (DMEA)							
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	305.434	86.832	97.826	219.803	-	219.803	99.734	101.218	102.613	104.699	Continuing	Continuing
1: <i>Technology Development</i>	179.009	37.659	44.912	133.074	-	133.074	46.971	47.886	48.789	49.785	Continuing	Continuing
2: <i>Trusted Foundry</i>	126.425	49.173	52.914	86.729	-	86.729	52.763	53.332	53.824	54.914	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Department has found it critical to National Security to maintain an ability to produce low volume State-of-the-Practice (SOTP) and legacy microelectronics that are unavailable from commercial foundries. The Defense Microelectronics Activity (DMEA) uniquely accomplishes this mission for the Department by providing a guaranteed and Trusted source of supply of microelectronics parts that are essential to combat operations. In addition DMEA provides the rare technology capability to bridge the gap between research and application allowing DMEA to develop, manage and implement innovative microelectronic solutions to enhance mission capability.

This is a critical capability in an atmosphere of diminishing domestic semiconductor manufacturing capability and increasing worldwide supply chain risks with threats to defense microelectronics. These threats include counterfeiting, Trojan horses, specific reliability issues in military environments and rapid obsolescence coming from an unpredictable and unsecured supply chain. As fiscal pressures force the Department to maintain its weapon systems longer than originally planned, their extended combat use increases attrition and the need for DMEA's unique capabilities increases.

Microelectronics is a crucial technology and central for all operations within the Department. Yet, as vital as this technology is to Department operations, the defense market represents less than 0.1% share of the total global semiconductor market. The Department frequently requires low volume SOTP and legacy microelectronics long after commercial foundries have moved on to advanced technology levels. As such, the semiconductor industry does not respond to the Department's particular needs of low volumes, long availability time frames, or its high-level security concerns. To meet these requirements, DMEA procures commercial licenses to organically produce semiconductor technologies that are no longer commercially manufactured or are unavailable due to no-bids owing to low volume requirements. These licenses enable DMEA to be the Department's microelectronics supplier of last resort, providing the Department with a long-term, trusted, and guaranteed source of these critical parts.

DMEA provides increasingly rare microelectronics design and fabrication expertise to ensure that the Department can field systems capable of ensuring technological superiority over potential adversaries. DMEA provides decisive, quick turn solutions for defense, intelligence, special operations, cyber and combat missions as well as microelectronic components that are unobtainable in the commercial market. DMEA's knowledge of varying military requirements across a broad and diverse range of combatant environments and missions – along with its unique technical perspective – allows it to develop, manage and implement novel microelectronic solutions to enhance mission capability. DMEA then uses these cutting-edge technology capabilities and products in the solutions it develops for its military clientele. After many years of performing analogous efforts, the technical experience, mission knowledge, and practical judgment that are gained from preceding efforts are incorporated into subsequent technology maturation projects. DMEA's capabilities make it a key tool in the intelligent and rapid development and application of advanced technologies to identified military needs.

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Defense Logistics Agency **Date:** May 2017

Appropriation/Budget Activity 0400: Research, Development, Test & Evaluation, Defense-Wide / BA 3: Advanced Technology Development (ATD)	R-1 Program Element (Number/Name) PE 0603720S / Microelectronics Technology Development and Support (DMEA)
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Working alongside industry, DMEA has created a model partnership that provides this capability for the Department. DMEA's uniquely flexible foundry supports the Department with a wide variety of integrated circuits using various processes that were developed by commercial manufacturers and which are now guaranteed to remain in one location for as long as they are needed. To obtain these processes, DMEA works closely with U.S. semiconductor industry partners to acquire process licenses.

These Government-held licenses allow for the transfer to DMEA of industry-developed intellectual property (IP) and the related processes for Department needs. These licenses ensure no commercial conflicts by including industry's right to bid first on resulting production volumes. DMEA always looks to industry first to see if it can provide the required components. If industry cannot or will not, only then does DMEA provide the necessary prototypes and low volume production order. A critical element required to make this business model work effectively is protection of the industry partners' valuable IP and processes. DMEA is Government owned and operated, providing the structure and confidence necessary in an industry partner to ensure them that their IP is protected from potential competitors. This strategic and cooperative industry partnership approach allows DMEA to use industry-developed IP and processes by acquiring, installing, and applying them toward meeting the immediate and long-term needs of the Department. This unique capability is essential to all major weapon systems, combat operations, and support needs. As such, DMEA serves the Department, other US Agencies, industry and Allied nations.

DMEA assists hundreds of Department programs every year. DMEA has provided its specialized engineering assistance and capabilities to older systems, current systems, and even to programs not yet in the production phase. This includes the Counter-Rocket, Artillery, and Mortar (C-RAM) System, F-18 Super Hornet, F-22 Raptor, F-35, RQ-4 Global Hawk, MQ-9 Reaper, AEGIS Advanced Surface Missile System, Advanced Medium-Range Air-to-Air Missile (AMRAAM), HH-60G Pave Hawk Helicopter, Evolved Sea Sparrow Missile (ESSM), among many other programs. DMEA assists the Combatant Commands (COCOMs) including Special Ops, Cyber, Intelligence, and the Radiation-Hard communities.

B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	89.038	97.826	98.694	-	98.694
Current President's Budget	86.832	97.826	219.803	-	219.803
Total Adjustments	-2.206	0.000	121.109	-	121.109
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-2.206	-			
• Pay Increase Adjustment	-	-	0.109	-	0.109
• Program Increase	-	-	121.000	-	121.000

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Defense Logistics Agency		Date: May 2017	
Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 3: Advanced Technology Development (ATD)</i>		R-1 Program Element (Number/Name) PE 0603720S / <i>Microelectronics Technology Development and Support (DMEA)</i>	
<u>Congressional Add Details (\$ in Millions, and Includes General Reductions)</u>		FY 2016	FY 2017
Project: 2: <i>Trusted Foundry</i>			
Congressional Add: <i>Trusted Source Implementation of Field Programmable Gate Arrays Study</i>		10.000	-
Congressional Add Subtotals for Project: 2		10.000	-
Congressional Add Totals for all Projects		10.000	-
<u>Change Summary Explanation</u>			
A full-year FY 2017 appropriation for this account was not enacted at the time the budget was prepared; therefore, the budget assumes this account is operating under the Continuing Appropriations Resolution, 2017 (P.L. 114-254). The amounts included for 2017 reflect the annualized level provided by the continuing resolution. BASE: FY17PB (\$97.826M) + Request for Additional Appropriations (\$0.000M).			
PB18 program increase for the top four FY2018 microelectronics initiatives, including access to the GlobalFoundries 14 nm foundry, development of secure chip design environments, procurement of foundry process intellectual property, and assured field-programmable gate arrays.			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Logistics Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 3					R-1 Program Element (Number/Name) PE 0603720S / Microelectronics Technology Development and Support (DMEA)				Project (Number/Name) 1 / Technology Development			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
1: Technology Development	179.009	37.659	44.912	133.074	-	133.074	46.971	47.886	48.789	49.785	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Technology Development funds provide DMEA with the core resources to execute its primary mission of providing an in-house ability to quickly develop and execute appropriate solutions to keep a weapon system operational, elevate its sophistication level or to meet new threats. These solutions use high mix, low volume, unique microelectronics that are endemic to military requirements but are not commercially available. These funds provide for the development and support necessary to ensure rapid prototyping, insertion, and support of microelectronics technologies into fielded systems, particularly as the technologies advance. DMEA maintains critical microelectronics design and fabrication skills to ensure that the Department is provided with systems capable of ensuring technological superiority over potential adversaries. DMEA provides an in-house capability to support these strategically important microelectronics technologies within the Department with distinctive resources to meet the Department's requirements across the entire spectrum of technology development, acquisition, and long-term support. This includes producing components to meet the Department's requirements for ultra-low volume, an extended availability timeframe, and a trusted, guaranteed and secure supply of microelectronics. These funds provide basic infrastructure upgrades as well as an in-house technical staff of skilled and experienced microelectronics personnel working in state-of-the-practice facilities providing technical and application engineering support for the implementation of advanced microelectronics research technologies from inspection and analysis through design, fabrication, test, assembly, integration and installation. These funds also provide for the recapitalization and modernization of aging microelectronic infrastructure, acquisition and implementation of design and test tools, the development of advanced techniques to inspect and analyze circuits, the adaptation of tools and processes to detect increasingly sophisticated counterfeit microelectronics in the defense supply chain, and the incorporation of the process technologies that are necessary to keep pace with the needs of the Department as weapon system support requirements migrate toward current state-of-the-art technologies. DMEA's capabilities make it a key resource in the intelligent and rapid application of advanced technologies to add needed performance enhancements in response to the newest asymmetric threats and to modernize aging weapon systems. DMEA designs, develops, and supports vital classified assets for ongoing and time-sensitive specialized intelligence operations and missions of the Department and the Special Operations Commands.

Today's weapon systems experience extended field operations and are required to remain in service beyond planned replacement schedules, driving the need for growth in DMEA's unique capabilities. This need, along with the continual contraction of commercial resources, makes DMEA the only available resource allowing many systems to remain operational. As such, DMEA and its capability are considered a National Critical Asset.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018
Title: Technology Development Accomplishments/Plans	37.659	44.912	133.074
FY 2016 Accomplishments: DMEA designed, developed, and demonstrated microelectronics concepts, advanced technologies, and applications to solve operational problems. DMEA applied advanced technologies to add performance enhancements in response to the newest asymmetric threats and to modernize aging weapon systems. In FY16 DMEA worked 256 tasks (Army 24%, Navy/Marines 27%, AF 33%, Other DoD 11%, and Non-DoD 5%) totaling \$1.29B and resulting in over \$540M of cost avoidance/savings. Examples			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Logistics Agency			Date: May 2017		
Appropriation/Budget Activity 0400 / 3		R-1 Program Element (Number/Name) PE 0603720S / Microelectronics Technology Development and Support (DMEA)	Project (Number/Name) 1 / Technology Development		
B. Accomplishments/Planned Programs (\$ in Millions)			FY 2016	FY 2017	FY 2018
of cost avoidance include \$106M for the C-5 Data Transfer Device, \$200M for the Counter-Rocket, Artillery and Mortar System and \$40M for the HH-60G Pave Hawk Helicopter. In keeping with the rapid pace of microelectronics technology, DMEA continued the process of extending its fabrication capability to smaller node sizes. DMEA started installation of the cleanroom in the 200mm facility.					
FY 2017 Plans: DMEA will continue to design, develop, and demonstrate microelectronics concepts, advanced technologies, and applications to solve operational problems. DMEA will apply advanced technologies to add performance enhancements in response to the newest asymmetric threats and to modernize aging weapon systems. The increased missions seen in the last several years by Combatant Commands (CCMDs) and Special Operations have caused those organizations to dramatically increase their demands for DMEA’s unique capability to provide quick technical solutions to immediate operational needs. To meet these increases, DMEA will continue to add capacity and capability by recapitalizing and modernizing aging microelectronic infrastructure, continue the installation of the cleanroom in the 200mm facility, extend and upgrade process IP, develop advanced techniques to inspect and analyze circuits, and adapt tools and processes to detect increasingly sophisticated counterfeit microelectronics. DMEA estimates it will work over 260 tasks in 2017 valued at approximately \$1.5B. The anticipated distribution by Component is Army 28%, Navy/Marines 27%, AF 33%, Other DoD 10%, and non-DoD 3%.					
FY 2018 Plans: DMEA will continue to design, develop, and demonstrate microelectronics concepts, advanced technologies, and applications to solve operational problems. DMEA will apply advanced technologies to add performance enhancements in response to the newest asymmetric threats and to modernize aging weapon systems. The increased missions seen in the last several years by Combatant Commands (CCMDs) and Special Operations have caused those organizations to dramatically increase their demands for DMEA’s unique capability to provide quick technical solutions to immediate operational needs. To meet these increases, DMEA will continue to add capacity and capability by recapitalizing and modernizing aging microelectronic infrastructure, extending and upgrading process IP, developing advanced techniques to inspect and analyze circuits, and adapting tools and processes to detect increasingly sophisticated counterfeit microelectronics to ensure a secure supply chain, all to meet quick turn solutions on which CCMDs and Special Operations can rely. DMEA will complete installation of the cleanroom in the 200mm facility, and will begin installation of semiconductor fabrication equipment in the completed cleanroom.					
Accomplishments/Planned Programs Subtotals			37.659	44.912	133.074
C. Other Program Funding Summary (\$ in Millions)					
N/A					
Remarks					
N/A					

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Logistics Agency		Date: May 2017
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603720S / <i>Microelectronics Technology Development and Support (DMEA)</i>	Project (Number/Name) 1 / <i>Technology Development</i>
D. Acquisition Strategy N/A		
E. Performance Metrics N/A		

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Logistics Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 3					R-1 Program Element (Number/Name) PE 0603720S / Microelectronics Technology Development and Support (DMEA)				Project (Number/Name) 2 / Trusted Foundry			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
2: Trusted Foundry	126.425	49.173	52.914	86.729	-	86.729	52.763	53.332	53.824	54.914	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Department and the National Security Agency (NSA) require uninterrupted access to state-of-the-art design and manufacturing processes to produce custom integrated circuits designed specifically for military purposes. Under DODI 5200.44, Application Specific Integrated Circuits (ASICs) in critical/essential systems must be procured from Trusted sources in order to avoid tampered or sabotaged parts. Worldwide competition from foreign, state-subsidized manufacturing facilities continues to greatly reduce the number of U.S. semiconductor fabrication facilities that might be Trusted sources. The prevalence of sophisticated offshore design and manufacturing facilities with economic incentives of state subsidies have resulted in the outsourcing of electronics component and integrated circuit services to these offshore facilities. This production capability is of increasing importance as domestic semiconductor manufacturing resources continue to decline, especially in the scarce domestic production capacity of high performance and state-of-the-art semiconductor technologies as illustrated by the recent acquisition of IBM's semiconductor manufacturing capability by GlobalFoundries. This acquisition, caused by economic pressures, has again highlighted the fact that commercial sources of microelectronics remain inherently unpredictable and constitute a continued supply chain risk regardless of Government investment. This trend threatens the integrity and worldwide leadership of the U.S. semiconductor industry by eliminating many domestic suppliers and reducing access to Trusted fabrication sources for advanced technologies. This trend is of acute concern to the defense and intelligence communities. Secure communications and cryptographic applications, among other areas of defense interest, depend heavily upon high performance semiconductors where a generation of improvement can translate into a significant force multiplier and capability advantage. Important defense technology investments and demonstrations carry size, weight, power, and performance goals that can only be met through the use of the most sophisticated semiconductors.

The Trusted Microelectronics program provides the Department with access to the Trusted state-of-the-art microelectronics design and manufacturing capabilities necessary to meet their confidentiality, integrity, availability, performance and delivery needs. The program also provides the Services with a competitive cadre of accredited Trusted suppliers that can meet the needs of their mission critical/essential systems for Trusted integrated circuit components. The Trusted Access Program Office has contracted with commercial sources to satisfy state-of-the-art semiconductor requirements. DMEA will focus on fostering all viable alternatives to continue the vital supply of Trusted and assured microelectronics, including the work of the DMEA Trusted Access Program Office with commercial state-of-the-art industry. It is imperative for a wide range of technologies in ongoing and future Department systems that access to Trusted suppliers continues. Most importantly, Trusted Microelectronics access is absolutely necessary to meet secure communication and cryptographic needs requiring state-of-the-art semiconductor technologies.

B. Accomplishments/Planned Programs (\$ in Millions)

Title: Trusted Foundry	FY 2016	FY 2017	FY 2018
	39.173	52.914	86.729
FY 2016 Accomplishments:			
Completed the transition of Trusted Access Program Office responsibility from NSA to DMEA, including the award of key contracts to ensure uninterrupted Trusted access to state-of-the-art semiconductor technology. Enhanced the cadre of trusted suppliers for the critical trusted components and services needed for appropriate defense systems. Enhanced Trusted Microelectronics			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Logistics Agency			Date: May 2017		
Appropriation/Budget Activity 0400 / 3		R-1 Program Element (Number/Name) PE 0603720S / <i>Microelectronics Technology Development and Support (DMEA)</i>		Project (Number/Name) 2 / <i>Trusted Foundry</i>	
B. Accomplishments/Planned Programs (\$ in Millions)			FY 2016	FY 2017	FY 2018
products to include newly available leading edge technologies and other key specialty processes required by Department programs. Expanded a line of trusted catalog components that can be purchased by Defense contractors. Continued activities to ensure the Department has Trusted Access to leading edge semiconductor technologies. Continued the development of a capability for the inspection and analysis of application-specific integrated circuits (ASICs) and refined the utilized methods for efficiency, accuracy, and applicability to multiple processes.					
FY 2017 Plans: Continue facilitating the availability of Trusted state-of-the-art semiconductor technology to DoD weapon system programs and research organizations through the DMEA Trusted Access Program office contracts. Continue the development of new capabilities for the inspection and analysis of application-specific integrated circuits (ASICs) and continuously refine the utilized methods for efficiency, accuracy, and applicability to multiple processes. Enhance the cadre of trusted suppliers for the critical trusted components and services needed for appropriate defense systems. Enhance Trusted Microelectronics products to include newly available leading edge technologies and other key specialty processes required by Department programs. Expand a line of trusted catalog components that can be purchased by Defense contractors. Continue activities that ensure the Department has Trusted Access to leading edge semiconductor technologies. Continue efforts to facilitate the availability of Trusted field-programmable gate arrays (FPGAs), and complete related technology development efforts. Continue the development of a capability for the inspection and analysis of application-specific integrated circuits (ASICs) and refined the utilized methods for efficiency, accuracy, and applicability to multiple processes.					
FY 2018 Plans: Continue facilitating the availability of Trusted state-of-the-art semiconductor technology to DoD weapon system programs and research organizations through the DMEA Trusted Access Program office contracts. Enhance the cadre of trusted suppliers for the critical trusted components and services needed for appropriate defense systems. Enhance Trusted Microelectronics products to include newly available leading edge technologies and other key specialty processes required by Department programs. Expand a line of trusted catalog components that can be purchased by Defense contractors. Continue activities that ensure the Department has Trusted Access to leading edge semiconductor technologies. Continue the development of a capability for the inspection and analysis of application-specific integrated circuits (ASICs) and continuously refine the utilized methods for efficiency, accuracy, and applicability to multiple processes.					
Accomplishments/Planned Programs Subtotals			39.173	52.914	86.729
			FY 2016	FY 2017	
Congressional Add: Trusted Source Implementation of Field Programmable Gate Arrays Study			10.000	-	

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Logistics Agency		Date: May 2017									
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603720S / <i>Microelectronics Technology Development and Support (DMEA)</i>	Project (Number/Name) 2 / <i>Trusted Foundry</i>									
		<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%;"></td> <td style="width:25%; text-align: center;">FY 2016</td> <td style="width:25%; text-align: center;">FY 2017</td> </tr> <tr> <td> <i>FY 2016 Accomplishments:</i> DMEA began implementation of promising aspects from the Trusted Field Programmable Gate Arrays (FPGAs) Study to further efforts to produce an FPGA in an acceptable Trusted manufacturing flow. </td> <td></td> <td></td> </tr> <tr> <td align="right">Congressional Adds Subtotals</td> <td align="center">10.000</td> <td align="center">-</td> </tr> </table>		FY 2016	FY 2017	<i>FY 2016 Accomplishments:</i> DMEA began implementation of promising aspects from the Trusted Field Programmable Gate Arrays (FPGAs) Study to further efforts to produce an FPGA in an acceptable Trusted manufacturing flow.			Congressional Adds Subtotals	10.000	-
	FY 2016	FY 2017									
<i>FY 2016 Accomplishments:</i> DMEA began implementation of promising aspects from the Trusted Field Programmable Gate Arrays (FPGAs) Study to further efforts to produce an FPGA in an acceptable Trusted manufacturing flow.											
Congressional Adds Subtotals	10.000	-									
<u>C. Other Program Funding Summary (\$ in Millions)</u> N/A											
<u>Remarks</u> N/A											
<u>D. Acquisition Strategy</u> N/A											
<u>E. Performance Metrics</u> N/A											

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Defense Logistics Agency	Date: May 2017
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Appropriation/Budget Activity	R-1 Program Element (Number/Name)											
0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 5: System Development & Demonstration (SDD)</i>	PE 0605070S / DoD Enterprise Systems Development and Demonstration											
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	76.178	11.501	5.660	6.266	-	6.266	3.200	2.400	1.500	0.750	Continuing	Continuing
4: <i>Defense Information System for Security (DISS)</i>	62.020	8.299	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	70.319
9: <i>Enterprise Funds Distribution (EFD)</i>	14.158	3.202	5.660	6.266	-	6.266	3.200	2.400	1.500	0.750	Continuing	Continuing
11: <i>Next Generation Resource Management System (NGRMS)</i>	0.000	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	0.000

A. Mission Description and Budget Item Justification

The mission of the DoD Enterprise Business Systems (DEBS) is to coordinate and enable business transformation efforts across the Department of Defense (DoD). The DLA recognizes that DoD's business enterprise must be closer to its warfighting customers than ever before. Joint military requirements drive the need for greater commonality and integration of business and financial operations.

B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	11.912	12.631	12.639	-	12.639
Current President's Budget	11.501	5.660	6.266	-	6.266
Total Adjustments	-0.411	-6.971	-6.373	-	-6.373
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.411	-			
• EFD Phase II Development & Deployment	-	-	0.620	-	0.620
• PB17 Amended Program Increase	-	1.860	-	-	-
• NGRMS Sunset	-	-8.831	-8.853	-	-8.853
• PB18 Program Increase - EFD	-	-	1.860	-	1.860

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Defense Logistics Agency		Date: May 2017
Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 5: System Development & Demonstration (SDD)</i>		R-1 Program Element (Number/Name) PE 0605070S / <i>DoD Enterprise Systems Development and Demonstration</i>
Change Summary Explanation <p>A full-year FY 2017 appropriation for this account was not enacted at the time the budget was prepared; therefore, the budget assumes this account is operating under the Continuing Appropriations Resolution, 2017 (P.L. 114-254). The amounts included for 2017 reflect the annualized level provided by the continuing resolution.</p> <p>EFD Base: FY17PB (\$3.800M) + Request for Additional Appropriations (\$1.860M required to address emergency warfighter readiness. Funds are in support of the RDT&E Project Enterprise Funds Distribution (EFD) Phase 2 Design, Development, and Deployment. These funds are needed to ensure continued on time development and software upgrades for EFD capability, specifically the SFIS/GL requirements required by 30 September 2017 to support DOD Audit compliance mandate. Additionally, these funds are needed to ensure remaining Phase 2 requirements are designed/deployed on time to eliminate on going excessive parallel data entry operations required from the DOD EFD user community. Such operations jeopardize data integrity and negatively impact audit readiness preparation efforts.)</p> <p>NGRMS Base: FY17PB (\$8.831M) + Request for Additional Appropriations (-\$8.831M realigned for NGRMS from the Defense Logistics Agency to OSD to align funding with the program office for more efficient execution.)</p> <p>PB18 NGRMS was removed across the FYDP as the program has been fully sunsetted. Some of the NGRMS was omnibus reprogrammed to Enterprise Funds Distribution (EFD).</p>		

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Logistics Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 5					R-1 Program Element (Number/Name) PE 0605070S / DoD Enterprise Systems Development and Demonstration				Project (Number/Name) 4 / Defense Information System for Security (DISS)			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
4: Defense Information System for Security (DISS)	62.020	8.299	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	70.319
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Defense Information System for Security (DISS) is a systems solution that specifically addresses the security clearance and suitability adjudicative requirements of Section 3001 of Public Law 108-458, the Intelligence Reform and Terrorism Prevention Act of 2004 (IRTPA) and the Joint Reform Team's Security and Suitability Process Reform Strategic Framework as published in February 2010 which requires 90% of all clearances - whether Top Secret, Secret, or Confidential - to be completed within 60 days. The first 40 days is to complete the investigative phase and the remaining 20 days is to complete the adjudicative phase of the clearance review. In addition to national security clearance determinations, DISS supports Suitability and Homeland Security Presidential Directive 12 (HSPD-12) credentialing eligibility compliance across the Department of Defense (DoD). The DISS will electronically collect, review, and share relevant data, government-wide, as mandated by the IRTPA and, guided by relevant Executive Orders, Congress, and Government Accountability Office (GAO) recommendations, deliver and maintain an appropriately vetted world-class workforce.

The DISS is comprised of two key application components: the Case Adjudication Tracking System (CATS) and the Joint Verification System (JVS). Currently, CATS is deployed in multiple versions (V1-V3) at the DoD Central Adjudication Facility (CAF); whereas the CATS component of DISS will upgrade CATS (V1-V3) technology stack and consolidate capabilities into a single baseline in FY2017. CATS (V1-V3) are operational fulfilling the requirements to receive background investigations and adjudicate national security, suitability and HSPD12 credentialing eligibility determinations via electronic and human adjudication processes. Historically, CATS electronically rendered favorable adjudicative decisions for approximately 24% of Secret-level cases. New Tier 3 e-Adjudication business rules for access to Secret information were approved in September 2016. JVS will be used by the security management community to manage subject's access to information based on eligibility, communicate with the CAF, manage subject incidents, and additional subject details such as reporting, travel, and relationships. The DISS will incrementally deploy additional capabilities to address functionality gaps between DISS and the Joint Personnel Adjudication System (JPAS). DISS will enable consistent standards throughout the collateral DoD Personnel Security, Suitability and HSPD12 mission areas. CATS (V1-V3) instances and JPAS, once fully replaced by DISS, will be decommissioned. JPAS is projected to be decommissioned in FY2019 but this may be adjusted based upon DISS deployments.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018
Title: Defense Information System for Security (DISS)	8.299	-	-
Description: The DISS CATS has been designated as the DoD non-Intelligence Community IT system for case management and adjudications by the 10 April 2009 USD(I) memo "Designation of the DoD Case Management and Adjudication Systems." Currently, CATS processes over 500,000 cases annually; electronically producing favorable adjudicative decisions for approximately 24% of Secret level cases.			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Logistics Agency		Date: May 2017	
Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0605070S / DoD Enterprise Systems Development and Demonstration	Project (Number/Name) 4 / Defense Information System for Security (DISS)	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
<p>Further, the 3 May 2012 Deputy Secretary of Defense Memo "DoD Central Adjudication Facilities (CAF) Consolidation" consolidated all DoD CAF into one consolidated DoD CAF responsible for personnel security adjudicative functions as well as favorable Suitability and HSPD-12 adjudications. The DISS (CATS) is the DOD CAF's designated IT case management system.</p> <p>Achieving the above goals will significantly enhance the operational readiness of the national security community and the Federal government. It will decrease the time required to get an individual through the investigation process. It will strengthen and reinforce reciprocity throughout the federal community by eliminating redundant or incomplete investigations by standardizing adjudicative decisions and by making available to all agencies adjudicative determinations of the Federal government.</p> <p>FY 2016 Accomplishments:</p> <ul style="list-style-type: none"> • Completed Seaside, CA Phase I infrastructure build in preparation for Washington Headquarter Services (WHS) Go-Live • OPM tiered case ingest successfully tested across all Legacy CATS versions • Developed DISS Portal training artifacts • Received final draft DISS hierarchy structures for the Components and WHS • Completed End User Evaluation (EUE) • System categorized and security controls identified • The DISS System of Record Notice (SoRN) was promulgated 			
Accomplishments/Planned Programs Subtotals		8.299	-
C. Other Program Funding Summary (\$ in Millions)			
N/A			
Remarks			
D. Acquisition Strategy			
<p>On May 09, 2013, the DISS CATS received a Full Deployment (FD) Acquisition Decision Memorandum (ADM) which acknowledged that CATS was operationally fielded at the five adjudication facilities and authorized the DISS PMO to enhance and field a consolidated CATS (CATS v4) and its associated portal in order to improve the lifecycle management of the CATS by consolidating the existing CATS applications into a consolidated CATS application that uses a single database. The July 11, 2014 "DISS Acquisition Strategy Revision Acquisition Decision Memorandum" revised the DISS acquisition strategy to field the remaining JVS capability not contained in the CATS. The JVS Milestone B Acquisition Decision Memorandum (ADM) was signed in FY15 Q2 and this initiated the Engineering Development phase in which the program will refine system requirements, configure the software, build functionality, conduct developmental testing, and plan for operational testing. These activities will continue until a Full Deployment Decision (FDD) is made.</p>			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Logistics Agency		Date: May 2017
Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0605070S / <i>DoD Enterprise Systems Development and Demonstration</i>	Project (Number/Name) 4 / <i>Defense Information System for Security (DISS)</i>
<p>The DISS PMO is responsible for program execution and will employ contract types as directed by the agency contracts policies in order to support the delivery and sustainment of the DISS Capabilities. DISS development contractors employ an agile development methodology to allow for a flexible approach that incorporates user requirements and feedback throughout the development lifecycle while meeting delivery requirements as prescribed by the associated development contract. The Agile development methodology allows for the fielding of incremental capabilities IAW the program's acquisition approach.</p> <p><u>E. Performance Metrics</u> N / A</p>		

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Logistics Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 5					R-1 Program Element (Number/Name) PE 0605070S / DoD Enterprise Systems Development and Demonstration				Project (Number/Name) 9 / Enterprise Funds Distribution (EFD)			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
9: Enterprise Funds Distribution (EFD)	14.158	3.202	5.660	6.266	-	6.266	3.200	2.400	1.500	0.750	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Enterprise Funds Distribution (EFD) is a multi-service/multi-agency solution established as a key initiative to provide full visibility of funds distributed through echelon I and II for the Military Departments and at all levels for the Defense Agencies to improve and modernize the OUSD(C) funds distribution process. Funds distribution by its nature is a key enabler of financial visibility within DoD enterprise systems. The concept of a fully visible enterprise funds distribution process serves as a reference where planned and coordinated funds development and execution takes place.

Within the current DoD environment, progress has been made streamlining a diverse set of stove-piped budget execution and funds distribution processes and systems. Efforts continue to improve the visibility of funding information, eliminate manual efforts and undue complexities to the management of budget authority, and to eliminate impediments in the flow of funding documents. The current environment relies heavily on manual processing and on disconnected standalone systems for the processing of Funding Authorization Documents (FADs) and reprogramming actions. This environment made the implementation of internal controls difficult, negatively impacted the accuracy and timeliness of information while making the processes of integrating and obtaining management information arduous.

The envisioned operational environment solves these problems by enabling lifecycle program value management in a web-based application utilizing an authoritative database with single-source data entry and automated workflow. Capabilities within this integrated environment will enable the automation of all funds distribution and funds control processes within OUSD(C) using authoritative and highly visible data. Specifically, capabilities include managing apportionments, distributing budget authority to the Military Departments and Defense Agencies, managing rescissions and continuing resolutions, creating and tracking reprogramming actions, and establishing program baselines and budget authority needed to support changes in funding priorities throughout the year.

The operational environment includes organizational elements down to the echelon II level responsible for managing DoD and Component appropriations operating in an unclassified environment. The web-based application provides pre-planning, apportionment, reprogramming, rescission, continuing resolution, reporting of enterprise-level funds control and distribution of appropriated funding.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018
Title: Enterprise Funds Distribution (EFD)	3.202	5.660	6.266
Description: EFD will distribute funds to the Military Departments and the Defense Agencies.			
FY 2016 Accomplishments:			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Logistics Agency		Date: May 2017		
Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0605070S / DoD Enterprise Systems Development and Demonstration	Project (Number/Name) 9 / Enterprise Funds Distribution (EFD)		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017	FY 2018
<ul style="list-style-type: none"> Implemented onto EFD the BRAC and non-general fund accounts (such as Special, Trust, Revolving, and Deposit funds). The efforts for implementation include requirements review, functional and technical analysis, system configuration/development, data conversion, and testing. Provided training to the end users who are responsible for the BRAC and non-general funds accounts. Conducted transition activities in preparation for DFAS to sustain the system. Converted the funding data for years prior to FY16 for the Defense Organizations that were implemented onto EFD as part of the Phase 2 efforts. Deployed Software upgrade Momentum 7.3 to current user base. <p>FY 2017 Plans:</p> <ul style="list-style-type: none"> Begin implementation of core EFD Phase 2 functionality and determine user group migration strategy. Determine strategy for development and deployment of remainder of requirements aligned with user group migration. . <p>FY 2018 Plans:</p> <ul style="list-style-type: none"> Continue development and deployment of EFD Phase 2 requirements based on user group migration strategy. 				
Accomplishments/Planned Programs Subtotals		3.202	5.660	6.266
C. Other Program Funding Summary (\$ in Millions)				
N/A				
Remarks				
D. Acquisition Strategy				
The EFD strategy is to use a "single acquisition to full capability," commercial-off-the-shelf (COTS) solution (Momentum software). The effort needed to ensure EFD is fully implemented for all appropriation data for the Military Services and Defense Organizations has led to a full deployment date of September 2016.				
E. Performance Metrics				
<ul style="list-style-type: none"> For performance, the objective is that 100% of the SFIS elements are SFIS compliant at FD. 				

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Logistics Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 5					R-1 Program Element (Number/Name) PE 0605070S / DoD Enterprise Systems Development and Demonstration				Project (Number/Name) 11 / Next Generation Resource Management System (NGRMS)			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
11: Next Generation Resource Management System (NGRMS)	0.000	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Department's budget focuses on institutionalizing and financing our capabilities to fight the wars we are in today and the scenarios we are most likely to face in the years ahead, while at the same time mitigating risk and providing for contingency operations. It also includes a fundamental overhaul of the DoD's approach to procurement, acquisition, and contracting. As such, the complex details of budgeting and tracking of funds become increasingly critical to senior leader decision making and to provide accountability to the taxpayer. Incorporating information technology toward current and emerging business processes manifesting into a state-of-the art system of systems will result in increasing efficiencies, timely diagnostics, and reducing lifecycle costs to maintain, sustain and repair.

Today, the Office of the Under Secretary of Defense Comptroller OUSD(C) and the Cost Analysis and Program Evaluation (CAPE) use various distinct automated systems (Comptroller Information System (CIS), Program Resource Collection Process (PRCP), Supplemental Resource Collection Process (SRCP), Budget Exhibits Generator and Standard Data Collection System (SDCS)) to formulate, justify, and execute DoD budgets. These six or more systems interact with at least several computer-based systems controlled by external organizations and agencies. These systems manage very similar financial information, yet each uses its own scheme for representing information. Much of the information managed by these systems is redundant. Cross-system data representations and redundancies make it difficult to exchange and to reconcile information. The capabilities provided by Comptroller systems, in some cases, fail to deliver services needed by its users, or fail to operate in ways that complement current and emerging business practices. They fail to give executives information in a comprehensible form, making it difficult to draw conclusions. Data disparities and functional redundancy make these systems more costly to maintain than they need to be.

There is a critical need for the development of a state-of-the-art information technology system to modernize and replace multiple, antiquated legacy systems and processes used to formulate, justify, present and defend the entire Department of Defense Budget in the Office of the Under Secretary of Defense (Comptroller) (OUSD(C)) to meet Title 10 and Title 31 mission and reporting requirements. The Comptroller's plan for mitigating the deficiencies and capability gaps associated with current systems is development of the Next Generation Resource Management System.

This initiative exploits emerging technology, processes, trends, capabilities, and techniques to incorporate state-of-the-art information technology enabling the ability, agility, and level of fidelity to collect, process, administer and report resource management data and to automate business processes within a more robust analytical environment within the Office of the Under Secretary of Defense (Comptroller) OUSD(C). Funded efforts will improve the timeliness of resource management reviews and decisions for senior leaders and Congress.

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2016	FY 2017	FY 2018
Title: Next Generation Resource Management Service (NGRMS)	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Logistics Agency		Date: May 2017	
Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0605070S / <i>DoD Enterprise Systems Development and Demonstration</i>	Project (Number/Name) 11 / <i>Next Generation Resource Management System (NGRMS)</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
<i>FY 2016 Accomplishments:</i> N/A. This program is currently being managed by OSD(C) and will be transferred to DLA in FY 2017.			
<i>FY 2017 Plans:</i> AMENDED BUDGET REQUEST JUSTIFICATION: FY17 OMNIBUS Reprogramming: -\$8.831 million is realigned for NGRMS from the Defense Logistics Agency to OSD to align funding with the program office for more efficient execution.			
<i>FY 2018 Plans:</i> Historical data migration from the legacy systems, development and deployment of integrated program budget submission capability (increment 2.0), and requirements development for increment 3.0			
Accomplishments/Planned Programs Subtotals		0.000	0.000
C. Other Program Funding Summary (\$ in Millions)			
N/A			
Remarks			
D. Acquisition Strategy			
Milestone C for Increment 2.0 3Q FY2017 Full Deployment Decision (FDD) for Increment 2.0 3Q FY2017 Increment 3.0 development and acceptance 3Q FY 2017 - 3Q FY 2018 Increment 4.0 development and acceptance 3Q FY 2018 – 2Q FY 2020			
E. Performance Metrics			
N/A.			

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Defense Logistics Agency	Date: May 2017
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Appropriation/Budget Activity 0400: Research, Development, Test & Evaluation, Defense-Wide / BA 5: System Development & Demonstration (SDD)	R-1 Program Element (Number/Name) PE 0605080S / Defense Agency Initiatives (DAI) - Financial System
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COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	79.757	30.568	30.457	24.436	-	24.436	40.300	2.899	1.923	25.567	Continuing	Continuing
1: Defense Agency Initiatives (DAI) - Financial System)	79.757	30.568	30.457	24.436	-	24.436	40.300	2.899	1.923	25.567	Continuing	Continuing

Program MDAP/MAIS Code:
Project MDAP/MAIS Code(s): 0491

A. Mission Description and Budget Item Justification

This program supports the Defense Agencies Initiative (DAI) Increment 2, an Acquisition Category I program. Previous funding for DAI, Increment 1, was documented in the Defense Enterprise Business Systems program element 0605070S, as well as, FY2013 4th Quarter Increment 2.

B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	31.660	26.657	3.836	-	3.836
Current President's Budget	30.568	30.457	24.436	-	24.436
Total Adjustments	-1.092	3.800	20.600	-	20.600
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-1.092	-			
• DAI Increment 3	-	-	20.600	-	20.600
• PB17 Amendment Increase	-	3.800	-	-	-

Change Summary Explanation

A full-year FY 2017 appropriation for this account was not enacted at the time the budget was prepared; therefore, the budget assumes this account is operating under the Continuing Appropriations Resolution, 2017 (P.L. 114-254). The amounts included for 2017 reflect the annualized level provided by the continuing resolution. Base: FY17PB (\$26.657M) + Request for Additional Appropriations (\$3.800M required to address emergency warfighter readiness. Funds are in support of the production environment for new agencies and meet the additional vendor software server requirements as DAI updates the other portions of the DAI Suite including, Operating system upgrade, Oracle Business Intelligence Enterprise Edition, and other applications/utilities to maintain currency with support. The increases will largely support Washington Headquarters Services and supported agencies. The data volume for WHS is roughly three times the volume of the largest DAI deployed agencies. Additionally, the growth in the number and size of attachments has resulted in higher storage requirements. This funding will also support additional equipment and services from Defense Information Systems Agency's Defense Enterprise Computing Center Ogden, UT.)

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Defense Logistics Agency		Date: May 2017
Appropriation/Budget Activity 0400: Research, Development, Test & Evaluation, Defense-Wide / BA 5: System Development & Demonstration (SDD)	R-1 Program Element (Number/Name) PE 0605080S / Defense Agency Initiatives (DAI) - Financial System	
PB18 increase in funding to complete development efforts.		

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Logistics Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 5					R-1 Program Element (Number/Name) PE 0605080S / Defense Agency Initiatives (DAI) - Financial System				Project (Number/Name) 1 / Defense Agency Initiatives (DAI) - Financial System			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
1: Defense Agency Initiatives (DAI) - Financial System	79.757	30.568	30.457	24.436	-	24.436	40.300	2.899	1.923	25.567	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
Project MDAP/MAIS Code: 0491												

A. Mission Description and Budget Item Justification

The DAI mission is to deliver auditable Chief Financial Officer (CFO) Act compliant business environments for Defense Agencies providing accurate, timely, authoritative financial data supporting the DoD goal of standardizing financial management practices improving financial decision support, and supporting audit readiness. Currently, Defense Agencies use more than 10 different non-compliant financial management systems supporting diverse operational functions and the warfighter in decision making and financial reporting. These disparate, non-integrated systems do not meet statutory requirements to produce timely, auditable reports.

The DAI program modernizes the Defense Agencies' financial management processes by streamlining financial management capabilities, addressing financial reporting material weaknesses, and supporting financial statement auditability for the majority of agencies and field activities across the DoD. DAI will support a transformation of budget, finance, and accounting processes across participating defense agencies to help improve the quality of financial information, supporting financial auditability and decision making. The DAI business solution, once implemented, will provide a near real-time, web-based system from a ".mil" environment of integrated business processes that will enable in excess of 84,000 Defense Agency financial managers, program managers, auditors, and Defense Finance and Accounting Service (DFAS) representatives to make sound financial business decisions.

The DAI implementation approach is to deploy a standardized system solution that is consistent with requirements in the Federal Financial Management Improvement Act (FFMIA) and the DoD Business Enterprise Architecture (BEA), while leveraging the out-of-the-box capabilities of the selected Commercial-Off-the-Shelf (COTS) product, Oracle e-Business Suite (EBS), Release 12.2.3 (R12). DAI implemented an Oracle Office of Management and Budget Financial Systems Integration Office (FSIO) qualified COTS financial management business solution with common business processes and data standards. The Program Management Office (PMO) will not develop any objects that are included in core COTS software or services (i.e. vendor data from Federal authoritative source).

DAI supports the 2014 Quadrennial Defense Review (QDR) Strategy 5, "Reform the business and support functions of the Defense enterprise". DAI is also aligned to the DOD Agency Strategic Fiscal Years 2015-2018, Goal 5: Reform and Reshape the Defense Institution, Key Strategic Initiative - Improving competitiveness through accountability and efficiency and SO 5.2: Improve financial processes, controls, and information via audit readiness. The objective of the DAI system is to achieve auditable, CFO Act compliant business environments for the Defense Agencies with accurate, timely, authoritative financial data.

The primary goal is to deploy a standardized system solution to improve overall financial management and comply with BEA, Standard Financial Information Structure (SFIS)/Standard Line of Accounting (SLOA), and Office of Federal Financial Management (OFFM) requirements. Common business functions within budget execution include the Department's BEA End to End (E2E) business processes: Cost Management; Budget to Report; Procure to Pay (P2P); Acquire to Retire (real property

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Logistics Agency		Date: May 2017
Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0605080S / Defense Agency Initiatives (DAI) - Financial System	Project (Number/Name) 1 / Defense Agency Initiatives (DAI) - Financial System
lifecycle accounting only); Hire to Retire (Time and Labor reporting only); and Order to Cash. Release (Rel) 1 provided an application upgrade to Oracle R12 along with (P2P) enhancements facilitating SFIS/SLOA compliance and automated Time and Labor absence management. Rel 2 introduced Grants Financial Management accounting and the start of a phased implementation of Governance, Risk and Compliance (GRC) capabilities. Future capabilities will support Rel 3 Direct Treasury Disbursing and Budget Formulation as well as Rel 4 Defense Working Capital Fund accounting, and Re-Sale Accounting (for Defense Commissary Agency (DeCA).		
DAI is currently implemented at 20 Defense Agencies and the Office of the Under Secretary of Defense, Comptroller, (OUSD(C)) (Time and Labor only) and supporting over 29,990 users. The program office is also responsible for operational sustainment of the system. Funds are required for additional government and contractor support, licenses, maintenance, and hardware to accomplish the remaining capability developments and organizational deployments, and initiate the annual Statement on Standards for Attestation Engagements No. 18 (SSAE 18) assertion packages.		
The benefits of DAI are: <ul style="list-style-type: none">• Common business processes and Enterprise data standards (i.e., SFIS and SLOA);• Access to real-time financial data transactions;• Significantly reduced data reconciliation requirements;• Enhanced analysis and decision support capabilities; and• Use of United States Standard General Ledger (USSGL) Chart of Accounts to resolve DoD material weaknesses and deficiencies.		
The DAI PMO completed the Oracle R12 application upgrade. The DAI PMO also provides system integration services that include: acquisition/financial management, project management; blueprinting; design, build, and unit test; developing required Reports, Interfaces, Conversions, Extensions, Forms and Workflows (RICE-FW) objects; testing (cyber security/information assurance, integration, functional, performance, conversion, user acceptance, operational); end-user training (train the trainer/change management preparing the users for the cross functional skills and awareness needed to perform well with an integrated enterprise resource planning system); system deployment; conversion; information assurance; sustainment; data service; help desk support; as well as studies and analysis support.		
DLA Information Operations provides the program executive officer, program manager and PMO staff. The DAI PMO relies on DLA Acquisition for most contracting. Defense Information Systems Agency (DISA) Defense Enterprise Computing Centers (DECCs) provide application, development and test as well as Continuity of Operations (COOP) hosting, Technical Contracting Office for development task orders, and the Joint Interoperability Test Command for Interoperability testing. While the DAI PMO serves as systems integrator, niche activities; i.e. P2P, development, are contracted.		
B. Accomplishments/Planned Programs (\$ in Millions)		
Title: Defense Agency Initiatives (DAI) - Financial System		
FY 2016 Accomplishments: In FY2016, the PMO will:		

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Logistics Agency			Date: May 2017		
Appropriation/Budget Activity 0400 / 5		R-1 Program Element (Number/Name) PE 0605080S / <i>Defense Agency Initiatives (DAI) - Financial System</i>		Project (Number/Name) 1 / <i>Defense Agency Initiatives (DAI) - Financial System</i>	
B. Accomplishments/Planned Programs (\$ in Millions)			FY 2016	FY 2017	FY 2018
<ul style="list-style-type: none"> • Conducted a service provider, independent audit, SSSAE 16 and support the Audit Readiness Office in developing service provider assertion packages supporting the SSAE 16 SOC 1 Report and resolve any Notification of Findings (NOFs). The DAI PMO will use the DECCs SSAE 16 SOC 1 Report as the basis for its input for the annual DLA SOC 1 Report that Agencies will use in their audits. DECCs maintain all the operations software and hardware in the suite. • Conducted BEA compliance assessment against the current version (v10.0 as of September 8, 2015), document results in the Department's Integrated Business Framework – Data Alignment Portal (IBF-DAP) portal and conduct Business Process Re-engineering for Rel 4 and October 2017 deploying Defense Agencies. • Resolved critical software errors and critical statutory/regulatory enhancements that impact operations and incorporate changes identified during BPR, BEA compliance assessment and the Audit generated corrective action plans. • Supported the DoD Information Assurance Certification and Accreditation Process (DIACAP)/ Risk Management Framework (RMF) process maintaining activity to support actions included in the DAA required POA&M including an independent FISCAM Test of Design/Test of Effectiveness. The submission package will result in a DAA decision to award an ATO. • Conducted testing to include: unit testing on developed items; monthly Rel testing that includes regression; annual Rel development testing that includes a SIT and UAT; Rel 3 developmental testing including a SIT and UAT; as well as an operational assessment event in conjunction with DOT&E following the annual Rel at using Defense Agencies. • Conducted contract renewal competitions and exercise options on existing contracts and monitor contractor performance and billing. • Deployed Rel 2 to some of the October 2017 deploying Defense Agencies' for Time and Labor. • Conducted October 2017 deploying Defense Agencies' implementation activities including data conversion, BPR and workforce preparation. • Continued the implementation of GRC capabilities delivered in Rel 2. • Developed Rel 3 Budget Formulation and Direct Treasury Disbursing capabilities, DAI Configuration Control Working Group (CCWG) approved changes and develop ability to send/receive the Department's Purchase Request and Procurement Data Standards (PRDS/PDS). • Conducted an annual Acquisition In-Process Review (IPR) with the MDA. • Oversaw the operations of the DISA DECCs at Ogden, UT (Production and T&D to include training) and Columbus, OH (COOP). The PMO operates database servers, application servers and web servers, leveraging the DECC for infrastructure support and host site related IA and internal controls. DECC services are governed by an annually negotiated Service Level Agreement (SLA). • Maintained currency with existing Federal, DFAS and target Enterprise systems including the System for Award Management (SAM) web services, as SAM assumes the functionality of the Federal Integrated Acquisition Environment (IAE) systems. • Maintained a sufficient Information Assurance/cybersecurity posture and support the DIACAP/ RMF process maintaining activity to support actions included in the Designated Approval Authority required actions included in the POA&M including maintaining currency of documentation in Enterprise Mission Assurance Support Service (EMASS) portal. This includes maintaining the operational and application software currency and security patches. 					

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Logistics Agency			Date: May 2017		
Appropriation/Budget Activity 0400 / 5		R-1 Program Element (Number/Name) PE 0605080S / Defense Agency Initiatives (DAI) - Financial System	Project (Number/Name) 1 / Defense Agency Initiatives (DAI) - Financial System		
B. Accomplishments/Planned Programs (\$ in Millions)			FY 2016	FY 2017	FY 2018
<div><ul style="list-style-type: none">• Maintained DAI master data leveraging feeds from the authoritative data sources.• Maintained the program's DODAF views in accordance with DLA guidance and in DLA systems.• Ensured sufficient administer all of the databases: production; T&D/training; and COOP.• Maintained the system configuration in accordance with the DLA J6 Enterprise Configuration Management Plan (ECMP) and DAI CCWG.• Maintained currency with functional policy with regard to function and data standards.• Maintained the technical side of the system including the internal processes and the operation of several interfaces with external systems leveraging DLA Transaction Services as well as established Federal Enterprise system web services.• Maintained and monitor user roles and responsibilities at the system level and guide using Agencies at the Component level.• Obtained an ATO and Interoperability Certification.<p>FY 2017 Plans:</p><p>In FY 2017, the DAI PMO will</p><ul style="list-style-type: none">• Deploy Rel 3 to current Defense Agencies and to full financial capabilities to Defense Security Cooperation Agency, DoD Inspector General, Director of Operational Test & Evaluation, Defense Information Systems Agency (General Fund) and Defense Human Resources Activity.• DAI PMO will develop Rel 4 Re-Sale Accounting and Defense Working Capital Fund accounting, work instructions, training materials as well as any necessary RICE-FW objects.• Conduct pre-Rel 4 deployment planning and BPR, with new Agencies, Rel 3 Agency mocks and Rel 4 SE technical reviews.• Conduct a service provider, independent audit, SSSAE 18 and support the Audit Readiness Office in developing service provider assertion packages supporting the SSAE 18 Service SOC 1 Report and resolve any identified NOFs.• The DAI PMO will use the DECCs SSAE 18 SOC 1 Report as the basis for its input for the annual DLA SOC 1 Report that Agencies will use in their audits. DECCs maintain all the operations software and hardware in the suite.• Conduct BEA compliance assessment against the current version (v10.0 as of September 8, 2015), document results in the Department's IBF-DAP portal and conduct Business Process Re-engineering for newly joining Defense Agencies.• Resolve critical software errors and critical statutory/regulatory enhancements that impact operations and incorporate changes identified during BPR, BEA compliance assessment and the Audit generated corrective action plans.• Support the DIACAP/RMF process maintaining activity to support actions included in the DAA required POA&M resulting in a DAA decision to award an ATO.• Conduct testing to include: unit testing on developed items; monthly Rel testing that includes regression; annual Rel development testing that includes a SIT and UAT; Rel 4 developmental testing including a SIT and UAT; as well as an operational assessment event in conjunction with DOT&E following the annual Rel at using Defense Agencies.</div>					

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Logistics Agency			Date: May 2017		
Appropriation/Budget Activity 0400 / 5		R-1 Program Element (Number/Name) PE 0605080S / <i>Defense Agency Initiatives (DAI) - Financial System</i>		Project (Number/Name) 1 / <i>Defense Agency Initiatives (DAI) - Financial System</i>	
B. Accomplishments/Planned Programs (\$ in Millions)			FY 2016	FY 2017	FY 2018
<ul style="list-style-type: none"> • Conduct contract renewal competitions and exercise options on existing contracts and monitor contractor performance and billing. • Conduct October 2018 deploying Defense Agencies' implementation activities including data conversion, BPR and workforce preparation. • Continue the implementation of GRC capabilities delivered in Rel 2 based on audit feedback. • Develop, test and release Electronic Funds Distribution (EFD) to DAI production. • Conduct an annual Acquisition IPR with the MDA. • Oversee the operations of the DISA DECCs at Ogden, UT (Production and T&D to include training) and Columbus, OH (COOP). The PMO operates database servers, application servers and web servers, leveraging the DECC for infrastructure support and host site related IA and internal controls. DECC services are governed by an annually negotiated Service Level Agreement (SLA). • Maintain currency with existing Federal, DFAS and target Enterprise systems including the SAM web services, as SAM assumes the functionality of the Federal IAE systems. • Maintain a sufficient Information Assurance/cybersecurity posture and support the DIACAP/ RMF process maintaining activity to support actions included in the Designated Approval Authority required actions included in the POA&M including maintaining currency of documentation in EMASS. This includes maintaining the operational and application software currency and security patches. • Maintain DAI master data leveraging feeds from the authoritative data sources. • Maintain the program's DODAF views in accordance with DLA guidance and in DLA systems. • Ensure sufficient administer all of the databases: production; T&D/training; and COOP. • Maintain the system configuration in accordance with the DLA J6 ECMP and the DAI CCWG. • Maintain currency with functional policy with regard to function and data standards. • Maintain the technical side of the system including the internal processes and the operation of several interfaces with external systems leveraging DLA Transaction Services as well as established Federal Enterprise system web services. • Maintain and monitor user roles and responsibilities at the system level and guide using Agencies at the Component level. • Procure required hardware, software and licenses for new Agency's personnel. • Obtain an ATO and Interoperability Certification. <p>FY 2018 Plans: In FY 2018, the DAI PMO will:</p> <ul style="list-style-type: none"> • Field Increment 2 Rel 4 to users. • Development/Testing for DISA General Fund (GF) agency unique requirements and begin study/development of 4th Estate Defense Working Capital Fund (DWCF) capabilities. Study/develop Agency unique requirements for DeCA, including Independent Operational Assessment. • Work instructions and training materials. 					

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Logistics Agency		Date: May 2017	
Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0605080S / <i>Defense Agency Initiatives (DAI) - Financial System</i>	Project (Number/Name) 1 / <i>Defense Agency Initiatives (DAI) - Financial System</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
<ul style="list-style-type: none"> • Conduct Follow-on Test and Evaluation event with using Agencies which completes the cycle of independent operational assessments. • Support the FM & time/labor for over 49k users at over 23 Agencies, Field Activities and orgs. • Support the DoD Information Assurance Certification and Accreditation Risk Management Framework process to support actions included in the Designated Authorizing Authority required Plan of Actions and Milestones including an independent FISCAM Test of Design/Test of Effectiveness to result in a DAA decision to award an Authority to Operate. • Continue to implement the Governance, Risk and Compliance capabilities by expanding Enterprise controls: Configuration, Access, Prevention & Transactions supporting audit findings, recommendations & CAPs. • Maintain the technical operation including: application of DISA Security Technical Implementation Guides, HW & SW currency for servers operating systems, middleware & applications including patches; overseeing internal processes within the DECC enclaves; & the daily operation of several interfaces with external systems leveraging DLA Transaction Services as well as established Federal Enterprise system web services. • Conduct regular adversarial assessments, RMF continuous monitoring including code scans, an independent Cyber Economic Vulnerability Assessment and a Cooperative Vulnerability and Penetration Assessment. • Obtain or maintain an interim Interoperability Certification or an Authority to Connect to the DoD Global Information Grid. • The Program will also perform developmental, operational and Cyber security testing with independent third parties under Office of the Secretary of Defense oversight. The Defense Logistics Agency will contract for an independent public accounting firm to conduct the annual FFMIA and SSAE 18 assessments and conduct Cyber security assessments on the system. 			
Accomplishments/Planned Programs Subtotals		30.568	30.457
C. Other Program Funding Summary (\$ in Millions)			
N/A			
Remarks			
D. Acquisition Strategy			
DAI is being developed and implemented using an evolutionary/incremental strategy including major annual software releases to accommodate upgrades as required by changes to the Department's BEA including new laws, regulations and policies as governed by its Functional Sponsor and Milestone Decision Authority (MDA).			
In the Acquisition Decision Memorandum (ADM) of September 23, 2013, the MDA placed DAI Increment 1 in sustainment. Increment 2 will address the Commercial Off The Shelf (COTS) application upgrade. The upgrade was completed (January 2015); therefore, Increment 2 Rel 1 overwrote Increment 1 for all users.			
E. Performance Metrics			
The following performance metrics will be performed on the DAI system:			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Logistics Agency		Date: May 2017
Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0605080S / <i>Defense Agency Initiatives (DAI) - Financial System</i>	Project (Number/Name) 1 / <i>Defense Agency Initiatives (DAI) - Financial System</i>
<p>Functionality: Financial system performance. PEO will determine substantial compliance with the annual Investment Review of PMO assertion of compliance with the latest version of the Department's BEA in scope requirements for Defense Financial Management Improvement Guidance (DFMIG) and other laws regulations and policy. Objective: Substantial compliance.</p> <p>Program Conformance to BEA Processes, Data Standards, and Business Rules. The PEO will determine substantial compliance with the annual Investment Review of PMO assertion of compliance with the latest version of the Department's BEA. Objective: Substantial compliance.</p> <p>Net Ready Key Performance Parameter (NR-KPP) Attribute (Att) A - Support net-centric DoD military operations Mission: Transform the budget, finance, and accounting operations of the DoD Agencies to achieve accurate and reliable financial information in support of financial accountability and effective and efficient decision making throughout the Defense Agencies in support of the missions of the warfighter.</p> <p>A.1. Budget to Report (B2R). DAI provides General Ledger, Trial Balance, Budget Execution, and Financial Reporting Capabilities. DAI will measure the percentage of successful attempts to:</p> <ul style="list-style-type: none"> * Generate and transmit Trial Balance Reports. Objective-95%; * Receive budget information from agency-specific systems, to support budget execution. Objective-95%; and * Generate and transmit reports to support period end processing procedures. Objective-95% <p>A.2 Procure to Pay (P2P). DAI provides the capability to Order Materials and Services (Commitments), Record Purchases and Contract Information (Obligations) Pay Bills (Accounts Payable), and Create Ready to Pay File. DAI will measure the percentage of successful attempts to:</p> <ul style="list-style-type: none"> * Exchange contract, obligation, receipt and invoice information with external systems to support procurement processes. Objective-95%; * Receive Purchase Card information from external systems to manage government purchase cards (P-Cards). Objective-95%; * Exchange data across agencies to support intergovernmental Purchase Request (PR) processes. Objective-95%; * Receive travel related data from external systems to support travel financial accounting events. Objective-95%; and * Exchange miscellaneous payment information with trading partners. Objective-95%. <p>A.3. Order to Cash (O2C). DAI provides the capability to Receive Customer Orders, Record Work Performed on the orders, Bill Customers, and Track Accounts Receivable. DAI will measure the percentage of successful attempts to:</p> <ul style="list-style-type: none"> * Exchange data with external systems to support management of customer orders. Objective-95%; * Exchange receivables data with external systems. Objective-95%; and * Manage exchange collections data with external systems. Objective-95%. 		

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Logistics Agency		Date: May 2017
Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0605080S / <i>Defense Agency Initiatives (DAI) - Financial System</i>	Project (Number/Name) 1 / <i>Defense Agency Initiatives (DAI) - Financial System</i>
<p>A.4. Acquire to Retire (A2R). DAI provides the capability to record Asset Acquisition, Depreciation, and Disposal. DAI will measure the percentage of successful attempts to:</p> <ul style="list-style-type: none"> * Receive asset creation information from external systems. Objective-95%; * Accumulate and transmit costs incurred for Capital Assets on Construction in Progress (CIP) and Work in Progress (WIP) projects. Objective-95%; * Generate and transmit property accounting information. Objective-95%; * Receive property maintenance data from external systems. Objective-95%; and * Receive disposal of assets information from external systems. Objective-95%. <p>A.5. Cost Management (formerly Cost Accounting). DAI provides Cost Accounting and Allocation Capabilities. DAI will measure the percentage of successful attempts to:</p> <ul style="list-style-type: none"> * Receive Project Budgets from external systems. Objective-95%; and * Receive cost data to support cost collection processes. Objective-95%. <p>A. 6. Hire to Retire (H2R). DAI provides Civilian, Military, and Contractor Time and Labor capabilities. DAI will measure the percentage of successful attempts to:</p> <ul style="list-style-type: none"> * Exchange employee and timekeeping information with external systems. Objective-95%; and * Process and send payroll data to external systems. Objective-95%. <p>NR-KPP Att B - Managed in the Network</p> <p>1) Type of Networks that are connected:</p> <ul style="list-style-type: none"> - The DAI application supports multiple Defense Agencies, and thus is accessible from multiple network points. A typical user accesses the application via the web browser from his/her agency specific LAN/WAN and/or local site firewall configurations, traversing through the Non-Classified Internet Protocol Routing Network (NIPRNet) to reach the secure DAI application hosted within the DoD Demilitarized Zone (DMZ) which is controlled and managed by DISA. - The DAI production application is hosted in a DISA DECC environment located in Ogden, UT and is managed by DAI Program Management Office <p>2) Measures of Performance (MOPs) to measure network entrance and management performance:</p> <p>a) Network related (DISA) – as per DISA Catalog of Services</p> <ul style="list-style-type: none"> -Interactive Availability - Portion of network/system controlled by DISA CSD available to the partner during the interactive window -Batch Throughput – Completion rate and delivery by specified time during batch window specified in SLA <p>b) Database related (DAI Program Management Office)</p> <ul style="list-style-type: none"> -System Availability -On Line user system response <p>3) Network Management:</p>		

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Logistics Agency		Date: May 2017
Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0605080S / <i>Defense Agency Initiatives (DAI) - Financial System</i>	Project (Number/Name) 1 / <i>Defense Agency Initiatives (DAI) - Financial System</i>
<p>-The Agency (user) being supported is responsible for the communications infrastructure necessary for leaving their location to connect users to the NIPRNet</p> <p>-DISA is responsible for communications on NIPRNet between the end user and the main DAI environment</p> <p>-DAI Program Management Office is responsible for activities occurring within the application and the Oracle Database</p> <p>4) Systems Management</p> <p>-NIPRNet and Infrastructure - Centralized within DISA CSD</p> <p>-DAI System – centralized within DAI Program Management Office</p> <p>5) Network Configuration Parameters – N/A (within the realm of DISA management) DAI will measure the percentage of success for:</p> <ul style="list-style-type: none"> * Supports secure Internet/NIPRNET access to solution. Interactive Availability. Objective-98.5%; * Supports secure Internet/NIPRNET access to solution. Batch Throughput. Objective-95%; * Provides adequate system response and availability to support operations. System Availability. (Condition: 5000 users/hour) Objective-95%; and * Provides adequate system response and availability to support operations. On-line system response. (Condition: 5000 users/hour) Objective-95%. <p>NR-KPP Att C - Effectively Exchange Information.</p> <p>DAI will satisfy all top-level critical Information Exchange Requirements (IERs) with all required DoD Enterprise, DFAS, Defense Agencies, and Federal Systems, as documented in SV-6. There are 47 data exchanges with other systems. The objectives are 100% for accuracy and ten seconds to 1 day for timeliness. Additional details available upon request.</p> <p>Major Performers</p> <p>CACI INC Federal Chantilly, VA Global Model Implementation and Compliance Support to DAI</p> <p>CACI Inc Federal Chantilly, VA DAI Implementation Support Services</p> <p>TASC, Inc. Andover, MA DISA Test and Development</p> <p>CACI ISS, Inc</p>		

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Logistics Agency		Date: May 2017
Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0605080S / <i>Defense Agency Initiatives (DAI) - Financial System</i>	Project (Number/Name) 1 / <i>Defense Agency Initiatives (DAI) - Financial System</i>
<p>Fairfax, VA Infrastructure Support</p> <p>Terathink Corporation Reston, VA Data Conversion Support</p> <p>International Business Machines Corporation Reston, VA DAI Global Model Development for Procure to Pay (P2P), Order to Cash (O2C), Budget to Retire (B2R), and Customer Application Development (CAD)</p> <p>CACI Inc. Federal Chantilly, VA DAI Global Model Development for Acquire to Retire (A2R), Cost Accounting (CA), and Time and Labor (T&L)</p> <p>Mythics Inc DBA Virginia Beach, VA Oracle CLM and Purchase Software</p>		

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Exhibit R-3, RDT&E Project Cost Analysis: FY 2018 Defense Logistics Agency												Date: May 2017			
Appropriation/Budget Activity 0400 / 5						R-1 Program Element (Number/Name) PE 0605080S / Defense Agency Initiatives (DAI) - Financial System						Project (Number/Name) 1 / Defense Agency Initiatives (DAI) - Financial System			
Product Development (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
DAI Compliance Support	Option/ CPFF	CACI Inc Federal : Chantilly, VA	10.411	8.129	Jun 2016	7.792	Jun 2017	7.800	Jun 2018	0.000		7.800	Continuing	Continuing	-
DAI Implementation Support	Option/ CPAF	CACI Inc Federal : Chantilly, VA	13.511	2.089	Mar 2016	6.651	Mar 2017	6.510	Mar 2018	0.000		6.510	Continuing	Continuing	-
Infrastructure Support	Option/ FFP	CACI ISS Inc : Fairfax, VA	4.043	4.140	May 2016	3.472	May 2017	3.635	May 2018	0.000		3.635	Continuing	Continuing	-
Global Model CAD	C/CPFF	CSC : Falls Church, VA	3.205	0.000		-		-		-		-	0.000	3.205	-
Global Model P2P	C/FFP	IBM : Bethesda, MD	14.701	4.511	Aug 2016	3.745	Aug 2017	0.277	Aug 2018	0.000		0.277	Continuing	Continuing	-
Global Model A2R	C/CPFF	CACI Inc Federal : Chantilly, VA	6.412	2.600	Aug 2016	2.361	Aug 2017	0.398	Aug 2018	0.000		0.398	Continuing	Continuing	-
Data Conversion	Option/ FFP	Terathink : Reston, VA	1.664	0.848	Sep 2016	0.000		0.000		0.000		0.000	0	2.512	-
Jaws Professional Licenses	C/FFP	Immix : McLean, VA	0.017	0.000		0.000		0.000		0.000		0.000	0.000	0.017	-
Oracle Advanced Compression Licenses	TBD	TBD : TBD	0.000	1.622	Oct 2016	0.000		0.000		0.000		0.000	0.000	1.622	-
Oracle Contract Lifecycle Management licenses	C/FFP	Mythics Inc : Virginia Beach, VA	7.408	0.000		0.000		-		-		-	0.000	7.408	-
Oracle Licenses	MIPR	DISA : Pensacola,FL	5.446	0.000		1.000		-		-		-	0	6.446	-
Additional Memory	MIPR	DISA : Pensacola, FL	1.037	0.000		0.000		-		-		-	0	1.037	-
Kurzweil 5000 508 Assistive Tech Licenses	C/FFP	Envision Technology Inc : Bethesda, Md	0.008	-		-		-		-		-	0	0.008	-
Dragon Naturally Speaking 508	C/FFP	Red River Computer Co : Claremont, NH	0.007	-		-		-		-		-	0	0.007	-
Data Conversion	C/TBD	TBD : TBD	0.000	0.000		1.900	Sep 2017	0.945	Sep 2018	0.000		0.945	Continuing	Continuing	-
DISA/DITCO Delinquent Balance	MIPR	DISA DITCO : Scott AFB, IL	0.000	0.017	Aug 2016	-		-		-		-	0.000	0.017	-
DBTA Section 1553	MIPR	DFAS : Columbus, OH	0.000	0.377	Oct 2015	-		-		-		-	0.000	0.377	-

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Exhibit R-3, RDT&E Project Cost Analysis: FY 2018 Defense Logistics Agency												Date: May 2017			
Appropriation/Budget Activity 0400 / 5						R-1 Program Element (Number/Name) PE 0605080S / Defense Agency Initiatives (DAI) - Financial System				Project (Number/Name) 1 / Defense Agency Initiatives (DAI) - Financial System					
Product Development (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
GRC & BI Hardware	MIPR	DISA : Pensacola, FL	0.000	0.377	Oct 2015	-		-		-		-	0.000	0.377	-
OS Upgrade	MIPR	DISA : Pensacola, FL	0.000	0.108	Aug 2016	-		-		-		-	0.000	0.108	-
Dimensions RM Support Maintenance/ Tool	MIPR	DISA : Fort Meade, MD	0.660	0.216	Oct 2016	0.216	Oct 2017	0.227	Oct 2018	0.000		0.227	Continuing	Continuing	-
Oracle Linux Operating System Upgrade	MIPR	TBD : TBD	0.000	0.000		0.065	Oct 2016	0.068	Oct 2018	-		0.068	0.000	0.133	-
Subtotal			68.530	25.034		27.202		19.860		0.000		19.860	-	-	-
Test and Evaluation (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Test and Development	MIPR	DISA : Pensacola, FL	4.001	4.719	Oct 2015	2.927	Oct 2016	3.250	Oct 2017	0.000		3.250	Continuing	Continuing	-
Independant Testing	MIPR	JITC : Indian Head, MD	2.945	0.328	May 2016	0.328	May 2017	0.344	May 2018	0.000		0.344	Continuing	Continuing	-
Performance and Regression Testing	MIPR	JITC : Ft Huachuca	1.700	0.236	Apr 2016	0.000		-		-		-	0	1.936	-
Operational Test and Evaluation	MIPR	JITC : Fort Huachuca, AZ	2.498	0.251	Oct 2015	0.000	Oct 2016	0.982	Oct 2017	0.000		0.982	Continuing	Continuing	-
DCPS Testing	MIPR	DFAS : Indianapolis, IN	0.083	-		-		-		-		-	0	0.083	-
Subtotal			11.227	5.534		3.255		4.576		0.000		4.576	-	-	-
			Prior Years	FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			79.757	30.568		30.457		24.436		0.000		24.436	-	-	-
Remarks															

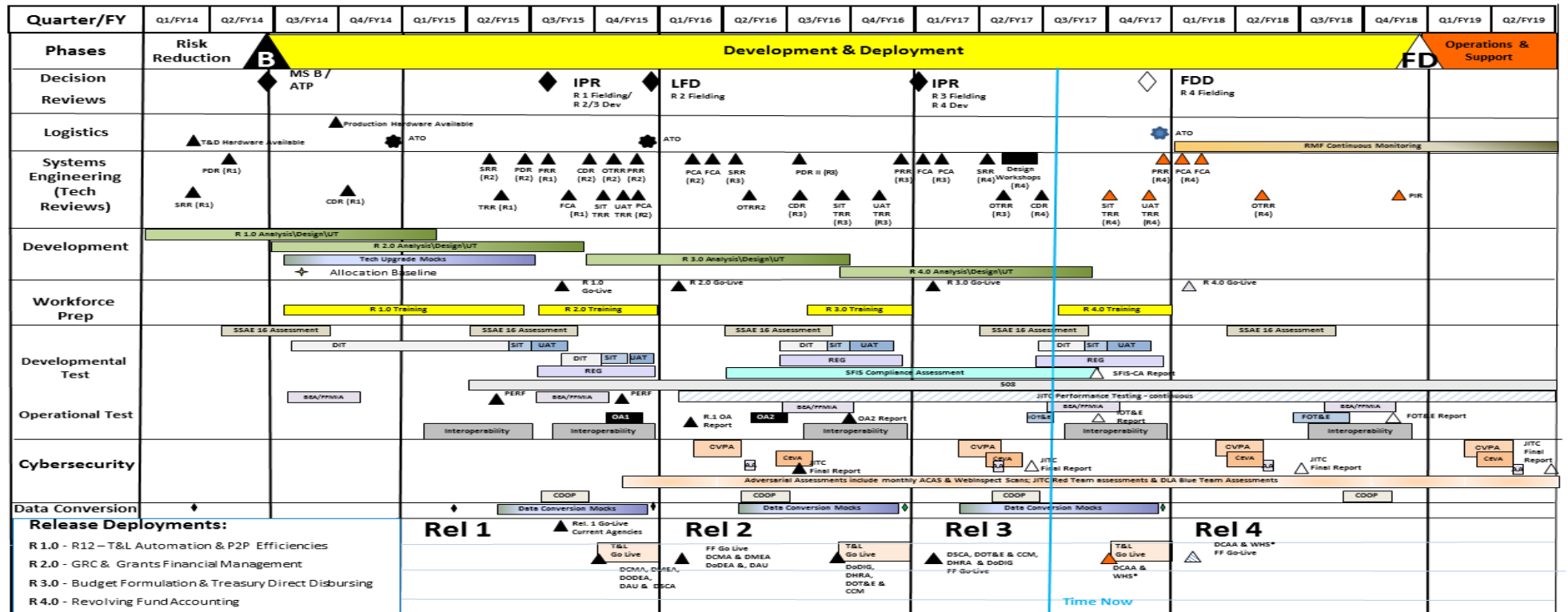
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Exhibit R-4, RDT&E Schedule Profile: FY 2018 Defense Logistics Agency

Date: May 2017

Appropriation/Budget Activity
0400 / 5R-1 Program Element (Number/Name)
PE 0605080S / Defense Agency Initiatives
(DAI) - Financial SystemProject (Number/Name)
1 / Defense Agency Initiatives (DAI) -
Financial System

Revised INC 2 Schedule



SOB: Section 508/Disability Test
AA: Adversarial Assessment
ACAS: Assured Compliance Assessment Solution
ATO: Authority to Operate (Includes Production & COOP)
ATP: Authority to Proceed Decision Review
BEA: Business Enterprise Architecture
CCM: Center for Countermeasures
CDR: Critical Design Review
CEVA: Cyber Economic Vulnerability Assessment
COOP: Continuity of Operations Testing

CVPA: Cooperative Vulnerability & Penetration Assessment
DAU: Defense Acquisition University
DCAA: Defense Contract Audit Agency
DCFO: Deputy Chief Financial Officer
DCMA: Defense Contract Management Agency
DHRA: Defense Human Resources Activity
DMEA: Defense Microelectronic s Activity
DODEA: DoD Education Activity
DODIG: DoD Inspector General
DOT&E: Director Operational Test and Development
DSCA: Defense Security Cooperation Agency
DT: Development Test

DIT: Developmental Integrated Test
DWCF: Defense Working Capital Fund
FCA: Functional Configuration Audit
FDD: Full Deployment Decision
FF: Full Financials
FFMIA: Federal Financial Management Information Act
FOT&E: Follow on Test and Evaluation
GRC: Governance, Risk and Compliance
IA: Information Assurance
IOC: Initial Operational Capability
IOT&E: Initial Operational Test & Evaluation
IPR: In-Process Review

JITC: Joint Interoperability Test Command
MS: Milestone
OA: Operational Assessment
OTA: Operational Test Authority
OTRR: Operational TRR
P2P: Procure to Pay
PCA: Physical Configuration Audit
PDR: Preliminary Design Review
Pen Test: Penetration Test (Black Team)
PERF: Performance Test
PIR: Post Implementation Review
PROD: Production
R: Release
R12: Oracle E-Business Suite, Release 12

REG: Regression Test
RMF: Risk Management Framework
SFIS-CA: Standard Financial Information Structure - Compliance Assessment
SIT: Systems Integration Test
SOD: Segregation of Duties
SRR: Software Requirements Review
SSAE 16: Statement of Standards for an Attestation Engagement
Std: Standards
T&D: Test and Development
T&L: Time & Labor
TRR: Test Readiness Review
UAT: User Acceptance Testing

USSGL: United States Standard General Ledger UT: Unit Test
WHS: Washington Headquarters Service

DFAS Data conversion process begins (12-24 months duration/site)

Increment Approach

Updated April 18, 2017

*Note: WHS deployment includes OSD Secretariat offices, Pentagon Force Protection Agency, Defense Test Resources Management Center (DTRMC), Defense Legal Services Agency (DLSA) and US Court of Appeals For Armed Services.

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Exhibit R-4A, RDT&E Schedule Details: FY 2018 Defense Logistics Agency			Date: May 2017
Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0605080S / <i>Defense Agency Initiatives (DAI) - Financial System</i>	Project (Number/Name) 1 / <i>Defense Agency Initiatives (DAI) - Financial System</i>	

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Operations & Maintenance</i>				
DAI Compliance Support	1	2014	1	2014
DAI Implementation Support	4	2017	3	2019
Infrastructure Support	4	2017	3	2019
Global Model P2P	4	2017	3	2019
Global Model A2R	4	2017	3	2019
Data Conversion	4	2017	3	2019
Dimensions RM Support Maintenance/ Tool	4	2017	3	2019
<i>Research Development Testing & Evaluation</i>				
Test and Development	4	2017	3	2019
Independent Testing	4	2017	3	2019
Operational Test and Evaluation	4	2017	3	2019

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Defense Logistics Agency	Date: May 2017
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Appropriation/Budget Activity					R-1 Program Element (Number/Name)							
0400: Research, Development, Test & Evaluation, Defense-Wide / BA 5: System Development & Demonstration (SDD)					PE 0605090S / Defense Retired and Annuitant Pay System (DRAS)							
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	18.030	9.785	7.949	13.475	-	13.475	2.226	1.753	1.785	1.821	Continuing	Continuing
1: Defense Retired and Annuitant Pay System 2 (DRAS)	18.030	9.785	7.949	13.475	-	13.475	2.226	1.753	1.785	1.821	Continuing	Continuing

A. Mission Description and Budget Item Justification

The primary objective of Defense Retired and Annuitant Pay System 2 (DRAS 2) is to establish and maintain a modern retiree and annuitant pay system featuring automated, market technology in place of selected manual processes.

B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	10.135	4.949	4.872	-	4.872
Current President's Budget	9.785	7.949	13.475	-	13.475
Total Adjustments	-0.350	3.000	8.603	-	8.603
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.350	-			
• DRAS2 Establish pre-production & production hosting environments	-	-	1.578	-	1.578
• Reprogramming from O&M	-	-	4.025	-	4.025
• PB17 Amended Program Increase	-	3.000	-	-	-
• PB18 Program Increase	-	-	3.000	-	3.000

Change Summary Explanation

A full-year FY 2017 appropriation for this account was not enacted at the time the budget was prepared; therefore, the budget assumes this account is operating under the Continuing Appropriations Resolution, 2017 (P.L. 114-254). The amounts included for 2017 reflect the annualized level provided by the continuing resolution. Base: FY17PB (\$4.949M) + Request for Additional Appropriations (\$3.000M required to address emergency warfighter readiness. Funds are in support of system integration and development activities for design and testing; requirements development, testing, delivery not supported within the COTS software; a partial procurement of the Oracle PeopleSoft License; and a development of interfaces to the military branches of services and other departments such as the Veteran's Administration (VA) via the Global Exchange (GEX).

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Defense Logistics Agency		Date: May 2017
Appropriation/Budget Activity 0400: Research, Development, Test & Evaluation, Defense-Wide / BA 5: System Development & Demonstration (SDD)	R-1 Program Element (Number/Name) PE 0605090S / Defense Retired and Annuitant Pay System (DRAS)	
PB18 Increase to continue the development of the functional and system requirements of DRAS2.		

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Logistics Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 5					R-1 Program Element (Number/Name) PE 0605090S / Defense Retired and Annuitant Pay System (DRAS)				Project (Number/Name) 1 / Defense Retired and Annuitant Pay System 2 (DRAS)			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
1: Defense Retired and Annuitant Pay System 2 (DRAS)	18.030	9.785	7.949	13.475	-	13.475	2.226	1.753	1.785	1.821	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
A. Mission Description and Budget Item Justification												
The primary objective of Defense Retired and Annuitant Pay System 2 (DRAS 2) is to establish and maintain a modern retiree and annuitant pay system. DRAS 2 will replace the current Defense Retiree and Annuitant Systems (DRAS) and selected manual processes with proven state of the market technology. This modernization will consolidate disparate DRAS systems and business processes, reduce system redundancies and inefficiencies, and increase customer satisfaction.												
B. Accomplishments/Planned Programs (\$ in Millions)										FY 2016	FY 2017	FY 2018
Title: Defense Retired and Annuitant Pay System (DRAS) 2										9.785	7.949	13.475
FY 2016 Accomplishments: -Achieved Acquisition Lifecycle Milestone B. -Issued a Task Order to for Build 1 and 2 requirements review and Build 1 system development. -Obtained additional Oracle PeopleSoft COTS software licenses. -Utilized Transaction Services for system interface activities. -Established Data Management environment in MilCloud and begin legacy data cleansing activities. -Completed Build 1 configuration and design activities and began Build 1 development.												
FY 2017 Plans: -Issue a Task Order to finalize Build 3 requirements, begin Build 2 and 3 development, including Conference Room Pilot demonstrations. -Obtain additional COTS software licensing. -Continue development of system interfaces and performance testing. -Establish pre-production hosting environment and perform Cyber Defense Security activities.												
FY 2018 Plans: -Issue a Task Order to continue Build 1 and 2 development, Conference Room Pilot demonstrations and system training. - Perform System Integration, Interoperability, User Acceptance Testing, and Parallel Operations Testing. -Establish production hosting environment and perform Cyber Defense Security activities.												
Accomplishments/Planned Programs Subtotals										9.785	7.949	13.475

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Logistics Agency		Date: May 2017
Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0605090S / <i>Defense Retired and Annuitant Pay System (DRAS)</i>	Project (Number/Name) 1 / <i>Defense Retired and Annuitant Pay System 2 (DRAS)</i>
C. Other Program Funding Summary (\$ in Millions) N/A		
Remarks		
D. Acquisition Strategy DRAS2 achieved Milestone B in August 2016 and entered into the Engineering, Development, and Production Phase of the Acquisition Lifecycle. DRAS2 is scheduled for Full Deployment in January 2019.		
E. Performance Metrics N/A		

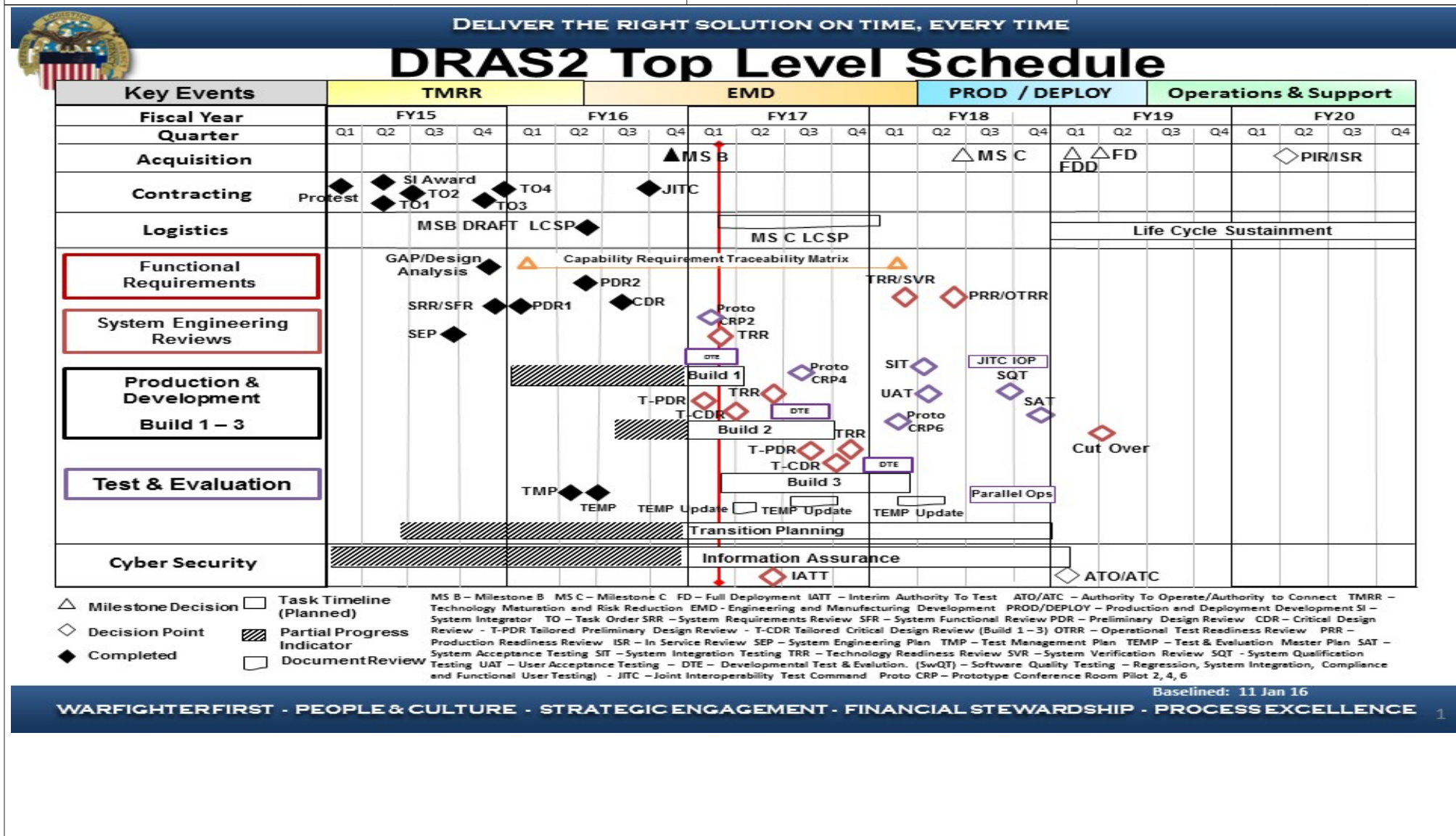
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Exhibit R-3, RDT&E Project Cost Analysis: FY 2018 Defense Logistics Agency												Date: May 2017			
Appropriation/Budget Activity 0400 / 5						R-1 Program Element (Number/Name) PE 0605090S / Defense Retired and Annuitant Pay System (DRAS)				Project (Number/Name) 1 / Defense Retired and Annuitant Pay System 2 (DRAS)					
Product Development (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
DRAS2 System Development and Integration	Option/ IDIQ	CSRA : Herndon, VA	7.372	5.724	Sep 2016	3.100	Oct 2017	10.271	Nov 2017	-		10.271	Continuing	Continuing	-
DRAS2 COTS License Purchase	Option/ IDIQ	CSRA/Oracle : To be Determined	8.808	1.635	May 2016	3.667	May 2017	0.000		-		0.000	Continuing	Continuing	-
DISA Hosting	MIPR	Virtual Operating Environment : Mechanicsburg, PA	0.000	0.721	Nov 2016	0.332	Nov 2017	1.537	Nov 2017	-		1.537	Continuing	Continuing	-
Transaction Services Interface Design	MIPR	DLA Transaction Services : Chambersburg, PA	1.850	1.050	Jul 2016	0.850	May 2016	0.412	Jul 2018	-		0.412	Continuing	Continuing	-
JITC - Testing	MIPR	JITC : To Be Determined	0.000	0.655	Jul 2016	0.000		1.255	Dec 2017	-		1.255	Continuing	Continuing	-
Subtotal			18.030	9.785		7.949		13.475		-		13.475	-	-	-
			Prior Years	FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			18.030	9.785		7.949		13.475		-		13.475	-	-	-
Remarks															
The System Development and Integration IDIQ Contract was awarded 29 September 2016. The program is in the 2nd Option Year of this contract.															

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Exhibit R-4, RDT&E Schedule Profile: FY 2018 Defense Logistics Agency

Date: May 2017

Appropriation/Budget Activity
0400 / 5R-1 Program Element (Number/Name)
PE 0605090S / Defense Retired and
Annuitant Pay System (DRAS)Project (Number/Name)
1 / Defense Retired and Annuitant Pay
System 2 (DRAS)

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Exhibit R-4A, RDT&E Schedule Details: FY 2018 Defense Logistics Agency			Date: May 2017
Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0605090S / <i>Defense Retired and Annuitant Pay System (DRAS)</i>	Project (Number/Name) 1 / <i>Defense Retired and Annuitant Pay System 2 (DRAS)</i>	

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Defense Retired and Annuitant Pay System (DRAS)</i>				
Defense Retired and Annuitant System (DRAS)	1	2017	4	2022

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Defense Logistics Agency	Date: May 2017
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Appropriation/Budget Activity 0400: Research, Development, Test & Evaluation, Defense-Wide / BA 6: RDT&E Management Support					R-1 Program Element (Number/Name) PE 0605502S / Small Business Innovative Research (SBIR)							
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	17.516	5.524	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
1: Small Business Innovative Research (SBIR)	17.516	5.524	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

A. Mission Description and Budget Item Justification

Defense Logistics Agency's (DLA's) ability to deliver Americans the right logistics solution in every transaction requires more than superior management of the Department's wholesale supplies and suppliers. It requires supply chain excellence. Our military's ability to generate and sustain combat readiness indefinitely, anywhere on the globe, requires that DLA-managed materiel flows seamlessly and as needed from the nation's industrial base to where it is ultimately used.

DLA's Small Business Innovative Research (SBIR) program seeks to solicit innovative technical applications of existing technologies to solve current and future agency requirements. Proposals from the small business community will fulfill this requirement. All selections shall demonstrate and involve a reasonable degree of technical risk with yet to be determined technical feasibility. Phase I proposals should demonstrate feasibility of the proposed technology and the merit supporting a Phase II award. Direct impact on a DLA solution, future market possibilities and demonstrated commercialization potential have a strong influence on Phase II selections.

B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	0.000	0.000	0.000	-	0.000
Current President's Budget	5.524	0.000	0.000	-	0.000
Total Adjustments	5.524	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	5.524	-			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Logistics Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 6					R-1 Program Element (Number/Name) PE 0605502S / Small Business Innovative Research (SBIR)				Project (Number/Name) 1 / Small Business Innovative Research (SBIR)			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
1: Small Business Innovative Research (SBIR)	17.516	5.524	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
A. Mission Description and Budget Item Justification												
<p>This project explores innovative concepts pursuant to Public Law 106-554 (Small Business Reauthorization Act of 2000) and Public Law 107-50 (Small Business Technology Transfer Program Reauthorization Act of 2001), which mandates a two-phase competition for small businesses with innovative technologies with a defense application as well as a commercial value. The Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs will develop new dual-use technologies for possible future Defense Logistics Agency (DLA) needs. Dual-use means the technologies will be judged on their potential for future private sector investment both as a vehicle for reducing development time and cost, unit costs of new DLA technologies, and as a route to national economic growth through new commercial products. DLA will conduct the competition as well as award and manage the contracts.</p> <p>The Defense Logistics Agency's SBIR/STTR investments are divided into multiple Research Areas identified from within several DLA Elements:</p> <p>DLA J3 R&D</p> <ul style="list-style-type: none">- Additive Manufacturing- Advanced Battery Manufacturing- Advanced Aircraft Braking Systems- Anti-Counterfeiting- Medical 3D Printing- Seamless Fuel Bladders- Strategic Materials- Warehouse Modernization- Subsistence- Limited Source NSN List (Source Approval Request (SAR) Development)- Reverse Engineering Technical Data Packages <p>DMEA</p> <ul style="list-style-type: none">- Advanced microelectronics concepts, technologies, and applications.												
B. Accomplishments/Planned Programs (\$ in Millions)									FY 2016	FY 2017	FY 2018	
Title: SBIR Accomplishments/Plans									5.524	0.000	0.000	

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Logistics Agency			Date: May 2017		
Appropriation/Budget Activity 0400 / 6		R-1 Program Element (Number/Name) PE 0605502S / <i>Small Business Innovative Research (SBIR)</i>		Project (Number/Name) 1 / <i>Small Business Innovative Research (SBIR)</i>	
B. Accomplishments/Planned Programs (\$ in Millions)			FY 2016	FY 2017	FY 2018
<p><i>FY 2016 Accomplishments:</i></p> <p>DLA SBIR: Executed of all active Phase I and Phase II SBIR/STTR Projects. In the DOD-wide 2016.1 solicitation, DLA selected 11 new Phase I projects and 1 Direct to Phase II project. The 16.3 solicitation yielded 4 new Phase I projects and the 16.3 solicitation is expected to produce 4 new Phase I projects. In FY16, the program awarded 6 new Phase II awards. All Phase II awards utilized OSD/OSBP funding (\$8M) documented on DD form 1144. Upon completion, all active Phase I projects have the opportunity to compete for Phase II awards.</p> <p>DLA STTR: Executed of all active Phase II STTR projects. DLA STTR awarded 3 New Phase I contracts exhausting FY15 funds. Upon completion, all active Phase I projects have the opportunity to compete for Phase II awards.</p> <p>DMEA SBIR: Completed feasibility studies for quantum cryptography single-photon detector chip. Completed a feasibility study for rapid and agile detection of counterfeit microelectronics by illuminating devices with RF energy and acquiring the subsequent emission signature. Completed a feasibility study for high-resolution x-ray microscopy of microelectronic devices. Completed feasibility studies for the analysis of integrated circuits using limited x-rays. Completed prototype development for a high-efficiency, high-resolution x-ray system for inspecting integrated circuits.</p> <p>DMEA STTR: Completed feasibility studies for developing a ZnS scintillator for high-resolution x-ray imaging of integrated circuits at 9KeV, and for developing a new sensor for 9KeV high resolution x-ray microscopy.</p> <p><i>FY 2017 Plans:</i></p> <p>DLA SBIR: To continue execution of all active Phase I and Phase II SBIR/STTR Projects. In the DOD-wide 2017.1 solicitation, DLA expects two new topics. Anticipate the selection of one to three topics per area. Upon completion, all active Phase I projects have the opportunity to compete for Phase II awards. DLA expects to award 6 new Phase II awards. All Phase II awards utilize OSD/OSBP funding (\$6M) documented on DD form 1144.</p> <p>DLA STTR: To continue execution of all active Phase I STTR projects. Upon completion, all active Phase I projects have the opportunity to compete for Phase II awards. Expect to award a single Phase II in late FY17. This will exhaust all FY16 and FY17 STTR funds.</p> <p>DMEA SBIR: DMEA will continue execution of all active SBIR projects. All active Phase I projects have the opportunity to progress to Phase II. DMEA will begin to study the feasibility of a high-brilliance 9KeV x-ray source. DMEA will complete prototype development for a broadband quadrature mixer with integrated I/Q mismatch calibration, and a nano-resolution 3D integrated circuit reconstruction system.</p>					

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Logistics Agency		Date: May 2017	
Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0605502S / <i>Small Business Innovative Research (SBIR)</i>	Project (Number/Name) 1 / <i>Small Business Innovative Research (SBIR)</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
<p>DMEA STTR: DMEA will continue execution of all active STTR projects. All active Phase I projects have the opportunity to progress to Phase II. DMEA will begin to study the feasibility of developing an optical metrology system for measuring the thickness of thin films on top of sapphire substrate wafers.</p> <p>FY 2018 Plans: DLA SBIR/ STTR: To continue execution of all active Phase I and Phase II SBIR/STTR projects. DLA expects to award 6-10 new Phase I awards, and 6-8 new Phase II awards.</p> <p>DMEA SBIR/STTR: DMEA will continue to seek innovative technical solutions to DoD microelectronics research and development needs and increase private-sector commercialization of these innovations.</p>			
Accomplishments/Planned Programs Subtotals		5.524	0.000
C. Other Program Funding Summary (\$ in Millions)			
N/A			
Remarks			
D. Acquisition Strategy			
<p>The SBIR acquisition process seeks to match projects with DLA's Strategic Focus Areas. The goal is to align SBIR/STTR developed technology with current and future DLA requirements. DLA solicits all new project execution work through the DoD SBIR Broad Agency Announcement (BAA). There are three separate solicitation periods throughout each year: Jan-Feb, May-Jun, and Sep-Oct.</p>			
E. Performance Metrics			
<p>SBIR /STTR programs measure performance in two separate metrics:</p> <ol style="list-style-type: none"> 1. Phase Progression: In terms of progression from Phase I to Phase II and Phase II to Phase III, DLA deems each successive progression success. DLA seeks to have a 50% progression from one Phase to the next as a minimum. 2. Commercialization: The Congressional language defines "Commercialization," which is clarified by the Office of Secretary of Defense Office of Small Business Programs (OSD/OSBP) Re-Authorization Policy Directive: <ul style="list-style-type: none"> - (Investment) The process of developing products, processes, technologies, or services; and/or - (Sales) The production and delivery (whether by the originating party or by others) of products, processes, technologies, or services for sale to or use by the Federal Government or commercial markets <p>The Small Business Administration and OSD/OSBP assign a Commercialization Index based on progression within the Phases and reported successes.</p>			

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Defense Logistics Agency	Date: May 2017
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Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0708011S / <i>Industrial Preparedness</i>											
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	0.000	21.843	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	21.843
7: <i>Improving Industrial Base Manufacturing Processes (formerly Material Availability)</i>	0.000	5.293	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	5.293
8: <i>Maintaining Viable Supply Sources (formerly High Quality Sources)</i>	0.000	10.188	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	10.188
9: <i>Improving Technical and Logistics Information (formerly Industry and Customer Collaboration)</i>	0.000	6.362	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	6.362

A. Mission Description and Budget Item Justification

The Defense Logistics Agency (DLA) Industrial Preparedness Manufacturing Technology (IP ManTech) Program supports the development of a responsive, world-class manufacturing capability to affordably meet the warfighters' needs throughout the defense system life cycle. IP ManTech: Provides the crucial link between invention and product application to speed technology transitions. The program matures and validates emerging manufacturing technologies to support low-risk implementation in industry and Department of Defense (DoD) facilities, e.g. depots and shipyards. It addresses production issues early by providing timely solutions, thereby reducing risk and positively impacting system life cycle affordability by providing solutions to manufacturing problems before they occur.

Beginning in FY16, DLA ManTech was realigned into three Strategic Focus Areas (SFA): 1) Improving Industrial base Manufacturing Processes; 2) Maintaining Viable Sources of Supply; and 3) Improving Technical and Logistics Information.

- The Improving Industrial Base Manufacturing Processes SFA includes efforts to reduce industrial base material costs and production lead-times, while improving the quality of DLA managed products. This SFA subsumed the former supply chain oriented efforts in Subsistence Network (formerly known as the Combat Rations Network for Technology Implementation), Procurement Readiness Optimization—Advanced Casting Technology (PRO-ACT), Procurement Readiness Optimization—Forging Advance System Technology (PRO-FAST), and Battery Network (BATNET). New manufacturing processes within the scope of this SFA include emerging technologies such as Additive Manufacturing.

- Maintaining Viable Supply Sources includes efforts to assure the commercial industrial base can satisfy DLA materiel requirements. This SFA subsumed the Material Acquisition Electronics ManTech efforts. In the future, it will include other DLA efforts to maintain a viable industrial capability in areas such as Strategic Materials.

- The Improving Technical and Logistics Information SFA include efforts to improve and facilitate the exchange of engineering and logistics information among DLA industry partners and customers. It includes the MANTECH program Military Uniform System Technology (MUST) (formerly known as Customer Driven Uniform Manufacturing) and the Defense Logistics Information Research Program from P.E. 0603712S. A primary focus of this SFA is to capitalize on the emerging “Model Based Enterprise” paradigm and the semantic web as an enabler to a logistics system that is smart and connected.

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Defense Logistics Agency		Date: May 2017
Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0708011S / <i>Industrial Preparedness</i>	

NOTE: The single supply chain exhibits were removed as they are now included within the SFA exhibits.

B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	22.605	0.000	0.000	-	0.000
Current President's Budget	21.843	0.000	0.000	-	0.000
Total Adjustments	-0.762	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.762	-			

Change Summary Explanation

Over the FY 17, \$9.346M was realigned to the ManTech PE from the DLA Log R&D PE (0603712S) and DLA Procurement Defense-Wide. These funds will address critical shortfalls in the Improving Industrial Base Manufacturing Processes and Maintaining Viable Supply Sources SFA's. The largest requirement was in the Maintaining Viable Supply Sources to develop a long-term, reliable source of linear microcircuits. These devices are critical to maintaining the readiness of front line weapon system electronics. High priority requirements in the Improving Industrial Base Manufacturing Processes SFA included additional funding for battery technology, castings and forging manufacturing technology.

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Logistics Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 0708011S / Industrial Preparedness				Project (Number/Name) 7 / Improving Industrial Base Manufacturing Processes (formerly Material Availability)			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
7: Improving Industrial Base Manufacturing Processes (formerly Material Availability)	0.000	5.293	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	5.293
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Material Availability (MA) Strategic Focus Area (SFA) is an R&D effort undertaken with DLA's industrial base to reduce material costs, reduce the length and variability of Production Lead-Times, assure the DLA managed products meet requirements, and continuously improve quality and reliability. Benefits of this SFA include lower material costs, lower inventory levels and more predictable Customer Wait Times, fewer quality deficiencies, and lower customer support costs. This strategic focus area includes within its scope the Subsistence Program (former Combat Rations Program), the Battery Program, the Castings and the Forgings programs.

The Battery network objective is to develop the next generation of battery manufacturing technologies for cost and price efficiency, longer shelf life, and lighter batteries with higher energy. The network conducts R&D initiatives to address sustainment gaps and bridge technical solutions into higher MRLs for specific groups of batteries. For FY2014, DLA received 139,163 orders for 2.85 million batteries at \$183M net value - compared to FY13 \$176M and FY12 \$216M. The Battery network focuses on projects to develop the production capability for advanced lithium-based non-rechargeable and rechargeable batteries to ensure the prompt and sustained availability, quality, and affordability of batteries. Desired outcomes include: streamlined inventory and associated cost reductions through standardization and improved distribution practices; resolved obsolescence issues; addressed surge and sustainment issues; enhanced security of supply chain; increased competition and manufacturing base; reduced per unit battery cost; and leveraged Service-level (Army, Navy, Air Force) and other governmental (DOE, DOT, NASA) R&D efforts to insert new technology and practices into the existing DLA battery inventory.

The Subsistence Network objective is to research and promote manufacturing improvements in the subsistence supply chain with the goals of leveraging the latest technologies, encouraging innovation and modernization, and to maximizing capability and capacity in subsistence. The areas of research includes: combat rations, food equipment, field feeding solutions, food footprint, food innovations, food safety and defense, garrison feeding, nutrition and health, storage and packaging solutions, surge and sustainment support, and water security. The Microwave Assisted Thermal Sterilization (MATS), MRE Alternate Chemical Laminate, Optimize Combat Ration Inspection Costs, and Combat Rations Shelf Life Temperature Monitoring Project are current short-term projects that will have desired results such as improved processes, enhanced quality of individual and group combat rations, reduced cost associated with combat rations inspections, and increased efficiencies, then transition these improvements as applicable to industrial base suppliers and government suppliers.

The Castings consortium objective is to develop new materials and technologies for the metalcasting industry to help DLA improve the supply of parts that contain castings. Weapon system spare parts managed by DLA that contain castings are responsible for a disproportionate share of DLA's backorders or unfilled orders (UFOs). Cast parts are ~2% of National Stock Numbered Class IX parts but represent ~5% of all backorders, and when only the oldest backorders are considered up to 10% are castings. This program includes tasks to develop new capabilities in the areas of inspection, materials, processes, modeling, and design. Once developed, these capabilities will support the foundry industry, where the technologies will be tested and implemented in conjunction with the industry associations. These advancements

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Logistics Agency		Date: May 2017		
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0708011S / Industrial Preparedness	Project (Number/Name) 7 / Improving Industrial Base Manufacturing Processes (formerly Material Availability)		
will improve the metalcasting supply chains for the DOD and the DLA to better support the warfighter. This is achieved through investments in projects aimed at reducing lead-time, reducing cost, and improving quality of castings critical to DOD weapon systems.				
The Forgings consortium objective is to develop new material and technological solutions for the forging industry to help DLA improve the supply of parts that contain forgings. Weapon system spare parts managed by DLA that contain Forgings are responsible for a disproportionate share of DLA’s backorders or unfilled orders (UFOs). Forged parts are ~2% of National Stock Numbered Class IX parts but represent ~5% of all backorders, and when only the oldest backorders are considered up to 10% are forgings. This program includes tasks to develop new capabilities in the areas of inspection, materials, processes, modeling, and design. Once developed these capabilities will support the forging industry, where the technologies will be tested and implemented in conjunction with the industry associations. These advancements will improve the forging supply chains for the DOD and the DLA to better support the warfighter. This is achieved through investments in projects aimed at reducing lead-time, reducing cost, and improving quality of forgings critical to DOD weapon systems.				
The Additive Manufacturing (AM) objective is to establish AM as an effective alternative to conventional manufacturing and document the process for AM benefits. DLA needs to exploit AM technology as a lead-time and inventory reduction enabler.				
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017	FY 2018
Title: Improving Industrial Base Manufacturing Processes (formally Material Availability)		5.293	0.000	-
FY 2016 Accomplishments: The Subsistence Network issued a new Broad Agency Announcement (BAA) in July 2016 and will remain open for five years. The BAA projects have an expected duration of 6-24 months and the government plans to invest up to \$18 million during Fiscal Years 2017-2021 for funding research in response to this BAA. The 5 MILMRE Menu Bag Test, a short term study associated with the Meals Ready-to-Eat (MRE) Chemical Laminate project was completed in December of 2016. The work on three Short Term Projects (STP) (Optimize Combat Rations Inspection, Microwave Assisted Thermal Sterilization (MATS), and MRE Shelf Life Temperature Monitoring Project) were extended at the government request in FY16 to fund additional research, development and testing of these projects. Further research and testing on the Optimize Combat Rations Inspection project will identify and test 18 cost savings measures. On the MATS project, a Microwave Assisted Thermal Sterilization Carrier Tray was designed and tested to optimize the product quality that the MATS can produce. The MRE Shelf Life Temperature Monitoring Project was extended to examine other subsistence storage and distribution points, including transportation systems and determine the temperature and humidity conditions that subsistence items are exposed to at the locations. The Small Business Innovation Research program Subsistence Topics were released in September 2016 and STPs were reviewed for consideration of Phase I selection in 2017.				
FY 2017 Plans: FY17 Fund Realignment from BA07 to BA03 PE 0603680S.				
Accomplishments/Planned Programs Subtotals		5.293	0.000	-

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Logistics Agency		Date: May 2017
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0708011S / <i>Industrial Preparedness</i>	Project (Number/Name) 7 / <i>Improving Industrial Base Manufacturing Processes (formerly Material Availability)</i>
C. Other Program Funding Summary (\$ in Millions) N/A		
Remarks		
D. Acquisition Strategy <p>The Battery Network plan is to establish contract partners through a competitive Broad Area Announcement (BAA) based upon proposals that demonstrated knowledge, experience, and expertise in the following areas of interest: Automation, Diminishing Manufacturing & Supply, Battery Safety, Reducing Acquisition Costs, Shelf Life, Supply Chain Logistics, Surge/Sustainment, and Technology Transition/Insertion. A Government Steering Group (GSG) of power source technical experts from the military services R&D groups will inform general R&D requirements for supply chain and technology improvement. The plan also includes awarding Phase 2 and 3 projects from DLA's Small Business Innovation Research (SBIR) in advanced battery manufacturing technology.</p> <p>The Subsistence Network Broad Agency Announcement (BAA) for the acquisition of research and development of short term projects was released in July 2016 and will remain open for five years, FY17 – FY21. A Joint Steering Group made up of government representatives from the Military Services, DLA, U.S. Department of Agriculture, U.S. Public Health Center, and the Natick Soldier Research, Development and Engineering Center will review ongoing projects, identify new areas for investment, assess proposed projects, examine procedures and processes, keep abreast of new technologies, and understand DLA and DoD subsistence needs and requirements.</p> <p>The DLA Castings R&D Program involved a competitive Broad Agency Announcement (BAA) in FY16 soliciting for new R&D projects. Evaluations will be completed in 2017, with multiple contract awards anticipated for 2017. The current contracts reached the end of their base period of performance on September 30, 2016, which were also awarded under a competitive BAA in 2011.</p> <p>The DLA Forgings R&D projects were awarded through a competitive Broad Agency Announcement (BAA).</p>		
E. Performance Metrics <p>The Battery Network plan is to report returns on investments and achievements to the Joint Defense Manufacturing Technology Panel (JDMTP) for evaluation.</p> <p>The Subsistence Network plan is to execute reductions in cost for shipping, storage, supply chain process, inventory, waste and inspections, as well as reduced lead times for combat ration production, field feeding equipment, garrison feeding and "market fresh."</p> <p>For example, SUBNET will provide the following technical achievements: 1) a microwave-assisted capability to sterilize group-sized entrees and components, packaged in Institutional Sized Pouches (ISP) and Polymeric Trays and 2) identify and produce at least one or more alternate sealant layers that can be used by the rations industry to pack high acidic food products and to ensure uninterrupted supply of MRE rations.</p> <p>The Castings consortium plan is to report returns on investments and achievements to the Joint Defense Manufacturing Technology Panel (JDMTP) for evaluation.</p> <p>The Forgings consortium plan is to report returns on investments and achievements to the Joint Defense Manufacturing Technology Panel (JDMTP) for evaluation.</p>		

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Logistics Agency		Date: May 2017
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0708011S / <i>Industrial Preparedness</i>	Project (Number/Name) 7 / <i>Improving Industrial Base Manufacturing Processes (formerly Material Availability)</i>
<p>The Additive Manufacturing metric is the number of parts qualified for AM and the lead-time savings achieved to make small quantities of items.</p> <p>At least 30% of the completed projects will transition.</p> <p>OSD-C financial metrics (obligation and disbursement) will be achieved.</p>		

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Logistics Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 0708011S / Industrial Preparedness				Project (Number/Name) 8 / Maintaining Viable Supply Sources (formerly High Quality Sources)			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
8: Maintaining Viable Supply Sources (formerly High Quality Sources)	0.000	10.188	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	10.188
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The High Quality Sources SFA are projects undertaken to assure that the industrial base can respond to DLA requirements and DLA can fill military customers' material requirements reliably and consistently. Benefits include eliminating cancelled requisitions returned to customers as "non-procurable." This strategic focus area includes within its scope the Material Acquisition Electronics program.

The Material Acquisition Electronics roadmap has four major thrusts in Digital Microcircuits: Advanced Schottky TTL, TTL Compatible CMOS, 512 Kilobit RAM/ROM and Mega Gate ASIC. The Roadmap also includes a new major thrust area: Linear Microcircuits. Over the past several years, obsolescence in this class of microcircuits has greatly increased and has become a significant concern. These are classes of microcircuits that are expected to become non-procurable in FY 17 and beyond. Without the technologies planned on the MAE Roadmap, DLA will not be able to support DoD's requirements for high quality spare parts for critical electronic systems and subsystems.

The Strategic Materials roadmap is a new thrust for the DLA Mantech program. It is designed to ensure that critical strategic materials are available from domestic sources and that process innovations are in place to efficiently process or recover strategic materials. Domestic capabilities can enhance national security and potentially reduce Defense Stockpile requirements.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018
Title: Maintaining Viable Supply Sources (formally High Quality Sources)	10.188	0.000	-
FY 2016 Accomplishments: MAE continued planning for the specific emulation technology implementations to support specific device family groups in consonance with customer and agency requirements. MAE completed development and transitioned higher density Read-Only and Random-Access Memory, Advanced Emitter-Coupled Logic and Closed-Cell CMOS capabilities into full-scale production, further increasing DLA's ability to re-establish sourcing of non-procurable microcircuit NSNs. The newly transitioned emulation capabilities address several discontinued device families and will increase the potential emulation production envelope by several hundred NSNs. MAE also initiated new implementations including development of TTL-Compatible CMOS Emulation Capability and development of reverse engineering and design capability for Field-Programmable Gate Arrays (FPGAs). It continued developing 350 nanometer Digital Emulation circuitry, bringing emulation capability that re-establishes sources for additional			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Logistics Agency		Date: May 2017	
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0708011S / <i>Industrial Preparedness</i>	Project (Number/Name) 8 / <i>Maintaining Viable Supply Sources</i> <i>(formerly High Quality Sources)</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
NSNs. AME also completed initial development and capability assessments (gap analysis) to support a new major emulation thrust to support Linear Microcircuits beginning in FY2017.			
FY 2017 Plans: FY17 Fund Realignment from BA07 to BA03 PE 0603680S			
Accomplishments/Planned Programs Subtotals		10.188	0.000
			-
C. Other Program Funding Summary (\$ in Millions)			
N/A			
Remarks			
D. Acquisition Strategy			
MAE efforts are incremental funding on a competitive awarded 5 year contract.			
Strategic Materials efforts will be competitively evaluated and awarded using Broad Agency Announcement (BAA) procedures.			
E. Performance Metrics			
Transition of one technology implementation (base array) to low-rate initial production or full-scale production. Each technology implementation increases the breadth of microcircuit part types which can be returned to a procurable status; improving readiness and avoiding the need to redesign at the next-higher level. Potential benefit to hundreds of weapon systems.			
Strategic Materials: Develop roadmap and transition targeted manufacturing technologies.			
At least 30% of the completed projects will transition.			
OSD-C financial metrics (obligation and disbursement) will be achieved.			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Logistics Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 0708011S / <i>Industrial Preparedness</i>				Project (Number/Name) 9 / <i>Improving Technical and Logistics Information (formerly Industry and Customer Collaboration)</i>			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
9: <i>Improving Technical and Logistics Information (formerly Industry and Customer Collaboration)</i>	0.000	6.362	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	6.362
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Improving Technical and Logistics Information Strategic Focus Area (SFA) projects improve and facilitate the communication of technical and logistics information among industry, DLA's military customers and DLA. This SFA includes Military Unique Sustainment Technology (MUST) and the Defense Logistics Information Research (DLIR) (P.E. 0603712S) within its scope. The movement of the DLIR related work from P.E. 0603712S to the DoD ManTech Program aligns the funding to the critical interface between DLA and industry and away from internal DLA operations.

The MUST focus addresses GAO Report 12-707 recommendations that DoD to establish a "knowledge-based approach" to collaborate on define and communicate of military unique requirements. DLA has the responsibility to communicate and manage the technical requirements among the Services and the Defense Industrial Base. Currently, there is no common environment for collaborating on new requirements among the stakeholders. The strategic objective of the DLA MUST program is to identify, develop and adopt technologies that can significantly reduce the lead-time between Individual Item and Equipment (IIE) development and sustainment from years to months. The program focuses on technologies that will transform the military IIE supply chain from an "electronic paper" (i.e. PDF/MS Word) based, manual environment into a knowledge based automated environment. The resulting approach will be a neutral platform that will seamlessly communicate military unique technical requirements throughout the end to end supply chain.

The DLIR Model Based Enterprise effort will develop capabilities to systematically accept engineering and design data from the Military Services, validate and store item technical data in 3D models. There are two classes of data that must be addressed: newly designed parts for systems still in development and legacy parts for systems that are in sustainment. The problem with newly designed parts is capturing the complete and accurate designs. The legacy parts do not have digital engineering models which recreate the design in contemporary engineering systems.

The Technical and Logistical Data Interoperability will pioneer methods to capture data from military Services, Original Equipment Manufacturers (OEMs), and suppliers to form a seamless thread of interoperable and linked data models.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018
Title: Improving Technical and Logistics Information (formally Industry and Customer Collaboration)	6.362	0.000	-
FY 2016 Accomplishments:			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Logistics Agency		Date: May 2017	
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0708011S / <i>Industrial Preparedness</i>	Project (Number/Name) 9 / <i>Improving Technical and Logistics Information (formerly Industry and Customer Collaboration)</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
<p>The MUST program completed plans to set up distributed pilots of the knowledge based approach. The pilots are developing and demonstrating a digital specification authoring tool, a 3D visualization tool, and technology to streamline the transition of requirements from the Services to DLA. This technology allows DLA, its customers and suppliers to access, manage and share technical requirements in a common format.</p> <p>The DLIR program completed the Strategic Sourcing Tool Project which provided an automated and repeatable process with an accompanying application for rapidly identifying commercially available equivalents for stocked NSNs.</p> <p>Additionally, the DLIR program initiated the Product Lifecycle Management (PLM) Interoperability Project. Currently, technical part data must be manually aggregated and interpreted, and then re-entered and verified within the various systems used by the Services, DLA, and its suppliers, to ensure consistency of all requirements. This project will attempt to semi-automate integration of requirements within each system, improve exchange across systems, and ensure that all participants are made aware of changes that affect these requirements.</p> <p>FY 2017 Plans: FY17 Fund Realignment from BA07 to BA03 PE 0603680S</p>			
Accomplishments/Planned Programs Subtotals		6.362	0.000
C. Other Program Funding Summary (\$ in Millions)			
N/A			
Remarks			
D. Acquisition Strategy			
Delivery/Task Orders are awarded against a competitively awarded IDIQ contracts.			
E. Performance Metrics			
<p>The metrics for ICC are error elimination in engineering and technical data, including omissions and uncertainties in specifications, streamlining vendor level of effort associated with completing procurements, and improved collaboration among the Services, DLA and the industrial base. The result will lead to reduced lead-time, inventory and to avoid the costs of defective material.</p> <p>At least 30% of the completed projects will transition.</p> <p>OSD-C financial metrics (obligation and disbursement) will be achieved.</p>			

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Defense Logistics Agency	Date: May 2017
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Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0708012S / <i>Pacific Disaster Centers</i>
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COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	16.582	1.709	1.754	1.770	-	1.770	1.770	1.770	1.785	1.821	Continuing	Continuing
1: <i>Logistics Support Activities (LSA)</i>	12.488	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	12.488
2: <i>Pacific Disaster Center</i>	4.094	1.709	1.754	1.770	-	1.770	1.770	1.770	1.785	1.821	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Pacific Disaster Center (PDC) has been in operation since February 1996. The PDC is a public/private partnership managed by the University of Hawaii (UH) under a cooperative agreement with the Department of Defense. It is functionally within the organization of the Office of the Under Secretary of Defense (Acquisition, Technology, and Logistics) (OUSD(AT&L)) and the Defense Logistics Agency (DLA). The PDC is a world-recognized authority and leader in science and information technology applications relating to humanitarian assistance and disaster relief (HA/DR). PDC develops new and innovative technologies to operate an (unclassified) integrated multi-hazard hazard monitoring, early warning and decision support system, called RAPIDS, for the department. Logistics Support Activities (LSA) transferred to outside DLA in FY15.

B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	1.770	1.754	1.755	-	1.755
Current President's Budget	1.709	1.754	1.770	-	1.770
Total Adjustments	-0.061	0.000	0.015	-	0.015
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.061	-			
• Funds Transfer	-	-	0.015	-	0.015

Change Summary Explanation

A full-year FY 2017 appropriation for this account was not enacted at the time the budget was prepared; therefore, the budget assumes this account is operating under the Continuing Appropriations Resolution, 2017 (P.L. 114-254). The amounts included for 2017 reflect the annualized level provided by the continuing resolution. Base: FY18PB (\$1.754M) + Request for Additional Appropriation (\$0.000M).

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Logistics Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 0708012S / Pacific Disaster Centers				Project (Number/Name) 1 / Logistics Support Activities (LSA)			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
1: Logistics Support Activities (LSA)	12.488	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	12.488
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This program is reported in accordance with Title 10, United States Code, Section 119 (a)(1) in the Special Access Program Annual Report to Congress. The USD(P) will continue to be the Operational Sponsor and functional OSD Principal Staff Assistant (PSA) for the program.

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Logistics Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 0708012S / Pacific Disaster Centers				Project (Number/Name) 2 / Pacific Disaster Center			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
2: Pacific Disaster Center	4.094	1.709	1.754	1.770	-	1.770	1.770	1.770	1.785	1.821	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Pacific Disaster Center (PDC) has been in operation since February 1996. The PDC is a public/private partnership managed by the University of Hawaii (UH) under a cooperative agreement with the Department of Defense. It is functionally within the organization of the Office of the Under Secretary of Defense (Acquisition, Technology, and Logistics) (OUSD(AT&L)) and the Defense Logistics Agency (DLA). The PDC is a world-recognized authority and leader in science and information technology applications relating to Humanitarian Assistance and Disaster Relief (HA/DR). It has developed innovative technologies, and has provided operational support for an (unclassified) integrated multi-hazard hazard monitoring, early warning and decision support system, called RAPIDS, for the department since 2007. The system, covering global hazard is frequently used by COCOMS, particularly PACOM and SOUTHCOM, for HA/DR missions and exercises, and was recently selected as one of the most effective systems in a position paper by the department, reviewing all unclassified information sharing systems.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018
Title: Pacific Disaster Center (PDC)	1.709	1.754	1.770
<p>Description: This program is reported in accordance with Title 10, United States Code, Section 119 (a)(1) in the Special Access Program Annual Report to Congress. The USD(P) will continue to be the Operational Sponsor and functional OSD Principal Staff Assistant (PSA) for the program. USD(AT&L) will provide acquisition oversight authority for the program.</p> <p>The Pacific Disaster Center (PDC) has been in operation since February 1996. The PDC is a public/private partnership managed by the University of Hawaii (UH) under a cooperative agreement with the Department of Defense. The Pacific Disaster Center (PDC) function, manpower, and budget resources transferred to the Office of the Under Secretary of Defense (Acquisition, Technology, and Logistics) (OUSD(AT&L)) and the Defense Logistics Agency (DLA) in October 2011.</p> <p>The USD(P) will continue to be the Operational Sponsor and functional OSD Principal Staff Assistant (PSA) for the program. The PDC is a world-recognized authority and leader in science and information technology applications relating to humanitarian assistance and disaster relief (HA/DR). PDC's applications and information products enhance preparedness, situational awareness, and civil-military communications for humanitarian missions worldwide, while its national-level socio-economic Risk and Vulnerability Assessments help inform strategies by measuring indicators for national resiliency using scientific methods.</p> <p>The PDC Program Office's (USD(P), ASD(HD&GS), and DASD(DC&MA)) primary responsibility is for management and stewardship of governmental funds provided in Defense Department appropriations for DoD missions associated with DoD CrM, HA/DR, Theater Security Cooperation, and Defense Support to Civil Authorities (DSCA). In doing this, the Program Office develops and provides policy, oversight and guidance, and jointly develops strategic guidelines, programmatic content and</p>			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Logistics Agency			Date: May 2017		
Appropriation/Budget Activity 0400 / 7		R-1 Program Element (Number/Name) PE 0708012S / <i>Pacific Disaster Centers</i>		Project (Number/Name) 2 / <i>Pacific Disaster Center</i>	
B. Accomplishments/Planned Programs (\$ in Millions)			FY 2016	FY 2017	FY 2018
<p>priorities with the UH and PDC. The PDC Program Office also serves as a support element of the Hawaii-based organization especially in the area of gaining Federal agency support and resources, as well as business opportunities.</p> <p>FY 2016 Accomplishments: The Pacific Disaster Center (PDC) continues to be at the forefront of improving disaster-reduction decision-support capabilities through the application of information, science and technology. PDC's products and services enhance foundational and global services supporting civil-military humanitarian assistance operations by the US Military and US agencies, state agencies, United Nation agencies, ASEAN, national governments, and International/Non-Governmental Organizations (I/NGO). Foundational and Global Services include projects supporting development, analysis, and delivery of relevant and actionable information. These activities fall into three categories: Global Information Services; Anticipatory Sciences and Socio-Economic Risk and Vulnerability Assessment; and Decision Support Platforms and Applications.</p> <p>Emphasis areas in FY 2016 include:</p> <ul style="list-style-type: none"> • Improve the simplified DisasterAWARE/RAPIDS user interface (a.k.a. "dashboard") for increased ease-of-use and situational awareness, while allowing the system to accommodate "no/low bandwidth" operational mode (enabling better support to mobile platforms, as well as, degraded communications) • Extend and enhance mobile computing and situational awareness platform for DisasterAWARE/RAPIDS to include: <ul style="list-style-type: none"> a) cross-device and cross-platform functionality, optimized for touch interface appropriate for mobile devices; b) limited "down range" data collection & sharing capabilities (e.g., damage photos, voice memos, etc.) c) investigate and implement degraded but functional/operational "off-grid" capabilities d) investigate and implement user customization and data import capabilities • Enhance DisasterAWARE's social media/network visualization capabilities, in collaboration with partners such as ONR-funded research in the subject matter • Extend and enhance Bio Surveillance capabilities in collaboration with Navy and Defense Threat Reduction Agency's (DTRA) Bio Surveillance Portal (BSP) Joint Program Executive Office • Extend collaboration with DTRA & other data providers in enhancing data fusion capabilities • Continue to emphasize and participate jointly- and externally-funded research and application programs to enhance the Center's capabilities and experiences which in turn can be operationalize and applied in direct support of DoD HA/DR and DSCA missions • Continue to grow competitive grants and proposals as a means to expand the center's capabilities, and leverage these new capabilities in support of DoD missions <p>FY 2017 Plans: Risk and Vulnerability Assessment</p> <ul style="list-style-type: none"> • Explore trends and shifts in risks and vulnerability using the last 7 years of data. 					

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Logistics Agency		Date: May 2017		
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0708012S / Pacific Disaster Centers	Project (Number/Name) 2 / Pacific Disaster Center		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017	FY 2018
<ul style="list-style-type: none">Explore creating country-report where subnational data are available (based on COCOM NDPBA country projects) <p>Data</p> <ul style="list-style-type: none">In accordance with the latest (DRAFT) DoD study for unclassified information systems for disaster preparedness, enhance development of standard protocols for interoperability.Continue development of new data sources for hazards and related observational data TBD <p>Modeling</p> <ul style="list-style-type: none">Explore incorporating impacts from hazard models into the definition of disasters within the system.Continue enhancing application of hazard models to estimating initial needs for HA/DR support missions <p>Applications</p> <ul style="list-style-type: none">Enhance RAPIDS functionality based on user feedback and requirementsContinue improving stabilization of the platform by increasing cloud-based utilizationContinue evaluating new and innovative technologies for enhancing user experience (for RAPIDS) <p>FY 2018 Plans:</p> <p>Risk and Vulnerability Assessment</p> <ul style="list-style-type: none">Explore trend analysis based on existing Global RVA data accumulated of the prior yearsImprove analytical reporting/visualization and automated assessment capabilities using Global RVA dataIncorporate country-report analytical capabilities into the above assessment reporting capabilities <p>Data</p> <ul style="list-style-type: none">Explore feasibility of hosting classified data in RAPIDS, should the application be hosted on SIPRContinue development of data sources for hazards and related observational data TBD <p>Modeling</p> <ul style="list-style-type: none">Integrate alerting capabilities and hazard impact modelingContinue enhancing application of hazard models to estimate initial needs for HA/DR support missions <p>Application</p>				

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Logistics Agency		Date: May 2017	
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0708012S / <i>Pacific Disaster Centers</i>	Project (Number/Name) 2 / <i>Pacific Disaster Center</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
<ul style="list-style-type: none"> Improve performance of the system and enhance user experience Improve mobile device-related features (e.g. battery usage, etc.) Continue evaluating new and innovative technologies for enhancing user experience (for RAPIDS) 			
Accomplishments/Planned Programs Subtotals		1.709	1.754
C. Other Program Funding Summary (\$ in Millions)			
N/A			
Remarks			
D. Acquisition Strategy			
<p>PDC projects beyond the baseline Situational Awareness & Decision Support Applications/Tools architecture (Atlas/EMOPS/RAPIDS) undertaken in support of the DoD Cooperative Agreement (CA) with the University of Hawaii (UH) are from PDC customers (e.g., DoD, NGOs, other nations, academia, and industry). The PDC prepares the public, disaster managers, governments, and others to mitigate the effects of disasters. The goal is to have people and technology work together to preserve life, safeguard livelihoods, protect property to foster disaster-resilient communicates. Projects obtained and funded from this customer base serve as a means to determine PDC product and services relevancy.</p>			
E. Performance Metrics			
<p>Projects objectives and tasks are designed to build upon the previous year's successes and are consistent with the framework and direction provided by the 2012-2016 PDC Strategic Plan. At the beginning of each calendar year, an Annual Plan is in-place to guide the program and enable a framework for performance feedback to the DoD PDC Program Manager, the PDC Executive Director, WHS CA Contracting Office, and the UH. At the end of each calendar year, these stakeholders meet to review the past year performance and finalize a new Annual Plan for the next calendar year. This plan details a set of specific objectives to further capabilities and capacities supporting the PDC's mission and increasing operational value to the stakeholders.</p>			

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Defense Logistics Agency	Date: May 2017
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Appropriation/Budget Activity 0400: Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development	R-1 Program Element (Number/Name) PE 0708047S / Defense Property Accountability System (DPAS)
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COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	0.000	0.000	2.154	2.924	-	2.924	2.972	3.021	3.071	3.132	Continuing	Continuing
1: DPAS	0.000	0.000	2.154	2.924	-	2.924	2.972	3.021	3.071	3.132	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Defense Property Accountability System (DPAS) provides the Department an accountability system which is fully compliant with financial reporting regulations and has a clean audit history. With an integrated accountability, utilization, maintenance, and warehouse capability, it is able to provide the Department an enterprise solution for asset management.

B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	0.000	2.154	2.924	-	2.924
Current President's Budget	0.000	2.154	2.924	-	2.924
Total Adjustments	0.000	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			

Change Summary Explanation

A full-year FY 2017 appropriation for this account was not enacted at the time the budget was prepared; therefore, the budget assumes this account is operating under the Continuing Appropriations Resolution, 2017 (P.L. 114-254). The amounts included for 2017 reflect the annualized level provided by the continuing resolution. Base: FY17PB (\$2.154M) + Request for Additional Appropriations (\$0.000).

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Logistics Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 0708047S / Defense Property Accountability System (DPAS)				Project (Number/Name) 1 / DPAS			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
1: DPAS	0.000	0.000	2.154	2.924	-	2.924	2.972	3.021	3.071	3.132	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
A. Mission Description and Budget Item Justification												
DPAS provides accountability and management functionality to the Department. The budgeted projects will provide enhancements to the existing capability, ensure efficient operability, and develop solutions for process gaps as they are discovered. The greater enhancements to DPAS allow the DoD to sunset legacy systems as DPAS assimilates the legacy functionality into its overall operations.												
B. Accomplishments/Planned Programs (\$ in Millions)										FY 2016	FY 2017	FY 2018
Title: Release DPAS v 4										-	2.154	2.924
Description: Provide enhancements to the warehouse management functions; incorporate vehicle telematics; improve the data warehousing for transaction history.												
FY 2017 Plans: Provide enhancements to the warehouse management functions; incorporate vehicle telematics; improve the data warehousing for transaction history.												
FY 2018 Plans: Provide functionality for event/project planning to include personnel and equipment resources; enhance interface with DAI to expect expense transactions for CIP Projects; provide interfaces to the Air Force logistics systems.												
Accomplishments/Planned Programs Subtotals										-	2.154	2.924
C. Other Program Funding Summary (\$ in Millions)												
N/A												
Remarks												
D. Acquisition Strategy												
N/A												
E. Performance Metrics												
DPAS will ensure the obligations and expenditures are in line with OSD (Comptroller) guidance, as currently issued.												

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**Department of Defense
Fiscal Year (FY) 2018 Budget Estimates**

May 2017



Defense Security Cooperation Agency

Defense-Wide Justification Book Volume 5 of 5

Research, Development, Test & Evaluation, Defense-Wide

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Defense Security Cooperation Agency • Budget Estimates FY 2018 • RDT&E Program

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Department of Defense
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

25 Apr 2017

Appropriation -----	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO
-----	-----	-----	-----	-----	-----	-----	-----
Research, Development, Test & Eval, DW	10,510	9,572	9,572				
Total Research, Development, Test & Evaluation	10,510	9,572	9,572				

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Department of Defense
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

25 Apr 2017

Appropriation -----	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total
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Research, Development, Test & Eval, DW	9,572	9,572		9,572	16,619		16,619
Total Research, Development, Test & Evaluation	9,572	9,572		9,572	16,619		16,619

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Department of Defense
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

25 Apr 2017

	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO
Summary Recap of Budget Activities							

Management Support	363						
Operational System Development	10,147	9,572	9,572				
Total Research, Development, Test & Evaluation	10,510	9,572	9,572				
Summary Recap of FYDP Programs							

Research and Development	10,510	9,572	9,572				
Total Research, Development, Test & Evaluation	10,510	9,572	9,572				

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Department of Defense
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

25 Apr 2017

	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Summary Recap of Budget Activities							

Management Support							
Operational System Development	9,572	9,572		9,572	16,619		16,619
Total Research, Development, Test & Evaluation	9,572	9,572		9,572	16,619		16,619
Summary Recap of FYDP Programs							

Research and Development	9,572	9,572		9,572	16,619		16,619
Total Research, Development, Test & Evaluation	9,572	9,572		9,572	16,619		16,619

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Defense-Wide
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

25 Apr 2017

	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO
Summary Recap of Budget Activities -----							
Management Support	363						
Operational System Development	10,147	9,572	9,572				
Total Research, Development, Test & Evaluation	10,510	9,572	9,572				
Summary Recap of FYDP Programs -----							
Research and Development	10,510	9,572	9,572				
Total Research, Development, Test & Evaluation	10,510	9,572	9,572				

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Defense-Wide
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

25 Apr 2017

	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Summary Recap of Budget Activities							

Management Support							
Operational System Development	9,572	9,572		9,572	16,619		16,619
Total Research, Development, Test & Evaluation	9,572	9,572		9,572	16,619		16,619
Summary Recap of FYDP Programs							

Research and Development	9,572	9,572		9,572	16,619		16,619
Total Research, Development, Test & Evaluation	9,572	9,572		9,572	16,619		16,619

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Defense-Wide
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

25 Apr 2017

Appropriation -----	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO
Defense Security Cooperative Agency	10,510	9,572	9,572				
Total Research, Development, Test & Evaluation	10,510	9,572	9,572				

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Defense-Wide
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

25 Apr 2017

Appropriation -----	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total
-----	-----	-----	-----	-----	-----	-----	-----
Defense Security Cooperative Agency	9,572	9,572		9,572	16,619	-	16,619
Total Research, Development, Test & Evaluation	9,572	9,572		9,572	16,619		16,619

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Defense-Wide
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

25 Apr 2017

Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO	S e c
160	0605502T	Small Business Innovative Research	06	363							U
		Management Support		363							
189	0605127T	Regional International Outreach (RIO) and Partnership for Peace Information Mana	07	2,116	1,424	1,424					U
190	0605147T	Overseas Humanitarian Assistance Shared Information System (OHASIS)	07	306	287	287					U
193	0607327T	Global Theater Security Cooperation Management Information Systems (G-TSCMIS)	07	7,725	7,861	7,861					U
		Operational System Development		10,147	9,572	9,572					
		Total Research, Development, Test & Eval, DW		10,510	9,572	9,572					

R-1C1F: FY 2018 President's Budget Request (Published Version), as of April 25, 2017 at 13:38:33

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Defense-Wide
 FY 2018 President's Budget Request
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 Total Obligational Authority
 (Dollars in Thousands)

25 Apr 2017

Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total	S e c
160	0605502T	Small Business Innovative Research	06								
		Management Support									U
189	0605127T	Regional International Outreach (RIO) and Partnership for Peace Information Mana	07	1,424	1,424		1,424	1,871		1,871	U
190	0605147T	Overseas Humanitarian Assistance Shared Information System (OHAISIS)	07	287	287		287	298		298	U
193	0607327T	Global Theater Security Cooperation Management Information Systems (G-TSCMIS)	07	7,861	7,861		7,861	14,450		14,450	U
		Operational System Development		9,572	9,572		9,572	16,619		16,619	
		Total Research, Development, Test & Eval, DW		9,572	9,572		9,572	16,619		16,619	

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Defense Security Cooperative Agency
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

25 Apr 2017

Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO	\$ e c
160	0605502T	Small Business Innovative Research	06	363							U
		Management Support		363							
189	0605127T	Regional International Outreach (RIO) and Partnership for Peace Information Mana	07	2,116	1,424	1,424					U
190	0605147T	Overseas Humanitarian Assistance Shared Information System (OHASIS)	07	306	287	287					U
193	0607327T	Global Theater Security Cooperation Management Information Systems (G-TSCMIS)	07	7,725	7,861	7,861					U
		Operational System Development		10,147	9,572	9,572					
		Total Defense Security Cooperative Agency		10,510	9,572	9,572					

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Defense Security Cooperative Agency
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

25 Apr 2017

Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total	S e c
160	0605502T	Small Business Innovative Research	06								
		Management Support									U
189	0605127T	Regional International Outreach (RIO) and Partnership for Peace Information Mana	07	1,424	1,424		1,424	1,871		1,871	U
190	0605147T	Overseas Humanitarian Assistance Shared Information System (OHAISIS)	07	287	287		287	298		298	U
193	0607327T	Global Theater Security Cooperation Management Information Systems (G-TSCMIS)	07	7,861	7,861		7,861	14,450		14,450	U
		Operational System Development		9,572	9,572		9,572	16,619		16,619	
		Total Defense Security Cooperative Agency		9,572	9,572		9,572	16,619		16,619	

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Appropriation 0400: Research, Development, Test & Evaluation, Defense-Wide

Line #	Budget Activity	Program Element Number	Program Element Title	Page
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190	07	0605147T	Overseas Humanitarian Assistance Shared Information System (OHASIS).....	Volume 5 - 429
193	07	0607327T	Global Theater Security Cooperation Management information Systems (G-TSCMIS)...	Volume 5 - 433

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Defense Security Cooperation Agency • Budget Estimates FY 2018 • RDT&E Program

Program Element Table of Contents (Alphabetically by Program Element Title)

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Overseas Humanitarian Assistance Shared Information System (OHASIS)	0605147T	190	07.....	Volume 5 - 429
Partner Outreach and Collaboration Support	0605127T	189	07.....	Volume 5 - 425
Small Business Innovative Research	0605502T	160	06.....	Volume 5 - 423

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Defense Security Cooperation Agency	Date: May 2017
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Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 6: RDT&E Management Support</i>					R-1 Program Element (Number/Name) PE 0605502T / <i>Small Business Innovative Research</i>							
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	0.409	0.363	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
0000: <i>SMALL BUSINESS INNOVATIVE RESEARCH</i>	0.409	0.363	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

A. Mission Description and Budget Item Justification

To support the OSD Small Business Innovation Research (SBIR) and Small Technology Transfer (STTR) Program

<u>B. Program Change Summary (\$ in Millions)</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018 Base</u>	<u>FY 2018 OCO</u>	<u>FY 2018 Total</u>
Previous President's Budget	0.000	0.000	0.000	-	0.000
Current President's Budget	0.363	0.000	0.000	-	0.000
Total Adjustments	0.363	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	0.363	-			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Security Cooperation Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 6					R-1 Program Element (Number/Name) PE 0605502T / <i>Small Business Innovative Research</i>				Project (Number/Name) 0000 / <i>SMALL BUSINESS INNOVATIVE RESEARCH</i>			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
0000: <i>SMALL BUSINESS INNOVATIVE RESEARCH</i>	0.409	0.363	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
A. Mission Description and Budget Item Justification To support the OSD Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) Program												
B. Accomplishments/Planned Programs (\$ in Millions)										FY 2016	FY 2017	FY 2018
Title: Small Business Innovate Research										0.363	-	-
Description: To support the establishment of an OSD Component Commercialization Readiness												
FY 2016 Accomplishments: DSCA SBIR and STTR programs were executed within OSD guidelines.												
Accomplishments/Planned Programs Subtotals										0.363	-	-
C. Other Program Funding Summary (\$ in Millions) N/A Remarks N/A D. Acquisition Strategy N/A E. Performance Metrics Not applicable												

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Defense Security Cooperation Agency **Date:** May 2017

Appropriation/Budget Activity					R-1 Program Element (Number/Name)							
0400: Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development					PE 0605127T / Partner Outreach and Collaboration Support							
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	12.045	2.116	1.424	1.871	-	1.871	1.855	1.792	1.828	1.846	Continuing	Continuing
000000: Partner Outreach and Collaboration Support	12.045	2.116	1.424	1.871	-	1.871	1.855	1.792	1.828	1.846	Continuing	Continuing

A. Mission Description and Budget Item Justification

Partner Outreach and Collaboration Support (POCS), is an Office of the Secretary of Defense (OSD) initiative. The focus of the program is a common information technology platform (GlobalNET) to improve international partner outreach and collaboration efforts in a federated environment. A federated environment – characterized by the capacity of DoD institutions and Partners to directly share participants and content across proprietary community websites - fostering networks of partner influencers and enabling better use of DoD resources through collaboration among the Regional Centers for Security Studies, PfP and international partners, other DoD educational institutions and communities. GlobalNET currently supports over 74,000 users. The program uses spiral methodology to speed the delivery of open source collaboration technologies the user community. The Defense Security Cooperation Agency (DSCA) oversees execution of the research and development of the GlobalNET effort and its operations, and ensures that the program addresses DoD security cooperation requirements in the context of defense, interagency, and international information sharing and collaboration needs.

The GlobalNET effort focuses on improving collaboration, supporting outreach efforts, and enabling communication among the Regional Centers for Security Studies, the Combatant Commanders, the DSCA, OUSD (Policy), North Atlantic Treaty Organization's (NATO) Military Partnerships Directorate (MPD), the PfP Consortium of Defense Academies, PfP Partner countries, and other DoD institutions and communities. It provides DoD and international partner security practitioners a platform to share information, communicate and collaborate globally 24/7, and supports administrative activities. It provides the ability to form collaborative communities of interest around security issues. GlobalNET facilitates information sharing and knowledge management concepts in accordance with U.S. policy. POCS implements the Congressional endorsement for the modernization of Defense capabilities in eligible PfP countries relative to their telecommunications infrastructure, and provides allies and partner countries the ability to team in critical cooperative activities that underpin the spirit of the PfP program. The program supports PfP coalition Initiatives through the development of distributive collaboration tools to assist U.S./NATO-approved PfP cooperative activities. This support is important to achieve the interoperability/ integration outlined in the Guidance for the Employment of the Force. POCS supports internet-based education, collaboration, exercise simulations, and training center requirements.

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Defense Security Cooperation Agency				Date: May 2017	
Appropriation/Budget Activity 0400: Research, Development, Test & Evaluation, Defense-Wide I BA 7: Operational Systems Development		R-1 Program Element (Number/Name) PE 0605127T I Partner Outreach and Collaboration Support			
B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	2.116	1.424	1.871	-	1.871
Current President's Budget	2.116	1.424	1.871	-	1.871
Total Adjustments	0.000	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
Change Summary Explanation					
FY 2016 - 2018: POCS requires funds to: research and implement additional stakeholder requested items as required from multiple user communities; continue to monitor and update the accreditation and the Risk Management Framework (RMF) process supporting the DSCA CIO and the GIG waiver package as the system is hosted in a FEDRAMP certified cloud hosting facility; continue to research the computer human interface (CHI) ensuring it is closely aligned with the stakeholder workflow; continue to reduce security vulnerabilities; and research the potential to deploy a native video teleconference (VTC) capability to replace the existing commercial Adobe connect tool. Further reductions to the R&D effort would lead to cuts to the GlobalNET system development, and mandated DoD security controls, supporting over 74,000 DoD and partner members.					

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Security Cooperation Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 0605127T / Partner Outreach and Collaboration Support				Project (Number/Name) 000000 / Partner Outreach and Collaboration Support			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
000000: Partner Outreach and Collaboration Support	12.045	2.116	1.424	1.871	-	1.871	1.855	1.792	1.828	1.846	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Partner Outreach and Collaboration Support (POCS); is an Office of the Secretary of Defense (OSD) initiative. The focus of the program is a common information technology platform (GlobalNET) to improve international partner outreach and collaboration efforts in a federated environment. A federated environment – characterized by the capacity of DoD institutions and Partners to directly share participants and content across proprietary community websites - fostering networks of partner influencers and enabling better use of DoD resources through collaboration among the Regional Centers for Security Studies, PfP and international partners, other DoD educational institutions and communities. GlobalNET currently support over 74,000 users. The program uses spiral methodology to speed the delivery of open source collaboration technologies the user community. The Defense Security Cooperation Agency (DSCA) oversees execution of the research and development of the GlobalNET effort and its operations, and ensures that the program addresses DoD security cooperation requirements in the context of defense, interagency, and international information sharing and collaboration needs.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018
Title: Partner Outreach and Collaboration Support (POCS)	2.116	1.424	1.871
<p>FY 2016 Accomplishments:</p> <p>Completed major system upgrade to GlobalNET, moving from a Drupal 6 code base to Drupal 7. Upgrade included redesign of system layout, workflow, and user experience. Integrated open source Learning Management System (ILIAS). Enabled Common Access Card access for US users.</p> <p>Add redundant/additional user capacity. This includes expanding the hardware and software to an alternate site to allow additional users to access and use the system concurrently, and be a backup site in the event of a disaster or failure. Because of all of the advanced graphics and expansion of the user base, it is anticipated that we will need this additional capacity.</p> <p>Ensure that discovery is much easier including adding the capability to refine search results using a keyword based refinement methodology. The amount of data the system will be collecting dictates greater refinement of the search results. In addition, build the capability to allow the users to refine the data by multiple folders.</p> <p>FY 2017 Plans:</p> <p>Add redundant/additional user capacity. This includes expanding the hardware and software to an alternate site to allow additional users to access and use the system concurrently and be a backup site in the event of a disaster or failure. Because of all of the</p>			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Security Cooperation Agency		Date: May 2017	
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0605127T / <i>Partner Outreach and Collaboration Support</i>	Project (Number/Name) 000000 / <i>Partner Outreach and Collaboration Support</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
advanced graphics and expansion of the user base, it is expected that we will need this additional capacity and the best plan to distribute it out to an alternate location.			
FY 2018 Plans: Continue to update the GlobalNET implementation to the newest platform stable release - allowing greater functionality and better security across all members of the platform.			
Recertify the security accreditation process which also reflects the new and updated software capabilities as well newly integrated educational organizations.			
Conduct the research and define the requirements for a gaming and exercise simulation module.			
Accomplishments/Planned Programs Subtotals		2.116	1.424
C. Other Program Funding Summary (\$ in Millions) N/A			
Remarks			
D. Acquisition Strategy The GlobalNET effort employs a spiral acquisition strategy ensuring a well-defined model for each institution/community that can be exported globally. The program uses a regional approach to ensure sustainable, leave-behind technology and information sharing procedures. By partnering with other U.S. Government activities, existing assets are leveraged to preserve U.S. investments, avoid duplication of effort between activities, and offer economically prudent solutions to improve information sharing and achieve U.S. security cooperation goals. Independent Operational Test teams are brought on to ensure that GlobalNET bears independent validation of the development team's effort. GlobalNET has regional based personnel to assist partners who are not familiar with social collaboration and networking media.			
E. Performance Metrics POCS development performance is measured in several methods: the successful meeting of stated performance objectives in the statement of work, and meeting target dates in the project management plan; via a combination of statistics including the number of trouble tickets generated on the development site, operational user feedback on development site usability, and design; and the system's performance during developmental and operational testing. The use of a 3rd party to execute the operational test ensures that the system meets the performance metrics prior to moving to production.			

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Defense Security Cooperation Agency **Date:** May 2017

Appropriation/Budget Activity					R-1 Program Element (Number/Name)							
0400: Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development					PE 0605147T / Overseas Humanitarian Assistance Shared Information System (OHASIS)							
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	1.404	0.306	0.287	0.298	0.000	0.298	0.304	0.303	0.309	0.312	Continuing	Continuing
000204: Overseas Humanitarian Assistance Shared Information System	1.404	0.306	0.287	0.298	0.000	0.298	0.304	0.303	0.309	0.312	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Overseas Humanitarian Assistance Shared Information System (OHASIS) provides stakeholders of DoD Humanitarian Assistance (HA) programs, including embassy staff, the Combatant Commands, the Defense Security Cooperation Agency (DSCA), and a broad range of Department of Defense and interagency partners, the capability to manage, support, and visualize Overseas Humanitarian, Disaster, and Civic Aid (OHDACA) funded projects on a web-based map display, in addition to automating report generation, providing tools to coordinate with Interagency and partner nation stakeholders, and perform a variety of analyses.

Under the direction of DSCA, the U.S. Army Corps of Engineers, Army Geospatial Center (AGC) is responsible for the entire lifecycle--from system definition to development, support, training, and product improvement of OHASIS. The AGC has been responsible for the OHASIS system since 2005 and has evolved it to the present 2.5 system, which contains more than 16,000 active projects (7,000 of which have been completed) valued at more than \$2.3 billion, with a community of over 6,000 users. The OHASIS system is a critical and mission essential means for thousands of military and civilian users to develop, staff, coordinate, approve, fund, implement, manage, and evaluate projects intended to assist the Combatant Commands in accomplishing theater campaign plan objectives and achieve strategic ends states in support of U.S. national security and foreign policy interests.

B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	0.306	0.287	0.298	0.000	0.298
Current President's Budget	0.306	0.287	0.298	0.000	0.298
Total Adjustments	0.000	0.000	0.000	0.000	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			

Change Summary Explanation

FY16-18: No significant change, the increase or decrease is a small inflation amount. The Overseas Humanitarian Assistance Shared Information System requires \$.3M to continue to provide web-based lifecycle management of Humanitarian Assistance projects to the Combatant Commands.

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Security Cooperation Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 0605147T / Overseas Humanitarian Assistance Shared Information System (OHASIS)				Project (Number/Name) 000204 / Overseas Humanitarian Assistance Shared Information System			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
000204: Overseas Humanitarian Assistance Shared Information System	1.404	0.306	0.287	0.298	0.000	0.298	0.304	0.303	0.309	0.312	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Overseas Humanitarian Assistance Shared Information System (OHASIS) provides stakeholders of DoD Humanitarian Assistance (HA) programs, including embassy staff, the Combatant Commands, the Defense Security Cooperation Agency (DSCA), and a broad range of Department of Defense and interagency partners, the capability to manage, support, and visualize Overseas Humanitarian, Disaster, and Civic Aid (OHDACA) funded projects on a web-based map display, in addition to automating report generation, providing tools to coordinate with Interagency and partner nation stakeholders, and perform a variety of analyses.

Under the direction of DSCA, the U.S. Army Corps of Engineers, Army Geospatial Center (AGC) is responsible for the entire lifecycle--from system definition to development, support, training, and product improvement of OHASIS. The AGC has been responsible for the OHASIS system since 2005 and has evolved it to the present 2.5 system, which contains more than 16,000 active projects (7,000 of which have been completed) valued at more than \$2.1 billion, with a community of over 6,000 users. The OHASIS system is a critical and mission essential means for thousands of military and civilian users to develop, staff, coordinate, approve, fund, implement, manage, and evaluate projects intended to assist the Combatant Commands in accomplishing theater campaign plan objectives and achieve strategic ends states in support of U.S. national security and foreign policy interests.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Title: Overseas Humanitarian Assistance Shared Information System	0.306	0.287	0.298	0.000	0.298
FY 2016 Accomplishments: Refactored entire code base to conform to DISA's Application Security and Development Security Technical Implementation Guide (STIG)					
Started registration in eMASS for Risk Management Framework					
Implemented DOD Password Rules and Access Policy					
Developed warehouse map for Okinawa warehouse to visually locate inventory in the warehouses					

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Security Cooperation Agency				Date: May 2017				
Appropriation/Budget Activity 0400 / 7		R-1 Program Element (Number/Name) PE 0605147T / Overseas Humanitarian Assistance Shared Information System (OHASIS)		Project (Number/Name) 000204 / Overseas Humanitarian Assistance Shared Information System				
B. Accomplishments/Planned Programs (\$ in Millions)				FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
<p>Implemented an enhanced warehouse reporting capability</p> <p>Launched new mapping tool that will have more analytical features and is compatible with mobile operating systems including Apple's iOS.</p> <p>FY 2017 Plans: Migrate OHASIS 2.5 to new virtualized machine in accordance to RMF control sets</p> <p>Develop and implement strategy to launch OHASIS version 2.5 which will transfer OHASIS production hosting to a Federal Risk and Authorization Management Program (FedRAMP) cloud-based hosting infrastructure or Army hosted servers on Non-Secure Internet Protocol Router NETwork (NIPRNET)</p> <p>Implement new Assessment, Monitoring and Evaluation framework for enhanced project management and analysis</p> <p>Assess low-bandwidth requirements and develop strategy to implement a corresponding version of OHASIS, as warranted</p> <p>FY 2018 Base Plans: Develop and launch low-bandwidth version of OHASIS that provides basic program tools (view only, task response, reports, minimal editing)</p> <p>Improve usability of project nomination and explore software optimization techniques to reduce load times and improve user experience</p> <p>Develop software infrastructure for CAC-enabled capability (full OHASIS or limited capability) contingent on evolving access requirements</p> <p>Continue to find more efficient ways of integrating with other systems including Pacific Disaster Center, REDi, Cooperation Security JCTD, GTSCMIS, USAID, CAOS, Foreign Assistance Dashboard, MARCIMs, etc.</p> <p>FY 2018 OCO Plans:</p>								

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Security Cooperation Agency				Date: May 2017	
Appropriation/Budget Activity 0400 / 7		R-1 Program Element (Number/Name) PE 0605147T / Overseas Humanitarian Assistance Shared Information System (OHASIS)		Project (Number/Name) 000204 / Overseas Humanitarian Assistance Shared Information System	
B. Accomplishments/Planned Programs (\$ in Millions)				FY 2016	FY 2017
				FY 2018 Base	FY 2018 OCO
				FY 2018 Total	
N/A					
Accomplishments/Planned Programs Subtotals				0.306	0.287
				0.298	0.000
				0.298	
C. Other Program Funding Summary (\$ in Millions)					
N/A					
Remarks					
N/A					
D. Acquisition Strategy					
The program employs an incremental technology development and implementation strategy to ensure a desired capability is delivered in a relevant timeframe. This strategy also will continue to leverage industry standard technologies for web development, database technology, database modeling, geographic information systems, reporting, and documentation. As additional users require the system, it will continue to be developed with scalability and maintainability as key considerations. Additionally, this capability will help DoD better collaborate and support external agencies and their programs by leveraging the web services that have been designed in the initial baseline.					
E. Performance Metrics					
OHASIS project performance is measured in several methods: the successful meeting of stated performance objectives in the statement of work and meeting target dates in the project management plan, and successful management of the full life cycle of the over 1,000 Overseas Humanitarian Disaster and Civic Aid (OHDACA) projects per Fiscal Year.					

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Defense Security Cooperation Agency										Date: May 2017		
Appropriation/Budget Activity					R-1 Program Element (Number/Name)							
0400: Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development					PE 0607327T / Global Theater Security Cooperation Management information Systems (G-TSCMIS)							
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	23.258	7.725	7.861	14.450	0.000	14.450	13.350	11.907	12.145	12.124	Continuing	Continuing
1: Global Theater Security Cooperation Management information Systems (G-TSCMIS)	23.258	7.725	7.861	14.450	-	14.450	13.350	11.907	12.145	12.124	Continuing	Continuing

A. Mission Description and Budget Item Justification

Global Theater Security Cooperation Management information System (G-TSCMIS) Program is an Office of the Secretary of Defense (OSD) initiative to develop and deploy a common web-based, centrally hosted Management Information System (MIS) that will serve as the information focus point for the Nation's Security Cooperation (SC) efforts by providing decision makers, SC planners and other users with the ability to view, manage, assess, and report SC activities and events. G-TSCMIS will consolidate, improve upon, and replace legacy TSCMIS solutions hosted at over 20 Department of Defense (DoD) Services, Agencies, and Combatant Commands (CCDRs). It will provide a comprehensive picture of whole-of-government SC activities, and will contribute to planning more effective cooperative security activities to align or meet desired outcomes in support of SC end states. The program is an evolutionary rapid Information Technology (IT) acquisition pilot program, as described in FY 2010 National Defense Authorization Act (NDAA) Section 804, that provides users at every user command with greater capability through several iterations and releases that are developed and implemented over time. The Department of Navy (DoN) was assigned acquisition lead for the effort by Deputy Secretary of Defense (DEPSECDEF).

G-TSCMIS is a fully interoperable component of Adaptive Planning and Execution (APEX) and the DoD Joint C2 (JC2) Capability. The effort will support the strategic planning of CCDRs by providing access to reports of programs, activities, events, funding, assessments, and status of achieving defined end states. G-TSCMIS will provide visualization, assessment, reporting, and data management throughout the conduct of SC activities planning and execution phases. Information from the SC activities will be binned by separate SC programs, budget lines/funding streams, equipment drawdown, etc. This will enable users at the tactical level to focus on specific programs, participating forces, events, and activities, while users at the strategic level will be able to access summary reports of geographic regions, resource requirements, or total expenditure of funds by source. G-TSCMIS support to DoD's SC reporting requirements is mandated by federal law for many SC programs and activities. To adhere to U.S. regulations, G-TSCMIS reports will be tailored to include programs, events, and activities by category, geographical areas, assessments, U.S. staffing levels, and sources of funding.

G-TSCMIS will interface with other systems, such as Joint Training Information Management System (JTIMS), Overseas Humanitarian Assistance Shared Info System (OHASIS), and Global Force Management - Data Initiative (GFM-DI). G-TSCMIS must also be interoperable with the other United States Government (USG) foreign assistance and international cooperation information systems. G-TSCMIS will allow decision makers and analysts to identify redundant investments, plan more effective engagements, and find gaps and opportunities for building more capable partners. The program uses multiple, rapidly executed releases of capability beginning with a Milestone B equivalent initial build decision held in Quarter 1 FY 2012, which resulted in approval from the Milestone Decision Authority (MDA) to enter the Incremental and Iterative Development and Deployment (IIDD) phase. The initial releases require defined objectives and mature technology. Based on analysis of

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Defense Security Cooperation Agency	Date: May 2017
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Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0607327T I <i>Global Theater Security Cooperation Management information Systems (G-TSCMIS)</i>
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required capabilities and resources, the Program Office is planning on executing G-TSCMIS in four major releases, each with three iterations, across the period of FY2012-FY2020.

B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	7.725	7.861	14.450	0.000	14.450
Current President's Budget	7.725	7.861	14.450	0.000	14.450
Total Adjustments	0.000	0.000	0.000	0.000	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			

Change Summary Explanation

FY 2016 - 2018: An increase in control from \$7.861M in FY17 to \$14.450M in FY18 is required for development contract award of the fourth release, Release 4. New requirements resulted from the Joint Staff J6 Requirements Workshop in Jun 2015 which added additional developmental efforts to the fourth release. New capabilities will include the ability for conducting strategic-level analysis, assessment, and decision making by senior OSD, CJCS and MILDEP stakeholders via the Strategic Visualization and Decision Support component; non-DoD CAC/PKI Token Access which will support Inter-agency access from non-DOD agencies such as the Department of State; a document repository so all pertinent security cooperation documentation from each user's organization is easily shared and accessible. Further improvements will be accomplished on the Cross-Domain Solution (CDS), which will allow the transfer of data/documents from SIPRNet to NIPRNet; the addition of four Authoritative Data Sources (ADS) which are a major component of G-TSCMIS data and reduce user re-entry resulting in a positive operational impact and higher quality of data -- i.e. completeness and accuracy; expansion of Attribute-Based Access Control (ABAC), which will facilitate dynamic creation and maintenance of access control policies, subject attributes, and resource attributes.

FY18 controls also required for program support for the acquisition, system development test and evaluation, systems engineering, cybersecurity, training development, and cross domain solution implementation fees. If full FY18 funds are not received, the scope of the Release 4 development contract would be reduced and the acquisition effort would be required beyond FY20. By not delivering all key capabilities in this final release, severe impacts on the security cooperation user community would occur as the demand signal to use G-TSCMIS increases

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Security Cooperation Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 0607327T / Global Theater Security Cooperation Management information Systems (G-TSCMIS)				Project (Number/Name) 1 / Global Theater Security Cooperation Management information Systems (G-TSCMIS)			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
1: Global Theater Security Cooperation Management information Systems (G-TSCMIS)	23.258	7.725	7.861	14.450	-	14.450	13.350	11.907	12.145	12.124	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

An increase in control from \$7.861M in FY17 to \$14.450M in FY18 is required for development contract award of the fourth release. New requirements resulted from the Joint Staff J6 Requirements Workshop in Jun 2015 which added additional developmental efforts to the fourth release. New capabilities will include the ability for conducting strategic-level analysis, assessment, and decision making by senior OSD, CJCS and MILDEP stakeholders via the Strategic Visualization and Decision Support component; non-DoD CAC/PKI Token Access which will support Inter-agency access from non-DOD agencies such as the Department of State; a document repository so all pertinent security cooperation documentation from each user's organization is easily shared and accessible. Further improvements will be accomplished on the Cross-Domain Solution (CDS), which will allow the transfer of data/documents from SIPRNet to NIPRNet; the addition of four Authoritative Data Sources (ADS) which are a major component of G-TSCMIS data and reduce user re-entry resulting in a positive operational impact and higher quality of data -- i.e. completeness and accuracy; expansion of Attribute-Based Access Control (ABAC), which will facilitate dynamic creation and maintenance of access control policies, subject attributes, and resource attributes.

A. Mission Description and Budget Item Justification

Global Theater Security Cooperation Management information System (G-TSCMIS) Program is an Office of the Secretary of Defense (OSD) initiative to develop and deploy a common web-based, centrally hosted Management Information System (MIS) that will serve as the information focus point for the Nation's Security Cooperation (SC) efforts by providing decision makers, SC planners and other users with the ability to view, manage, assess, and report SC activities and events. G-TSCMIS will consolidate, improve upon, and replace legacy TSCMIS solutions hosted at over 20 Department of Defense (DoD) Services, Agencies, and Combatant Commands (CCDRs). It will provide a comprehensive picture of whole-of-government SC activities, and will contribute to planning more effective cooperative security activities to align or meet desired outcomes in support of SC end states. The program is an evolutionary rapid Information Technology (IT) acquisition pilot program, as described in FY 2010 National Defense Authorization Act (NDAA) Section 804, that provides users at every user command with greater capability through several iterations and releases that are developed and implemented over time. The Department of Navy (DoN) was assigned acquisition lead for the effort by Deputy Secretary of Defense (DEPSECDEF).

G-TSCMIS is a fully interoperable component of Adaptive Planning and Execution (APEX) and the DoD Joint C2 (JC2) Capability. The effort will support the strategic planning of CCDRs by providing access to reports of programs, activities, events, funding, assessments, and status of achieving defined end states. G-TSCMIS will provide visualization, assessment, reporting, and data management throughout the conduct of SC activities planning and execution phases. Information from the SC activities will be binned by separate SC programs, budget lines/funding streams, equipment drawdown, etc. This will enable users at the tactical level to focus on

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Security Cooperation Agency		Date: May 2017
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0607327T / <i>Global Theater Security Cooperation Management information Systems (G-TSCMIS)</i>	Project (Number/Name) 1 / <i>Global Theater Security Cooperation Management information Systems (G-TSCMIS)</i>

specific programs, participating forces, events, and activities, while users at the strategic level will be able to access summary reports of geographic regions, resource requirements, or total expenditure of funds by source. G-TSCMIS support to DoD's SC reporting requirements is mandated by federal law for many SC programs and activities. To adhere to U.S. regulations, G-TSCMIS reports will be tailored to include programs, events, and activities by category, geographical areas, assessments, U.S. staffing levels, and sources of funding.

G-TSCMIS will interface with other systems, such as Joint Training Information Management System (JTIMS), Overseas Humanitarian Assistance Shared Info System (OHASIS), and Global Force Management - Data Initiative (GFM-DI). G-TSCMIS will also be interoperable with the other United States Government (USG) foreign assistance and international cooperation information systems. G-TSCMIS will allow decision makers and analysts to identify redundant investments, plan more effective engagements, and find gaps and opportunities for building more capable partners. The program uses multiple, rapidly executed releases of capability beginning with a Milestone B equivalent initial build decision held in Quarter 1 FY 2012, which resulted in approval from the Milestone Decision Authority (MDA) to enter the Incremental and Iterative Development and Deployment (IIDD) phase. The initial releases require defined objectives and mature technology. Based on analysis of required capabilities and resources, the Program Office is planning on executing G-TSCMIS in four major releases, each with three iterations, across the period of FY2012-FY2020.

B. Accomplishments/Planned Programs (\$ in Millions)

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
<p>Title: Global Theater Security Cooperation Management Information System (G-TSCMIS)</p> <p>FY 2016 Accomplishments: Completed development of Release 3 Iteration 1 software. This included user community testing event of Iteration 1, contractor software integration testing (CSIT), government Independent Verification and Validation (IV&V) testing, Information Assurance (IA) testing, and Integrated Test (IT). User stories and scenarios were developed to support testing.</p> <p>Detailed design of Release Iteration 2 (R3-I2) efforts completed leading up to the Critical Design Review and government acceptance of the design. Code and Unit Test for R3-I2 efforts started.</p> <p>Began the decision process to define the contract strategy for software development of remaining requirements that will be implemented in Release 4.</p> <p>Began development of new training guides and courseware to reflect major upgrades to G-TSCMIS user interface in Release 3 Iteration 2.</p> <p>FY 2017 Plans:</p>	7.725	7.861	14.450	0.000	14.450

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Security Cooperation Agency			Date: May 2017
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0607327T / <i>Global Theater Security Cooperation Management information Systems (G-TSCMIS)</i>	Project (Number/Name) 1 / <i>Global Theater Security Cooperation Management information Systems (G-TSCMIS)</i>	

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
<p>Complete development and fielding of Release 3 software. This will include CSITs for Iterations 2 and 3, and user community participation. Conduct/complete government IV&V testing, IA testing, and IT with operational test agency participation for risk reduction.</p> <p>User stories and scenarios will be developed to support testing. As each software iteration is tested and verified, installation of that iteration with all necessary IA and maintenance fixes to G-TSCMIS software will be conducted at the two data centers for operational use.</p> <p>Finalize applicable contracting documentation to support the Release 4 Request for Proposal (RFP) and begin source selection activities.</p> <p>FY 2018 Base Plans: Award the Release 4 contract and conduct post award conference; begin planning efforts and conduct both the preliminary and critical design reviews for government acceptance; conduct Code and Unit Testing, contractor software integration testing (CSIT), software acceptance testing, government Independent Verification and Validation (IV&V) testing, Information Assurance (IA) testing, and Integrated Test (IT). User stories and scenarios will be developed to support testing. Design reviews and planning efforts of new capabilities will be very technical and required full understanding of requirements. New capabilities will include the ability for conducting strategic-level analysis, assessment, and decision making by senior OSD, CJCS and MILDEP stakeholders via the Strategic Visualization and Decision Support component; non-DoD CAC/PKI Token Access which will support Inter-agency access from non-DOD agencies such as the Dept. of State; a document repository so all pertinent security cooperation documentation from each user's organization is easily shared and accessible. Further improvements will be accomplished on the Cross-Domain Solution (CDS), which will allow the transfer of data/documents from SIPRNet to NIPRNet; the addition of four Authoritative Data Sources (ADS) which are a major component of G-TSCMIS data and reduce user re-entry resulting in a positive operational impact and higher quality of data -- i.e. completeness and accuracy; expansion of Attribute-Based Access Control (ABAC), which will facilitate dynamic creation and maintenance of access control policies, subject attributes, and resource attributes.</p> <p>FY 2018 OCO Plans: N/A</p>					
Accomplishments/Planned Programs Subtotals	7.725	7.861	14.450	0.000	14.450

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Security Cooperation Agency			Date: May 2017
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0607327T / <i>Global Theater Security Cooperation Management information Systems (G-TSCMIS)</i>	Project (Number/Name) 1 / <i>Global Theater Security Cooperation Management information Systems (G-TSCMIS)</i>	

C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u> <u>Base</u>	<u>FY 2018</u> <u>OCO</u>	<u>FY 2018</u> <u>Total</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• 0605104D8Z: <i>Technical Studies</i>	0.000	0.000	0.000	-	0.000	-	-	-	-	Continuing	Continuing

Remarks

FY 2013 funding was in Office of Secretary of Defense AT&L Budget in Program Element 0605104D8Z- Technical Studies.

D. Acquisition Strategy

G-TSCMIS will follow the Rapid IT Acquisition approach as detailed in Section 804 of the 2010 National Defense Authorization Act (NDAA). G-TSCMIS will initiate an evolutionary and iterative development process for a software-only solution using multiple, rapidly executed releases of capability beginning with a Build Decision in FY2012 and enter the Incremental and Iterative Development and Deployment (IIDD) phase. Once fielded and operational on both NIPR and SIPR, users will access G-TSCMIS over a web browser with information on a centralized server. The development period is planned for FY 2012 through FY 2020. G-TSCMIS contracting used fair opportunity competitive procedures on the Indefinite Delivery Indefinite Quantity (IDIQ) MAC for Releases 1 and 2, and fair and open competition for the Release 3 contract. Barriers to competition were minimized by using performance and functional specifications and equivalent commercial standards. Release 4 will be completed by a separate contract which will be competed for under fair and open competition.

E. Performance Metrics

G-TSCMIS performance is measured in several outcome-based methods. The JC2 Capability Definition Package produced by JS J6 defines the Key Performance Parameters (KPP) and Key System Attributes (KSA) to be met. JS J6 also approved specific Measures of Effectiveness and Measures of Performance (MOE/MOP), establishing thresholds and objectives for G-TSCMIS software to meet. Successful meeting of stated performance objectives in the statement of work, and meeting cost, schedule and performance targets as defined in the G-TSCMIS Acquisition Program Baseline are key metrics for the program. The use of participating Service Operational Test Agencies to perform operational testing ensures G-TSCMIS meets the performance metrics prior to making the software operational. Additional statistics-based metrics, trouble tickets logged by the Service Desk, operational user feedback and IV&V and Developmental tests validate system performance. Major Performers: Science Applications International Corporation (SAIC) for Release 1, 2 and 3 software development.

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Exhibit R-3, RDT&E Project Cost Analysis: FY 2018 Defense Security Cooperation Agency												Date: May 2017			
Appropriation/Budget Activity 0400 / 7						R-1 Program Element (Number/Name) PE 0607327T / Global Theater Security Cooperation information Systems (G-TSCMIS)						Project (Number/Name) 1 / Global Theater Security Cooperation Management information Systems (G-TSCMIS)			
Product Development (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Systems Engineering	MIPR	SSC LANT : Charleston, SC	15.745	2.061	Dec 2015	1.026	Dec 2016	1.334	Dec 2017	0.000		1.334	Continuing	Continuing	0.000
Software Development	C/CPIF	Leidos : Reston, VA	5.231	3.787	Dec 2015	2.507	Dec 2016	0.000		0.000		0.000	Continuing	Continuing	0.000
Systems Engineering	MIPR	MITRE : San Diego	0.203	0.168	Dec 2015	0.191	Dec 2016	0.210	Dec 2017	0.000		0.210	Continuing	Continuing	0.000
Training Development	MIPR	SSC PAC : San Diego	0.201	0.166	Dec 2015	0.119	Dec 2016	0.131	Dec 2017	0.000		0.131	Continuing	Continuing	0.000
Software Development	C/CPIF	TBD : *** LOCATION ***	0.000	0.000		1.929	Mar 2018	10.477	May 2018	0.000		10.477	Continuing	Continuing	0.000
Subtotal			21.380	6.182		5.772		12.152		0.000		12.152	-	-	0.000
Test and Evaluation (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Test & Evaluation	MIPR	Various : Various	0.247	0.196	Dec 2015	0.404	Dec 2016	0.513	Dec 2017	0.000		0.513	Continuing	Continuing	-
Subtotal			0.247	0.196		0.404		0.513		0.000		0.513	-	-	-
Management Services (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support	Option/CPFF	Seaport : San Diego, CA	1.171	0.967	Dec 2015	1.203	Dec 2016	1.264	Dec 2017	-		1.264	Continuing	Continuing	-
Systems Engineering Management	Option/CPFF	Sentek : San Diego, CA	0.344	0.000	Dec 2015	0.000		0.000		-		0.000	Continuing	Continuing	-
Contract Engineering Support	SS/CPFF	Seaport : San Diego, CA	0.000	0.284	Dec 2015	0.285	Dec 2016	0.313	Dec 2017	-		0.313	Continuing	Continuing	-
Government Engineering Support	MIPR	SSC PAC : San Diego, CA	0.106	0.088	Dec 2015	0.197	Dec 2016	0.208	Dec 2017	-		0.208	Continuing	Continuing	-

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Exhibit R-3, RDT&E Project Cost Analysis: FY 2018 Defense Security Cooperation Agency												Date: May 2017		
Appropriation/Budget Activity 0400 / 7						R-1 Program Element (Number/Name) PE 0607327T / <i>Global Theater Security Cooperation Management information Systems (G-TSCMIS)</i>				Project (Number/Name) 1 / <i>Global Theater Security Cooperation Management information Systems (G-TSCMIS)</i>				

Management Services (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Travel	MIPR	SPAWAR : San Diego, CA / Charleston, SC	0.010	0.008	Dec 2015	0.000	Dec 2016	-		-		-	Continuing	Continuing	-
Subtotal			1.631	1.347		1.685		1.785		-		1.785	-	-	-

	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	23.258	7.725	7.861	14.450	0.000	14.450	-	-	-

Remarks

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Exhibit R-4, RDT&E Schedule Profile: FY 2018 Defense Security Cooperation Agency			Date: May 2017
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0607327T / <i>Global Theater Security Cooperation Management information Systems (G-TSCMIS)</i>	Project (Number/Name) 1 / <i>Global Theater Security Cooperation Management information Systems (G-TSCMIS)</i>	

	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Acquisition Milestones																												
G-TSCMIS Rel 3 FDR																												
G-TSCMIS Rel 4 Build Decision																												
G-TSCMIS Rel 4FDR																												
Iterative & Incremental Development / Deployment (IIDD) Activities Release 3																												
Systems Engineering																												
Define/Design/Develop Capabilities																												
Iterative & Incremental Development / Deployment (IIDD) Activities Release 4																												
Systems Engineering																												
Define/Design/Develop Capabilities																												

	FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Acquisition Milestones																												
G-TSCMIS Rel 3 FDR																												
G-TSCMIS Rel 4 Build Decision																												
G-TSCMIS Rel 4FDR																												
Iterative & Incremental Development / Deployment (IIDD) Activities Release 3																												
Systems Engineering																												
Define/Design/Develop Capabilities																												

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Exhibit R-4, RDT&E Schedule Profile: FY 2018 Defense Security Cooperation Agency																								Date: May 2017													
Appropriation/Budget Activity 0400 / 7										R-1 Program Element (Number/Name) PE 0607327T / Global Theater Security Cooperation Management information Systems (G-TSCMIS)										Project (Number/Name) 1 / Global Theater Security Cooperation Management information Systems (G-TSCMIS)																	
										FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022			
										1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Iterative & Incremental Development / Deployment (IIDD) Activities Release 4																																					
Systems Engineering																																					
Define/Design/Develop Capabilities																																					

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Exhibit R-4A, RDT&E Schedule Details: FY 2018 Defense Security Cooperation Agency			Date: May 2017
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0607327T / <i>Global Theater Security Cooperation Management information Systems (G-TSCMIS)</i>	Project (Number/Name) 1 / <i>Global Theater Security Cooperation Management information Systems (G-TSCMIS)</i>	

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Acquisition Milestones</i>				
G-TSCMIS Rel 3 FDR	4	2017	4	2017
G-TSCMIS Rel 4 Build Decision	2	2018	2	2018
G-TSCMIS Rel 4FDR	1	2020	1	2020
<i>Iterative & Incremental Development /Deployment (IIDD) Activities Release 3</i>				
Systems Engineering	1	2015	2	2017
Define/Design/Develop Capabilities	1	2015	2	2017
<i>Iterative & Incremental Development /Deployment (IIDD) Activities Release 4</i>				
Systems Engineering	2	2018	1	2020
Define/Design/Develop Capabilities	2	2018	4	2020

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**Department of Defense
Fiscal Year (FY) 2018 Budget Estimates**

May 2017



Defense Security Service

Defense-Wide Justification Book Volume 5 of 5

Research, Development, Test & Evaluation, Defense-Wide

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Department of Defense
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

24 Apr 2017

Appropriation	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO
Research, Development, Test & Eval, DW	8,462	9,275	12,175				
Total Research, Development, Test & Evaluation	8,462	9,275	12,175				

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Department of Defense
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

24 Apr 2017

Appropriation	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total
-----	-----	-----	-----	-----	-----	-----	-----
Research, Development, Test & Eval, DW	9,275	12,175		12,175	10,430		10,430
Total Research, Development, Test & Evaluation	9,275	12,175		12,175	10,430		10,430

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Department of Defense
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

24 Apr 2017

	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO
Summary Recap of Budget Activities							
Operational System Development	8,462	9,275	12,175				
Total Research, Development, Test & Evaluation	8,462	9,275	12,175				
Summary Recap of FYDP Programs							
Intelligence and Communications	2,533	5,034	5,034				
Research and Development	5,929	4,241	7,141				
Classified Programs							
Total Research, Development, Test & Evaluation	8,462	9,275	12,175				

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Department of Defense
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
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 (Dollars in Thousands)

24 Apr 2017

	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Summary Recap of Budget Activities							
Operational System Development	9,275	12,175		12,175	10,430		10,430
Total Research, Development, Test & Evaluation	9,275	12,175		12,175	10,430		10,430
Summary Recap of FYDP Programs							
Intelligence and Communications	5,034	5,034		5,034	5,365		5,365
Research and Development	4,241	7,141		7,141	4,565		4,565
Classified Programs					500		500
Total Research, Development, Test & Evaluation	9,275	12,175		12,175	10,430		10,430

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Defense-Wide
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
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 (Dollars in Thousands)

24 Apr 2017

	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO
Summary Recap of Budget Activities							
Operational System Development	8,462	9,275	12,175				
Total Research, Development, Test & Evaluation	8,462	9,275	12,175				
Summary Recap of FYDP Programs							
Intelligence and Communications	2,533	5,034	5,034				
Research and Development	5,929	4,241	7,141				
Classified Programs							
Total Research, Development, Test & Evaluation	8,462	9,275	12,175				

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 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

24 Apr 2017

	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Summary Recap of Budget Activities							
Operational System Development	9,275	12,175		12,175	10,430		10,430
Total Research, Development, Test & Evaluation	9,275	12,175		12,175	10,430		10,430
Summary Recap of FYDP Programs							
Intelligence and Communications	5,034	5,034		5,034	5,365		5,365
Research and Development	4,241	7,141		7,141	4,565		4,565
Classified Programs					500		500
Total Research, Development, Test & Evaluation	9,275	12,175		12,175	10,430		10,430

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Defense-Wide
 FY 2018 President's Budget Request
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 (Dollars in Thousands)

24 Apr 2017

Appropriation	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO
-----	-----	-----	-----	-----	-----	-----	-----
Defense Security Service	8,462	9,275	12,175				
Total Research, Development, Test & Evaluation	8,462	9,275	12,175				

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Defense-Wide
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

24 Apr 2017

Appropriation	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total

Defense Security Service	9,275	12,175		12,175			
Total Research, Development, Test & Evaluation	9,275	12,175		12,175			

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 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

24 Apr 2017

Appropriation: 0400D Research, Development, Test & Eval, DW

Program Line Element No Number	Item	Act	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO	S e c
188 0604130V	Enterprise Security System (ESS)	07	5,929	4,241	7,141					U
236 0305327V	Insider Threat	07	2,533	5,034	5,034					U
9999 9999999999	Classified Programs									U
	Operational System Development		8,462	9,275	12,175					
Total Research, Development, Test & Eval, DW			8,462	9,275	12,175					

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 FY 2018 President's Budget Request
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 Total Obligational Authority
 (Dollars in Thousands)

24 Apr 2017

Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Se
188	0604130V	Enterprise Security System (ESS)	07	4,241	7,141		7,141	4,565		4,565	U
236	0305327V	Insider Threat	07	5,034	5,034		5,034	5,365		5,365	U
9999	9999999999	Classified Programs						500		500	U
		Operational System Development		9,275	12,175		12,175	10,430		10,430	
Total Research, Development, Test & Eval, DW				9,275	12,175		12,175	10,430		10,430	

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Total Obligational Authority
(Dollars in Thousands)

Appropriation: 0400D Research, Development, Test & Eval, DW

Line	Program Element	Item	Act	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO	S e c
--	-----	----	---	-----	-----	-----	-----	-----	-----	-----	-
188	0604130V	Enterprise Security System (ESS)	07	5,929	4,241	7,141					U
236	0305327V	Insider Threat	07	2,533	5,034	5,034					U
		Operational System Development		8,462	9,275	12,175					
				8,462	9,275	12,175					
		Total Defense Security Service		8,462	9,275	12,175					

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Defense Security Service
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
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 (Dollars in Thousands)

24 Apr 2017

Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Sec
188	0604130V	Enterprise Security System (ESS)	07	4,241	7,141		7,141	4,565		4,565	U
236	0305327V	Insider Threat	07	5,034	5,034		5,034	5,365		5,365	U
		Operational System Development		9,275	12,175		12,175	9,930		9,930	
		Total Defense Security Service		9,275	12,175		12,175	9,930		9,930	

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Enterprise Security System	0604130V	188	07.....	Volume 5 - 465
Insider Threat	0305327V	236	07.....	Volume 5 - 471

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Defense Security Service **Date:** May 2017

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development</i>					R-1 Program Element (Number/Name) PE 0604130V / <i>Enterprise Security System</i>							
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	108.465	5.929	7.141	4.565	-	4.565	4.183	3.372	3.473	3.542	Continuing	Continuing
000: <i>Enterprise Security System</i>	108.465	5.929	7.141	4.565	-	4.565	4.183	3.372	3.473	3.542	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Defense Security Service (DSS) supports national security and the warfighter through its industrial security oversight, education, and insider threat missions. The DSS is responsible for overseeing the protection of classified information and technologies, and materials in the hands of cleared industry by ensuring compliance with the National Industrial Security Program (NISP) on behalf of 26 Department of Defense (DoD) components and 31 other U.S. Federal agencies. The NISP serves as a single, integrated, cohesive industrial security program to protect classified information and to preserve our Nation's economic and technological interests. The DSS provides security oversight, counterintelligence coverage and support to approximately 10,000 cleared companies (comprising over 13,000 industrial facilities and about 850,000 cleared contractors), and accreditation of more than 55,000 workstations across multiple and differing classified networks that process classified information and 160 Secure Internet Protocol Router Networks (SIPRNet) nodes. The DSS NISP oversight role includes responsibility for the majority of the cleared contractors in the United States to include determination, issuance, and oversight of facility security clearances and making determination that contractor employees are eligible to access classified information. The oversight roles include: Conducting required NISP assessments to deter, detect, and identify loss or compromise of classified information and ensure corrective actions; Accrediting classified contractor computer systems to allow industry to perform on classified programs; Completing Foreign Ownership, Control, and Influence (FOCI) mitigation agreements and properly analyzing, evaluating and providing oversight to cleared firms under FOCI agreements.

B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	7.929	4.241	4.565	-	4.565
Current President's Budget	5.929	7.141	4.565	-	4.565
Total Adjustments	-2.000	2.900	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-2.000	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Additional Appropriation	-	2.900	-	-	-

Change Summary Explanation

FY17 – Amended Budget Request: +2.9M - is required to address emergency warfighter readiness. Funds are needed to continue the development of the National Industrial Security System (NISS). NISS increment 2 will provide critical functionality with a cross domain solution between NIPR and SIPR environments as well as create a SIPR version of the NISS application. This capability bridges the foundational technology gap with the DSS risk based threat approach

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Defense Security Service		Date: May 2017
Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development</i>		R-1 Program Element (Number/Name) PE 0604130V / <i>Enterprise Security System</i>
<p>to oversee the protection of national security information relative to the development of our nation's most critical warfighter programs. In the absence of this capability, DSS will divert resources to legacy systems which require menial data entry rather than meaningful security, counter-intelligence operations and analysis.</p> <p>FY18 Budget Request: represents a \$2.5M decrease from the FY17 PB; the FY18 funding request of \$4.6M is required to continue development of the Defense Security Service automated mission system capabilities overseeing the protection of classified information and technologies, and materials in the hands of cleared industry. Continuous development activities are required to implement the DSS in Transition (DiT) initiatives to facilitate tailored, threat-driven security oversight and prioritized information sharing. As DoD Security Enterprise continues to evolve, several critical missions have transitioned to DSS, which drives the need for continuous application refresh of existing as well as the acquisition of new advanced technologies in support of new missions. A critical facet of DiT is Phase II of the National Industrial Security System (NISS) which will leverage event driven SIPR communications amongst DSS Components and external- organizations in lieu of schedule driven compliance. NCAISS integration with NISS will ensure access to authorized individuals with the need to know are provided with timely and relevant information to respond on anticipated threats. NCCS, the automated DD-254, will be updated to allow contractors and Government Contracting Authorities (GCAs) to review the full history of submissions for a more holistic view of security requirements and subcontractor relationships.</p>		

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Security Service										Date: May 2017		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 0604130V / Enterprise Security System				Project (Number/Name) 000 / Enterprise Security System			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
000: Enterprise Security System	108.465	5.929	7.141	4.565	-	4.565	4.183	3.372	3.473	3.542	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Defense Security Service manages the Enterprise Security System (ESS) to provide an effective, real-time, security support capability for the Military Departments, DoD Agencies, the NISP, and other Federal Agencies. In compliance with the Expanded Electronic Government, President's Management Agenda, and the DoD Enterprise Architecture Framework, ESS is the unified offering of security mission systems which facilitate and automate improved national investigative and adjudicative standards, streamline security processes, and increase DoD community collaboration.

The DSS Mission Information Technology (IT) systems provide critical service to the major DSS mission areas for Industrial Security Oversight and Security Education. DSS performs this critical function through operation of its mission production systems to include the Industrial Security Facilities Database (ISFD), the DSS Gateway, and the Security Training Education and Professionalization Portal (STEPP). RDT&E for DSS mission systems primarily includes pre-planned product improvements to the applications, researching and improving assured information sharing to better posture systems and networks against vulnerabilities, ensuring self-defense of systems and networks, and safeguarding data at all stages for the DSS to increase efficiencies by providing web-based systems to manage certification and accreditation activities. These IT systems are as follows:

Office of Designated Approving Authority (ODAA) Business Management System (OBMS). The OBMS will automate the approval and certification process of cleared industry's classified information processing security plans and operations. This will increase mission efficiency by providing a web-based system to manage certification and accreditation activities, provide improved reporting capabilities to support DSS and industry through improved metrics, accreditation timeliness and accuracy and reduce the number of unaccredited systems by providing automated notifications to DSS and industry.

EFCL: The eFCL will be a centralized repository for information of facilities participating in the National Industrial Security Program (NISP). The eFCL will capture facility information relating to a cleared facility, from the initial processing of the facility clearance, the record decision pertaining to facility clearance request, to include Foreign Ownership Control or Influence (FOCI) information, as well as decommissioning the facility clearance, and capturing the DSS oversight activities. The eFCL will provide a means for users to submit, update, search, and view facility verification requests.

Industrial Security Facilities Database (ISFD). ISFD is the main DSS mission system that tracks and executes the National Industrial Security Program for DoD and 27 other Federal Executive Agencies of cleared industrial security facilities. The ISFD provide users with a nationwide perspective on National Industrial Security Program related facilities, as well as, facilities under DSS oversight in the DoD conventional AA&E program. ISFD provides source data for the DoD Joint Personnel Adjudicative System (JPAS) and the Facility Verification Request (FVR) application.

National Industrial Security System (NISS, formerly known as Field Operations System (FOS). The NISS is slated as the next generation enterprise capability, replacing the Industrial Security Facility Database (ISFD). Additionally, NISS will provide seamless integration of other DSS systems and applications, such as eFCL, OBMS, DD-254, and Mobile Workforce Applications. NISS will provide DSS with comprehensive enhanced capability to manage its entire mission portfolio. NISS will improve

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Security Service		Date: May 2017	
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0604130V / Enterprise Security System	Project (Number/Name) 000 / Enterprise Security System	
information sharing and collaboration, providing timely and accurate data in the hands of field representatives for decision-making. The system will provide agency-wide metrics to measure and improve agency performance in providing security oversight and the protection of national security.			
The National Contract Classification System (NCCS). The Federal Acquisition Regulation (FAR) requires a DD Form 254 be incorporated in each classified contract, and the National Industrial Security Operating Manual (NISPOM)(4-103a) requires a DD 254 be issued by the government with each Invitation for Bid, Request for Proposal, or Request for Quote. The DD Form 254 provides contractor (or a subcontractor) the security requirements and classification guidance necessary to perform on a classified contract. Contract Security Classification Specification required by DoD 5220.22-4, Industrial Security Regulation and the National Industrial Security Program Operating Manual (NISPOM) is to develop a federated system for the oversight and management of providing classified information access and guidance required to perform on classified contracts. The DD 254, an underlying business processes, is critical to ensure access to our Nation’s classified information is properly safeguarded.			
National Industrial Security Program (NISP) Control Access and Information Security System (NCAISS) formerly known as Identity Management (IdM). NCAISS is mandatory for compliance with Department of Defense (DoD) Public Key Infrastructure (PKI) Program Management Office and Office of the Assistant Secretary of Defense for Networks and Information Integration (ASD-NII), Joint Task Force for Global Networks Operations (JTF-GNO) Communications Tasking Order (CTO) 06-02, CTO 07-015, and Office of Management and Budget (OMB) Memo 11-11 (M-11-11), directing accelerated use of PKI across the enterprise. This initiative is designed to enable multiple DSS business systems to have service-accessibility that is controlled through PKI-compliant single sign-on authentication. Potential expanded use of the NCAISS across the DSS enterprise to provide CAC-based authentication for business support applications to support the SIPRNet and JWICS domains, provide enhanced identity and access control analytics. It will also incorporate any remaining DSS operated application into the DSS NCAISS solution.			
B. Accomplishments/Planned Programs (\$ in Millions)	FY 2016	FY 2017	FY 2018
Title: Systems Enhancement	5.929	7.141	4.565
FY 2016 Accomplishments:			
1. NISS. Continued development of increment 1 for consolidation of ISFD and eFCL; 2 of 4 releases have been completed. Completed provisioning of the DISA MilCloud development infrastructure. Capabilities will expand with each new module.			
2. NCCS. Continued enhancements and version releases. Releases v5.8.1, v5.9, and v5.9.1 were completed as scheduled. IOC met and user rollout/deployment plan underway.			
3. OBMS. Project successfully closed out and transitioned to full sustainment (no further development). Contract with development/software maintenance vendor ended on 9/29/16.			
4. NCAISS. Continued integration and application sustainment costs, with some software upgrades. Successfully migrated from the SUN Identity management legacy software to the Oracle identity management software. NCAISS Oracle 1.0 FOC delivered.			
5. ISFD. Integrated virtualized ISFD for decommissioning of legacy, infrastructure servers. Discoverer (OBIEE) Upgrades are now deferred until NISS deployment in FY17.			
FY 2017 Plans:			
1. NISS. Complete development of NISS Increment 1 by 4Q of FY17.			
Increment 1 to include ISFD and e-FCL core functionality, and replace both			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Security Service			Date: May 2017	
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0604130V / Enterprise Security System	Project (Number/Name) 000 / Enterprise Security System		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017	FY 2018
<p>systems. Initiate Independent Verification and Validation (IV&V) and Government Acceptance Testing (GAT) of Increment 1 in 4Q of FY17. Address IV&V and GAT findings. This will constitute the Initial Operating Capability (IOC) of NISS. Initiate planning of NISS Increment 2.</p> <p>2. NCCS. Enhancements will continue in FY17 to include; enhanced search criteria, the automation of the National Interest Determinations (NID) process, data encryption, additional attachment capabilities, and various other minor enhancements to NCCS.</p> <p>3. OBMS. No future funding required.</p> <p>4. NCAISS. NCAISS integrations will continue in FY17 to include projected integrations with National Industrial Security System (NISS), SharePoint, CI Web, and Remedy. NCAISS will continue under operations and maintenance throughout FY17.</p> <p>5. ISFD. No future funding required.</p> <p>6. eFCL. Continuation of minor updates to support Field operations and continual system maintenance. A significant portion of the system updates will align operations with new policy (NISPOM Change 2). Additionally, updates will continue to improve the user experience and backend maintenance of the system.</p> <p>7. NISS. Continued development of Increment 1 for consolidation of ISFD and eFCL Working on Independent Verification and Validation (IV&V) and Government Acceptance Testing (GAT). Completed the NISS Pre-Production environment installation. Started system integration with the National Industrial Security Program (NISP) Control Access and Information Security System (NCAISS), to be completed 3Q FY17. Initiated planning of NISS Increment 2.</p> <p>8. ISFD. Completed development and deployment of virtualized ISFD (v5.0). It was deployed Q2 which mitigated infrastructure vulnerabilities. No future funding required.</p> <p>9. NCCS. FOC milestone was achieved Q1 with the release of NCCS v5.9.1. Two releases with enhancements will continue in FY17 to include; enhanced search criteria, the automation of the National Interest Determinations (NID) process, data encryption, additional attachment capabilities, and various other minor enhancements to NCCS</p> <p>10. NCAISS. NCAISS integrations will continue in FY17 to include projected integrations with National Industrial Security System (NISS), and the addition of a Stoplight Page. An instance of NCAISS will be installed in MilCloud.</p> <p>11. eFCL Continued with minor system enhancements, pending deployment of NISS.</p> <p>FY 2018 Plans:</p> <p>1. NISS. Initiate development of NISS Increment 2, subject to availability of funds. Increment 2 will include a SIPR instance of NISS, a Cross-domain Solution, and add enhancements to Security Violations, Security Vulnerability Assessments, and Suspicious Contact Reports. Initiate Independent Verification and Verification (IV&V) and Government Acceptance Testing (GAT) of Increment 2. IV&V and GAT findings will be addressed. Initiate planning of NISS Increment 3.</p>				

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Security Service		Date: May 2017	
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0604130V / <i>Enterprise Security System</i>	Project (Number/Name) 000 / <i>Enterprise Security System</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
2. NCCS. Continue scheduled enhancements through version releases and continued sustainment. Agile development approach; 2 release cycles per year. Future enhancements will address updates to the New DD254 Form.			
3. NCAISS. Continue integration and application sustainment activities.			
4. eFCL. DSS will no longer use eFCL once capabilities have transitioned into NISS.			
5. ISFD. DSS will retire ISFD once capabilities have transitioned into NISS.			
Accomplishments/Planned Programs Subtotals		5.929	7.141
C. Other Program Funding Summary (\$ in Millions) N/A			
Remarks			
D. Acquisition Strategy DSS will use a variety of acquisition appropriate vehicles such as Indefinite Delivery, Indefinite Quantity (IDIQ), Blanket Purchase Agreements (BPA), and multiple or single award contracts for the development of new applications, enhancement of other applications, and perform system integration with COTS and GOTS solutions and technology. These efforts will significantly reduce the lead time in contract award process and reduce overhead contract cost, improve technical solutions and deployments, and deliver more effective and efficient automation projects for DSS and the NISP community.			
E. Performance Metrics N/A			

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Defense Security Service **Date:** May 2017

Appropriation/Budget Activity 0400: Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development	R-1 Program Element (Number/Name) PE 0305327V / Insider Threat
---	--

COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	8.670	2.533	5.034	5.365	-	5.365	0.000	0.000	0.000	0.000	Continuing	Continuing
0305327V: Insider Threat	8.670	2.533	5.034	5.365	-	5.365	0.000	0.000	0.000	0.000	Continuing	Continuing

A. Mission Description and Budget Item Justification

The DoD Insider Threat program will provide an integrated capability to monitor and audit information for insider threat detection and mitigation. The program will gather, integrate, review, assess, and respond to information derived from CI, security, cyber security, civilian and military personnel management, workplace violence, anti-terrorism risk management, law enforcement, the monitoring of user activity on DoD information networks, and other sources as necessary and appropriate to identify, mitigate, and counter insider threats. Key elements of the Insider Threat program and security reform efforts are the implementation of Continuous Evaluation (CE) and establishment of the Defense Insider Threat Management and Analysis Center (DITMAC).

B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	2.533	5.034	0.000	-	0.000
Current President's Budget	2.533	5.034	5.365	-	5.365
Total Adjustments	0.000	0.000	5.365	-	5.365
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• One Time Increase	-	-	5.365	-	5.365

Change Summary Explanation

There is minimal increase from FY17 to FY18. The \$5.4M is required to meet the enterprise adoptability requirement goals for the platform. The DITMAC and the systems that support it (DITMAC System of Systems (DSoS)) were scoped to enable processing of reports to DITMAC only. The commencement of operations of some DoD Component Insider Threat Programs in FY16 uncovered a lack of available technical capabilities. A determination was made to offer the DSoS as the DoDs enterprise platform for insider threat related technical capabilities. The platform expansion requires a complete system re-architecture design to make the technical capabilities more readily accessible by related missions, increasing communication/information sharing, decreasing cyber vulnerabilities, and cost savings each year in software licensing and technical support.

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Security Service										Date: May 2017		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 0305327V / Insider Threat				Project (Number/Name) 0305327V / Insider Threat			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
0305327V: Insider Threat	8.670	2.533	5.034	5.365	-	5.365	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
A. Mission Description and Budget Item Justification												
The DoD Insider Threat program will provide an integrated capability to monitor and audit information for insider threat detection and mitigation. The program will gather, integrate, review, assess, and respond to information derived from CI, security, cybersecurity, civilian and military personnel management, workplace violence, anti-terrorism risk management, law enforcement, the monitoring of user activity on DoD information networks, and other sources as necessary and appropriate to identify, mitigate, and counter insider threats. Key elements of the Insider Threat program and security reform efforts are the implementation of Continuous Evaluation (CE) and establishment of the Defense Insider Threat Management and Analysis Center (DITMAC).												
B. Accomplishments/Planned Programs (\$ in Millions)									FY 2016	FY 2017	FY 2018	
Title: Insider Threat									2.533	5.034	5.365	
FY 2016 Accomplishments: Continuation of the development of the DoD Insider Threat program. Vendor continued system enhancements/development and testing. Transitioned to the Risk Management Framework (RMF) accreditation process.												
FY 2017 Plans: Funding will continue development of the DoD Insider Threat program, including the enhancement of CE and DITMAC tools and systems. Research and development efforts will be used to prove the technical capability of using automated record checks in an end-to-end process to achieve CE and influence personnel security reform. Efforts will include a synthesis of current investigative and adjudicative standards, as well as new methodologies to evaluate the whole-person concept. Further DITMAC IT Architecture Engineering Development for systems that will provide ingest, processing, and case management capabilities, relying on feeds from CE and monitoring systems.												
FY 2018 Plans: Continued development/refinement of the DSoS; development of advanced analytic tools; assessment of new technologies and interfaces for enabling external communication with the DSoS.												
Accomplishments/Planned Programs Subtotals									2.533	5.034	5.365	
C. Other Program Funding Summary (\$ in Millions)												
N/A												
Remarks												

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Security Service		Date: May 2017
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0305327V / Insider Threat	Project (Number/Name) 0305327V / Insider Threat
D. Acquisition Strategy N/A		
E. Performance Metrics TBD		

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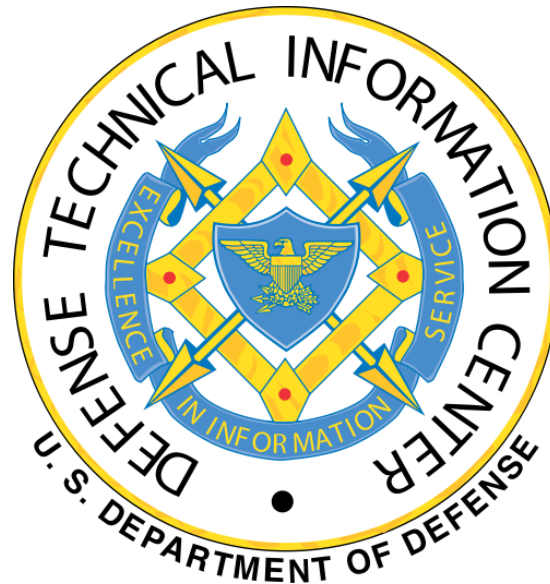
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**Department of Defense
Fiscal Year (FY) 2018 Budget Estimates**

May 2017



Defense Technical Information Center

Defense-Wide Justification Book Volume 5 of 5

Research, Development, Test & Evaluation, Defense-Wide

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Department of Defense
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

17 May 2017

Appropriation -----	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO
Research, Development, Test & Eval, DW	57,133	48,234	48,234				
Total Research, Development, Test & Evaluation	57,133	48,234	48,234				

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Department of Defense
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

17 May 2017

Appropriation -----	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total
-----	-----	-----	-----	-----	-----	-----	-----
Research, Development, Test & Eval, DW	48,234	48,234		48,234	58,332		58,332
Total Research, Development, Test & Evaluation	48,234	48,234		48,234	58,332		58,332

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Department of Defense
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

17 May 2017

	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO
Summary Recap of Budget Activities							

Management Support	57,133	48,234	48,234				
Total Research, Development, Test & Evaluation	57,133	48,234	48,234				
Summary Recap of FYDP Programs							

Research and Development	57,133	48,234	48,234				
Total Research, Development, Test & Evaluation	57,133	48,234	48,234				

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Department of Defense
 FY 2018 President's Budget Request
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 Total Obligational Authority
 (Dollars in Thousands)

17 May 2017

	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Summary Recap of Budget Activities -----							
Management Support	48,234	48,234		48,234	58,332		58,332
Total Research, Development, Test & Evaluation	48,234	48,234		48,234	58,332		58,332
Summary Recap of FYDP Programs -----							
Research and Development	48,234	48,234		48,234	58,332		58,332
Total Research, Development, Test & Evaluation	48,234	48,234		48,234	58,332		58,332

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 (Dollars in Thousands)

17 May 2017

	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO
Summary Recap of Budget Activities -----							
Management Support	57,133	48,234	48,234				
Total Research, Development, Test & Evaluation	57,133	48,234	48,234				
Summary Recap of FYDP Programs -----							
Research and Development	57,133	48,234	48,234				
Total Research, Development, Test & Evaluation	57,133	48,234	48,234				

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 (Dollars in Thousands)

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	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Summary Recap of Budget Activities -----							
Management Support	48,234	48,234		48,234	58,332		58,332
Total Research, Development, Test & Evaluation	48,234	48,234		48,234	58,332		58,332
Summary Recap of FYDP Programs -----							
Research and Development	48,234	48,234		48,234	58,332		58,332
Total Research, Development, Test & Evaluation	48,234	48,234		48,234	58,332		58,332

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 Total Obligational Authority
 (Dollars in Thousands)

17 May 2017

Appropriation -----	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO
Defense Technical Information Center	57,133	48,234	48,234				
Total Research, Development, Test & Evaluation	57,133	48,234	48,234				

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Defense-Wide
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

17 May 2017

Appropriation	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total
-----	-----	-----	-----	-----	-----	-----	-----
Defense Technical Information Center	48,234	48,234		48,234	58,332		58,332
Total Research, Development, Test & Evaluation	48,234	48,234		48,234	58,332		58,332

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Defense-Wide
 FY 2018 President's Budget Request
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 Total Obligational Authority
 (Dollars in Thousands)

17 May 2017

Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO	S e c
163	0605801KA	Defense Technical Information Center (DTIC)	06	57,133	43,834	43,834					U
167	0605998KA	Management HQ - Defense Technical Information Center (DTIC)	06		4,400	4,400					U
		Management Support		57,133	48,234	48,234					
Total Research, Development, Test & Eval, DW				57,133	48,234	48,234					

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17 May 2017

Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Se
163	0605801KA	Defense Technical Information Center (DTIC)	06	43,834	43,834		43,834	54,145		54,145	U
167	0605998KA	Management HQ - Defense Technical Information Center (DTIC)	06	4,400	4,400		4,400	4,187		4,187	U
		Management Support		48,234	48,234		48,234	58,332		58,332	
Total Research, Development, Test & Eval, DW				48,234	48,234		48,234	58,332		58,332	

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Defense Technical Information Center
 FY 2018 President's Budget Request
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 Total Obligational Authority
 (Dollars in Thousands)

17 May 2017

Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO	S e c
163	0605801KA	Defense Technical Information Center (DTIC)	06	57,133	43,834	43,834					U
167	0605998KA	Management HQ - Defense Technical Information Center (DTIC)	06		4,400	4,400					U
		Management Support		57,133	48,234	48,234					
		Total Defense Technical Information Center		57,133	48,234	48,234					

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Defense Technical Information Center
FY 2018 President's Budget Request
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Total Obligational Authority
(Dollars in Thousands)

17 May 2017

Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Se
163	0605801KA	Defense Technical Information Center (DTIC)	06	43,834	43,834		43,834	54,145		54,145	U
167	0605998KA	Management HQ - Defense Technical Information Center (DTIC)	06	4,400	4,400		4,400	4,187		4,187	U
		Management Support		48,234	48,234		48,234	58,332		58,332	
		Total Defense Technical Information Center		48,234	48,234		48,234	58,332		58,332	

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Defense Technical Information Center	Date: May 2017
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Appropriation/Budget Activity					R-1 Program Element (Number/Name)							
0400: Research, Development, Test & Evaluation, Defense-Wide / BA 6: RDT&E Management Support					PE 0605801KA / Defense Technical Information Center							
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	106.813	57.133	43.834	54.145	-	54.145	57.647	59.348	61.302	63.454	Continuing	Continuing
001: Defense Technical Information Center	94.012	51.385	38.086	49.071	-	49.071	52.631	54.332	56.286	58.438	Continuing	Continuing
002: Information Analysis Centers	12.801	5.748	5.748	5.074	-	5.074	5.016	5.016	5.016	5.016	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Defense Technical Information Center's (DTIC) unique mission is to aggregate and fuse science and technology data to provide rapid, accurate, and reliable knowledge to researchers and developers of the next generation of technologies needed to assure our national security. DTIC, a DoD Field Activity, is the DoD's singular executive agent and designated source for DoD-funded scientific, technical, engineering, and industry-related information. DTIC also operates DoD Information Analysis Centers (IACs) focused on Defense Systems, Cyber Security and Information Systems, and Homeland Defense and Security.

Each year, DoD invests over \$12.0 Billion in research, development and procurement of advanced technologies needed to defend our nation. DTIC preserves the fruits of these costly labors for reuse across the enterprise. As an efficient and cost-effective steward of technical information, DTIC provides nearly instantaneous answers to researchers seeking state-of-the-art data relevant to their projects. DTIC regularly prevents duplication of experiments, tests, and prototyping activities because researchers can see what has already been done in their field of effort, even if prior research resulted in a dead end. Their work can pick up from the point of most recent results. Using DTIC-created forums, researchers, Warfighters, and industry partners can also rapidly collaborate and connect across the DoD research and engineering (R&E) enterprise. Finally, DTIC provides a department-level map of R&D activity. This map gives decision-makers insight into current and past research, highlighting where progress is being made and by whom. Through the preservation and sharing of the results of billions of dollars of past DoD investments, DTIC increases the return on past investments and accelerates current efforts, saving the Department precious time and dollars. Through its collaboration tools and outreach to the R&E community, DTIC connects researchers across the lab enterprise, to include researchers and engineers, Warfighters and DoD's industry partners.

DTIC's strategic themes center on customer focus, innovation, operational excellence, and strategic partnering. In support of these themes, DTIC's organizational efforts are focused on the following priority areas:

- 1) Search: Develop new algorithms that enable our users to quickly discover useful information and to ensure we present the most relevant information. Expand and enhance our data collections to improve the quality and completeness of the data.
- 2) Collaboration: Provide collaboration platforms for the DoD science and technology community to work together on investments that efficiently deliver solutions to the Warfighter.
- 3) Access Identity: Strengthen methods of user authentication through the use of public key infrastructure (PKI) tokens, biometrics and other methods to grant access to recognized, trusted and authorized users. Protect intellectual property (IP) and industry proprietary data assets entrusted to DTIC's stewardship (protect information access).

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Defense Technical Information Center		Date: May 2017
Appropriation/Budget Activity 0400: Research, Development, Test & Evaluation, Defense-Wide / BA 6: RDT&E Management Support	R-1 Program Element (Number/Name) PE 0605801KA / Defense Technical Information Center	
<p>4) Data Fusion/Analysis: Gather information from multiple data sources and provide knowledge products that fuse the disparate data sets into a single view of the life cycle of research. Present an overarching picture of research investment that enables decision-makers to link multiple efforts with integrated capabilities (employ resources to highest priority efforts and coordinate efforts across Services).</p> <p>5) Cyber Security: Continue to leverage state-of-the art technologies, processes and practices designed to protect DTIC networks, computers, programs and data from attack, damage or unauthorized access.</p> <p>6) Data Center Optimization/Cloud: Migrate services to cloud providers to improve availability, redundancy, and mission flexibility; to reduce time to deliver new capabilities; to save costs; and to enhance cyber security.</p> <p>DTIC recognizes the need to accomplish its mission while increasing the value of its services and products in an environment of Department-wide budget reductions. DTIC has reduced its headquarter staffing, physical footprint, civilian personnel and support contractors. DTIC has restructured the IAC program, and continues to consolidate its data center.</p> <p>Despite reduced budgets, DTIC has taken on additional programs, to include its new role in leading the Department in efforts to provide public access to DoD-funded journal articles and research data and increase outreach to industry through DTIC's Defense Innovation Marketplace. Moreover, DTIC activities promote citizen science. Citizen science mobilizes the public to engage in the scientific process and thereby address real-world problems. Citizen scientists identify research questions, collect and analyze data, interpret results, make new discoveries, develop technologies and applications, and solve complex problems. DTIC continues to ensure its activities are efficient and effective, meet users' expectations, and employ industry best practices and standards, while protecting its wealth of information from cyber threats.</p> <p>DTIC's restructured Information Analysis Centers (IACs) drive innovation and technological development by anticipating and responding to the information needs of the defense and broader community. The IAC Program Office provides core funding, management and oversight of three IACs, which are chartered by DoD to collect, analyze, and disseminate worldwide scientific and technical information in specialized fields. The IAC multi-award task order contracts ensure that new research, analysis, and development builds on prior investments and puts to work the best practices of government, industry, and academia. The IAC approach was identified as a "best practice" by the Director of Defense Procurement and Acquisition Policy in a January 2015 memo wherein he promoted maximum use of the IAC contracts across DoD. The IACs are structured into three application areas: Cyber Security and Information Systems, Homeland Defense and Security, and Defense Systems. As part of the Department's acquisition improvement initiatives, the IAC multi-award contracts enhance competition, increase usage of small businesses, and reduce costs. For the last several years, competition inherent in the IAC model has produced savings of 17-25 percent over projected costs, delivering vetted technical expertise to address many of the complex challenges DoD faces. An independent assessment by the Center for Strategic and International Studies reported that the IACs improve affordability, productivity, and standardization within defense acquisition programs. Providing the acquisition enterprise access to thousands of industry subject matter experts, DTIC's IACs perform over \$1.0 Billion of customer-funded research and prototyping annually. The results of the work are a rich source of new material in DTIC's information asset collections and are available to users across the Department (and other federal agencies, e.g., Department of Energy, Department of Homeland Security).</p> <p>This Program Element (PE) supports DTIC mission operations. DTIC focuses on three core mission areas (Collection, Dissemination and IACs) and purchases space and shared services (e.g., human resources (HR); financial management; contracting; IT security; communications; and civilian payroll services) from expert and efficient DoD providers.</p>		

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B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	56.775	43.834	45.504	-	45.504
Current President's Budget	57.133	43.834	54.145	-	54.145
Total Adjustments	0.358	0.000	8.641	-	8.641
• Congressional General Reductions	0.000	-			
• Congressional Directed Reductions	0.000	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Program Change	0.358	-	9.055	-	9.055
• Service Requirements Review Board (SRRB) Reduction	-	-	-0.592	-	-0.592
• Program Adjustments	-	-	0.178	-	0.178

Change Summary Explanation

Specific changes to the FY 2018 program (a net increase of \$8.641 Million from the previous FY 2018 PB Base) are outlined below:

FY 2018 Program Changes: The Department added \$9.055 Million to the FY 2018 DTIC program as a means of resetting the DTIC budget top-line, which had seen a general decline since FY 2011. Absent the requested increase, DTIC would be forced to cease most capability development and to limit efforts on cybersecurity. These constraints would translate to increased risk on the cybersecurity front and reduced search and retrieval effectiveness, i.e., DoD researchers would incur increased costs and delays in solving technology challenges related to fielding needed warfighting capabilities.

The funding infusion enables DTIC to keep closer pace with the advance of the state of the art in the science and technology data collections, to refresh outdated and increasingly unsupportable infrastructure, to pursue strategic improvement in tools used by users to search and find needed information, and to begin DTIC's migration to a cloud host. Marketplace realities force DTIC to refresh commercial-off-the-shelf technologies supporting information search, storage, and retrieval. These upgrades are driven by constant evolution of information technology and the reality that vendors enhance or discontinue products as a means of remaining competitive. This dynamic is not new. The eight previous search engines DTIC deployed, over two decades, have been discontinued by the manufacturer. In addition, user identity management continues to evolve, and DTIC must keep pace. In recent years, DTIC has added support for multiple variants of the government Public-Key Infrastructure card (CAC) used by DoD, other Federal Agencies, industry, and other commercial entities. In the future, we must be ready to accept other identification tokens and biometric identifiers. Finally, DTIC must find ways to support a growing variety of platforms, devices, and interfaces. Ten years ago, 99 percent of DTIC users were on Windows/IE desktop platform. Added funding will allow DTIC to deliver improved search and discovery tools, to simplify access and identity management while increasing cyber security, to provide access on our users' platform of choice – expanding to deliver to mobile devices (tables and mobile devices), and to migrate to cloud hosting. Cloud hosting merits special mention because of its promise to allow DTIC professionals

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<p>to move their focus from infrastructure maintenance to more strategic functions. Cloud hosting will enable DTIC to be more flexible and agile in meeting our mission objective and increase our ability to innovate. Use of cloud technologies to support COOP capabilities were delayed by DoD security concerns requiring policy changes for the Federal Risk and Authorization Management Program (FedRAMP). Revised FedRAMP guidance and vendor certification now allow DTIC to reconstitute this critical capability. The requested additional funding will allow increased collaboration with our partners, and allows further outreach and increased ability to educate and bring awareness to the importance of sharing their results with the community through DTIC. Funding also promotes increased attendance at scientific conferences and outreach to DoD laboratories, partnership with COCOM S&T staffs, etc., in DTIC's primary mission to find, collect and ingest S&T data for the purpose of sharing with the larger community.</p> <p>New funding supports key initiatives to develop and implement new technologies. These include search and discovery infrastructure; IT COOP reconstitution; data center consolidation and transition to cloud computing; mobile technology; user access and identity management; Controlled Unclassified Information (CUI) in support of the Executive Order 13556; Public Access to scientific data and publications, in compliance with the Executive Office of the President, Office of Science and Technology Policy; as well as efforts to address a rapidly changing and more sophisticated technological environment. While DTIC has been planning these initiatives, budget erosion and funding constraints have limited our ability to address these critical tasks. Without the Department's FY 2018 funding increase, DTIC will be unable to accomplish these initiatives. The FY 2018 investment represents a small fraction of the Department's research and development spending, and will lead to near- and long-term benefits as efficiencies in the information collection and dissemination processes are implemented. These DTIC initiatives strengthen DoD business practices and result in taxpayer savings. The FY 2018 funding increase supports the following DTIC programs/initiatives:</p> <ul style="list-style-type: none"> - Search and Discovery Infrastructure: "Search" functionality is the primary way information is shared. DTIC's funding shortfall over the past several years has reduced the effectiveness of our search. Given current funding levels, DTIC has maintained basic functionality, but has not been able to improve and incorporate new search technologies and user interfaces. This shortfall directly effects users. It makes them work harder to find the most relevant, applicable, and essential information in DTIC's collections. In a practical sense, with the Department spending \$12.0 Billion in science and technology funding per year, limited "search" capability drives up costs in the form of duplication of "search" effort, pursuing trails of approaches that have already shown to fail, and inability to find relevant research results. DTIC must invest in the latest "search" technologies to offer users a complete data picture of DoD-funded research results and reduce the expertise users must hold to find relevant information. - DTIC IT COOP Reconstitution: DTIC holds and manages over 4 million records in its collection. Funding enables DTIC to reconstitute its Continuity of Operations (COOP) systems/servers (mission-essential functions) within the 12-hour timeframe required by Department of Defense Directive 3020.26 if a catastrophic event were to take the primary system off-line. The investment lessens the risk associated with the extended loss of access to DoD-funded research data and the inability for DTIC to collect new research results. Funding supports the analysis of alternatives, system architecture, cyber risk management framework documentation/accreditation, system engineering, software development, testing, hardware procurement, software licenses, storage, and bandwidth. - Data Center Consolidation/Cloud Computing Transition: The Federal Data Center Consolidation Initiative (FDCCI) directs the reduction in physical servers and the consolidation of data centers. DTIC has reduced the number of its physical servers by 60 percent and moved to a virtualized server environment. Outsourcing to the cloud will enable DTIC to focus more resources on our core mission--delivering information through innovative applications, rather than 		

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<p>maintaining an IT platform. DTIC information services will become more flexible and innovative, shortening the gap between testing and implementation of DoD weapon systems. To operate effectively in cloud environments, DTIC must reengineer much of its information pipeline. The funding request supports the analysis of alternatives, system architecture, system engineering, cyber risk management, necessary architecture and software modifications, services costs (servers, storage, bandwidth, management, etc.), testing, and software licensing.</p> <p>- Mobile and Emerging Platform technology: DTIC serves a diverse audience. DoD users, industry partners, and academic researchers have moved from a traditional desktop Windows Internet Explorer (IE) environment to an array of devices (desktops, laptops, tablets, and mobile), operating systems, and browsers. To remain relevant, DTIC must ensure products and interfaces support these new devices. If new technology is not pursued, large portions of DTIC's user community will be lost. FY 2018 funding supports the analysis of alternatives, metrics, software development, testing, hardware, licenses, cyber security, and Risk Management Framework (RMF)/accreditation.</p> <p>- Controlled Unclassified Information (CUI): In September 2016, the National Archives and Records Administration (NARA, specifically the Information Security Oversight Office) released final guidance to execute the CUI effort throughout the Executive Branch. This guidance supported the President's Executive Order 13556, issued in November 2008, Controlled Unclassified Information (CUI). The EO directed the National Archives and Records Administration (NARA) as the CUI Executive Agent to standardize the way the Executive Branch handles information (excluding information that is classified). Distribution of information outside of the DoD is only allowable when documents are marked to the new CUI standards, including categories that will require portion marking. The term "Controlled Unclassified Information" ("CUI") will start being used by the Department in 2017, phasing out the term "For Official Use Only" ("FOUO"). As the Department's unique central repository and distribution source for technical information, DTIC must modify their collection, storage, and distribution systems to recognize and properly handle new marking and distribution standards. Lacking establishment of these new systems and proper CUI marking, the DoD would lose much of its ability to share material with other Federal Government agencies, industry partners, and allies. Added funding supports the initiation of steps needed to support new CUI standards, namely: policy development, system requirements planning, cyber security assessments, software prototyping, and development of user training.</p> <p>- Public Access: The Executive Office of the President (EOP)/Office of Science and Technology Policy (OSTP) issued a memorandum directing Federal agencies that spend more than \$100 Million per year on research and development (R&D) to develop plans to support increased access to the results of research funded by the Federal government. As the Department's central repository of DoD-funded technical information, DTIC was tasked with implementing the infrastructure to collect and disseminate journal articles, manuscripts and digital data that are the result of DoD-funded research. In FY 2017, DoD issued new policy to internal researchers to develop data management plans and submit authors' manuscripts for journal articles. Funding allows DTIC to continue work with DoD Labs; educate and train researchers of new requirements; develop policy for external researchers (contracts and grants), submission compliance measures, and user facing tools; and evaluate and prototype the handling of data sets. Supporting data sets bring with it a range of complex issues caused by the variety of sciences and their output, and the sheer sizes that can grow to petabytes.</p> <p>FY 2018 Service Requirements Review Board (SRRB) Reduction: \$.592 Million reduction to the DTIC program is the result of the Department's recent service contract downsizing effort.</p>		

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FY 2018 Program Adjustments: reflects the net change of economic assumptions and/or pricing adjustments.		

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Technical Information Center										Date: May 2017		
Appropriation/Budget Activity 0400 / 6					R-1 Program Element (Number/Name) PE 0605801KA / Defense Technical Information Center				Project (Number/Name) 001 / Defense Technical Information Center			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
001: Defense Technical Information Center	94.012	51.385	38.086	49.071	-	49.071	52.631	54.332	56.286	58.438	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

DTIC is responsible for developing, coordinating and enabling a strong scientific and technical information (STINFO) program for the Assistant Secretary of Defense for Research and Engineering (ASD(R&E)) and the DoD scientific & technical (S&T) enterprise. In this role, DTIC sets policy for scientific and technical information (STI) exchanges for the research and engineering (R&E) community. DTIC's aim is to maximize the availability and use of technical information and products resulting from Defense-funded technical activities while ensuring restrictions to safeguard national security, export control, and intellectual property rights.

Recognizing the common elements across budget justification documents, progress reports, completed work reports, studies, and journal articles, DTIC is mapping relationships to enable users to access the life cycle of research projects from planning to final results. DTIC employs information technology to verify and validate information submitted and improve user confidence in DoD research documentation.

DTIC is leading the Department's efforts to implement public access to published journal articles, and digital data from research funded by taxpayers. In this role, DTIC is actively working with partners across the Services, components, other federal agencies and publishers. These ongoing efforts directly complement and support the Department's objectives associated with Citizen Science. Consistent with the Administration's (Office of Management and Budget) emphasis for open standards and machine readable formats, DTIC initiated the transition from paper and Portable Document Format (PDF) based information to Web Service Extensible Markup Language (XML) standard data submission and machine readable delivery. DTIC partnered with the OSD Comptroller to collect investment account budget justification documentation in XML and embed this XML in PDF for justification books delivered to Congress. DTIC employed this same technology in collecting S&T progress reports from the Services and Agencies, and Independent Research and Development (IR&D) data from industry. DTIC is planning the migration of its completed technical reports collection to the same open standards, i.e., machine readable formats.

Through the use of commercial search technology, DTIC provides search capability that links its knowledge of the DoD domain and metadata to support both text searches and data mining. DTIC continually works to enable additional features within our search capabilities and from commercial partners to improve information discovery and relevance.

DoD conducts science and technology research via the following means: 60+ labs, Federally Funded Research and Development Centers (FFRDCs), DTIC's Information Analysis Centers (IACs), and other contracts and grants. Spanning over a dozen distinct priority area communities of interest, the results of this work is available through DTIC's web-based R&E Gateway. To protect this information, DTIC regulates access through a database of registered users. In addition, DTIC uses commercial software in compliance with DoD Identity Management Standards to provide instant authenticated access to users of either the Common Access Card (CAC), External Certificate Authority (ECA), or Personal Identity Verification (PIV) cards. DTIC's unclassified assets, tools and community interaction capabilities foster innovation, competition and identification of solutions in an access-controlled environment.

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Focus on User Communities and Distribution Points: DTIC supports user communities on the network where they work, i.e., NIPRNET, SIPRNET and public internet, and uniquely provides access controls within unclassified and classified material to protect intellectual property in our search, distribution, and collaboration tools.

- DoD's RDT&E Enterprise: As a Field Activity to ASD(R&E)/AT&L, DTIC's priority is the RDT&E enterprise, hosting information assets and tools on the NIPRNET (the primary network for the community).

- Warfighter: Improving coordination between the acquisition enterprise and warfighter communities, DTIC hosts a subset of information assets and tools on the SIPRNET. DTIC is working to expand the availability of science and technology (S&T) information, to include Independent Research and Development (IR&D), on the SIPRNET. DTIC is continuing its efforts to establish parity of information and capabilities on applications hosted on both NIPRNET and SIPRNET platforms.

- Industry and Academia via Public Internet: Engaging industry outside the NIPRNET firewall to support acquisition improvement initiatives and encourage the introduction of innovation, DTIC hosts unclassified public information and tools accessible to all users on the Internet. The Public Access initiative adds importance to the public distribution point, to encourage technology transfer of basic and public research to the private sector, and to give an economic boost to small businesses that can use that data to provide new applications to consumers.

Summary. DTIC protects and preserves DoD's multi-billion dollar investment in research, which empowers the acquisition enterprise through innovative tools, information systems, and decision support capabilities. The efficiency benefits can be enormous. Each 1 percent increase in the reuse of S&T efforts produces over \$100 Million in savings that can be redirected. Those savings come from elimination of inefficient redundancy (and unnecessary delays), increased community interaction, and ultimately, a more capable military. DTIC is uniquely positioned to support and to ensure the value of DoD's R&D portfolio is fully realized.

B. Accomplishments/Planned Programs (\$ in Millions)

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2016	FY 2017	FY 2018
<p>Title: Defense Technical Information Center</p> <p>FY 2016 Accomplishments:</p> <ul style="list-style-type: none"> - Implemented and deployed a new, commercially available search, which leveraged the new Master Data Repository (MDR), to enable users to discover more relevant science and technology information faster by refining their search using Boolean, wildcards, nesting, truncation, stemming, phrases and proximity operators. - Implemented two-factor authentication to DTIC collections through the use of External Certificate Authority (ECA) and Personal Identity Verification (PIV) cards for 98 percent of DTIC users, increasing security to limited DoD data, while easing access for authenticated users. - Supported DoD's public access effort, including policy development for intramural basic research. Continued to expand publicly-available content in support of the Department's Citizen Science objectives. During FY 2016, the number of full-text journal articles provided by publishers through PubDefense increased by 1,267, while publicly accessible citations for embargoed articles increased by 2,445. -- Established DTIC public access interface to provide users with a public access search of DoD-funded publisher records. 	51.385	38.086	49.071

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B. Accomplishments/Planned Programs (\$ in Millions)			FY 2016	FY 2017	FY 2018
<ul style="list-style-type: none"> -- Established input template for public access journal articles. - Expanded Defense Innovation Marketplace search and analytic capabilities in alignment with the Department's acquisition improvement initiatives; added small business research information. -- Employed the Marketplace to support four Technology Interchange Meetings with industry hosted by the U.S. Air Force: Aero Enterprise Dialogue, Space Enterprise, Nuclear Deterrence Operations, and Sensors Communities of Interest (COI). -- Industry added more than 6,000 project summaries to the Independent Research and Development (IR&D) collection, providing the Department visibility into industry's research efforts. -- Explored the utility of Technology Domain Awareness (TDA) activities. Developed roadmap and executed initial outreach with the National Defense University (NDU). - Extended capability of DTIC standard library content management system in the DoD-hosted cloud. - Expanded capability of the Master Data Repository (MDR) solution to consolidate DTIC data collections into one common storage infrastructure for increased analysis and visualization capabilities across the suite of collections. Over 4 million records from six datasets were consolidated into the Master Data Repository during FY 2016. -- Increased the number of technical reports, with over 30,000 additional documents available to DTIC users, for advanced, integrated search. - Collaborated with the DoD Intelligence community on policy and planning for the implementation of the new Controlled Unclassified Information (CUI) federal marking regulations. - Implemented Full Operating Capability (FOC) of the DoD Grant Awards System, which contains publicly-searchable descriptive abstracts of DoD grant awards from December 9, 2014 to present. -- The system was established in response to a statutory requirement contained in Section 8123 of the fiscal year 2015 DoD Appropriations Act (Division C of the Consolidated and Further Continuing Appropriations Act, Public Law 113-235). DoD components have submitted 6,890 records (with a total anticipated award amount/value of approximately \$4.5 Billion) into the database. - Deployed a new DoD Research and Engineering (R&E) Gateway home page as the primary customer access point for DTIC science and technology (S&T) reports, search capabilities, and collaboration tools; this is a cleaner, simpler interface for customers to find information and start working in DTIC tools faster. -- Expanded outreach to the DTIC user community and DoD science and technology (S&T) communities of interest (COIs) by offering onsite briefings, demonstrations and training for the R&E Gateway search and collaborative tools. -- Deployed a new DoDTechspace collaboration tool user interface; this new interface greatly simplified the users' ability to execute collaboration functions, which resulted in a 16 percent increase in new content added to the site. - Aligned with DoD Joint Information Environment (JIE) initiative for the Federal Data Center Consolidation Initiatives (FDCCI) by maximizing the virtualization of DTIC systems and applications that service all of the DoD, industry partners, and academia users. - Planned the migration of DTIC to a DoD-CIO approved cloud service provider, based on final guidance from the Department. 					

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B. Accomplishments/Planned Programs (\$ in Millions)			FY 2016	FY 2017	FY 2018
<p>- Met DoD's audit readiness milestones and requirements.</p> <p>FY 2017 Plans:</p> <p>- Evaluate FY 2016 progress in semantic technology; expand semantic enhancement of content to promote exploration and discovery across multiple collections to identify related search topics, concepts and associations, to the extent maturing capabilities allow.</p> <p>-- Apply semantic linking and tagging technology to new collections, such as journal articles, data set metadata and acquisition data. As of April 2017, the tagging technology has been utilized to tag new technical reports and journal articles added to the DTIC Collection with subject terms. Plan to continue expanding to include communities of interest and technical readiness levels, and report subject groupings. The tagging technology has the ability to batch process 4 million documents in under 20 days.</p> <p>-- Addition of a semantic search option to standard keyword search results.</p> <p>- Enhance DTIC identity management by implementing the capability to accept PIV-Industry (PIV-I), the federal government standard for two-factor authentication; enables authenticated industry adapters to access DTIC collections and products. Initial companies seeking access with PIV-I are Boeing, Lockheed Martin, Northrup Grumman, Raytheon, and Symantec.</p> <p>- Support DoD's public access effort, albeit at a reduced level. Providing public access to federally funded research not only brings the Department into compliance with the Office of Science and Technology Policy (OSTP) Memorandum, but also provides DoD with a central repository of published science and technology (S&T) information to encourage innovation.</p> <p>-- Pursue collaborative efforts with other Federal agencies to leverage existing systems and lessons learned.</p> <p>-- Establish draft guidance for data management plans (DMPs). Work with subject matter experts to develop DMP requirements relevant to specific science and technology disciplines.</p> <p>-- Continue to plan for the integration of input, public access search, and authentication capabilities to support the submission of journal articles from contractors and grantees.</p> <p>- Complement the Department's acquisition improvement initiatives by expanding the search and analytic capabilities of the Defense Innovation Marketplace.</p> <p>-- Maintain the Marketplace capability to support all the Services' communications with industry for Technology Interchange Meetings, across all of the Communities of Interest (COIs).</p> <p>- Continue migrating legacy standalone collection feeds to DTIC's standard library content management system in the DoD-hosted cloud, reducing the footprint of multiple technologies and driving efficiencies and cost avoidance.</p> <p>-- Migrate the second collection, the Information Analysis Center (IAC) Total Electronic Migration System (TEMS) collection and process into the DTIC consolidated content management system. The IACs process over 30,000 technical reports annually into the DTIC collection.</p> <p>- Implement the Master Data Repository (MDR) for the DTIC collections on SIPRNET.</p> <p>-- Deploy a new SIPR search, which leverages the new MDR, to enable users to discover more relevant science and technology information faster by refining a search using Boolean, wildcards, nesting, truncation, stemming, phrases and proximity operators.</p>					

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B. Accomplishments/Planned Programs (\$ in Millions)								
<ul style="list-style-type: none"> - Collaborate with the DoD Intelligence community and other AT&L representatives on policy and implementation of the new Controlled Unclassified Information (CUI) federal marking regulations, as DoD begins to rewrite its guidance for marking documents. - Complete the enhancement of the International Agreements Database (IADB) to include re-engineering the application for more efficient integration with the database and search capability. - Continue the initial evaluation and prototyping of Cloud Service Provider offerings to select the best provider for Infrastructure As A Service (IAAS), Platform As A Service (PAAS), and Software As A Service (SaaS). -- Further explore options to establish a DTIC Cloud location and vendor; begin preparations to initiate the transition from a DTIC-provided Data Center to a DoD-CIO approved Cloud Service Provider. -- Stand up an initial public site (unclassified, unlimited) in a commercially available cloud; move selected public web-sites static content to a Cloud Service Provider. <p>FY 2018 Plans:</p> <ul style="list-style-type: none"> - Deliver customers the ability to apply flexible search strategies across all DTIC collections. -- Continue to integrate search and analysis capabilities across all collections on SIPRNET and NIPRNET for improved analysis and discovery of information. -- Complete upgrade and update to the search interface to incorporate new search capabilities and improve the user experience with DTIC search products. -- Discontinue the DTIC Google Search Appliances (GSA); transition all search capabilities to the MDR. -- Leverage persistent digital identifiers to build consolidated author profiles, and links to technical documents. - Provide capability to automate processing of public release content to eliminate backlog, and enable rapid availability. -- Reduce the footprint of multiple technologies and retire the 25-year-old legacy system to drive efficiencies and reduce cost of ownership. - Conduct an analysis of alternatives to support the advancement of identity management capabilities. -- Review and investigate innovative commercial technologies and available government offerings. -- Develop requirements; establish Subject Matter Expert (SME) positions; and track industry technology advancements. - Integrate ontologies (sets of concepts and categories within a subject domain) with the Master Data Repository, providing enhanced search, highly relevant results, and real-time analysis of incoming records to promote exploration and discovery. -- Extend current literal search with search by the "intent" and by example, saving user time from repeated searches using different terms. -- Improve data quality by bridging data gaps within a single collection and/or between collections, offering a homogenous data lake representing research project lifecycle from inception to completion. - Help the defense community locate the most relevant technical information by leveraging the Master Data Repository (MDR) solution. 		<table> <tr> <th>FY 2016</th><th>FY 2017</th><th>FY 2018</th></tr> <tr> <td></td><td></td><td></td></tr> </table>	FY 2016	FY 2017	FY 2018			
FY 2016	FY 2017	FY 2018						

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Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0605801KA / Defense Technical Information Center	Project (Number/Name) 001 / Defense Technical Information Center		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017	FY 2018
<div>-- Migrate NIPR enhancements (Enterprise Content Management System (ECMS), grants, data sets, international agreements, content integration) to SIPRNET.</div> <div>-- Integrate with subject tagging service and DTIC Thesaurus.</div> <div>-- Integrate cooperative agreements, acquisition data, R1s, P1s, Congressional mark-ups into Master Data Repository.</div> <div>- Collaborate with the DoD Intelligence community and other AT&L representatives on policy and implementation of the new Controlled Unclassified Information (CUI) federal marking regulations, as DoD rewrites its guidance for marking documents.</div> <div>- Support DoD's public access effort; conduct outreach and educate intramural and extramural researchers on the requirement to submit journal articles to DTIC.</div> <div>-- Collaborate with the DoD laboratories to design efficient integrated submission mechanism for all types of public access information.</div> <div>-- Implement contractors/grantees input capability for journal articles, with a mechanism to authenticate the submission.</div> <div>-- Enhance public access search to include both new and legacy journal articles submitted to DTIC, combined with pointers to publisher versions.</div> <div>-- Establish pilot project to accept submissions of data management plans (DMPs) for DoD-funded research programs.</div> <div>-- Begin to accept voluntary input of metadata pointing to public or limited dissemination data sets.</div> <div>-- Create catalog/locator of data sets using discovery and descriptive metadata; send metadata for public data sets to data.gov.</div> <div>-- Initiate an independent study and a prototype to examine options for the management of digitally formatted scientific datasets.</div> <div>-- Evaluate dataset dissemination capabilities.</div> <div>- Deliver customer-driven features based on an improved understanding of customer successes and experiences on our sites.</div> <div>-- Implement decision based metrics across primary DTIC products to improve DTIC's ability to understand customer behavior and make business decisions on investments in products and services.</div> <div>-- Deliver capability for DTIC program managers and product owners to have full visibility and transparency on product usage, customer trends and customer tendencies in products and services. This will allow full visibility on all user actions and interactions in the search user interface and fully capture user successes by measuring downloads, bibliography builds and exports, and user paths through the interfaces.</div> <div>- Conduct initial planning to establish a functional IT Continuity of Operations (COOP) capability for DTIC.</div> <div>-- Complete an IT COOP analysis of alternatives in order to produce an approved and executable IT COOP plan. Review commercial technologies and government offerings.</div> <div>-- Integrate effort with concurrent cloud services planning to provide required infrastructure to support and sustain the future IT COOP environment.</div> <div>-- Design cyber RMF documentation and accreditation; conduct initial system engineering to ensure the highest availability of future services.</div> <div>- Conduct an analysis of alternatives to support the migration of DTIC's Data Center to a Cloud Service Provider.</div>				

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Technical Information Center		Date: May 2017	
Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0605801KA / <i>Defense Technical Information Center</i>	Project (Number/Name) 001 / <i>Defense Technical Information Center</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
<ul style="list-style-type: none"> -- Begin the design of a cloud system architecture and the modification of code to create an optimal cloud environment which will improve customer support experience, reduce cost and labor, capture user data, and improve security posture in order to meet DoD Data Center reduction goals. -- Plan the transition stages for phasing DTIC's public, NIPRNET and SIPRNET activities to a cloud environment. -- Develop and design the Risk Management Framework (RMF) controls for a new DTIC Cloud environment; prepare accreditation documentation and an update to the Authority to Operate (ATO). -- Design the integration of Single Sign-On capabilities, User Registration Systems, and public key infrastructure (PKI) authentication methods for a new DTIC Cloud environment. -- Explore options to establish a contract or service level agreement with an organization or company to facilitate DTIC's transition from its Data Center to a Cloud Service Provider. -- Construct a flexible cost model to track true cost of ownership to share costs with DTIC customers and better track internal expenditures. -- Continue the successful migration of public sites to a commercial or government-provided cloud/data center. - Research and investigate innovative commercial technologies needed to field mobile capabilities in support of user devices, operating systems, and browsers. -- Conduct an analysis of alternatives to support development of mobile capabilities. -- Develop initial plans for incorporating mobile technologies to include metrics, software development, testing, and cyber security. 			
Accomplishments/Planned Programs Subtotals		51.385	38.086
C. Other Program Funding Summary (\$ in Millions)			
N/A			
Remarks			
D. Acquisition Strategy			
N/A			
E. Performance Metrics			
Figures reflect FY 2016 end-of-year data.			
Total Unique DTIC NIPRNET Users: 26,404 Total Unique DTIC SIPRNET Users: 5,340 Total Unique IAC (CSIAC, DSIAC, and HDIAC) Users: 97,091 Total DTIC Users: 128,835			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Technical Information Center		Date: May 2017
Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0605801KA / Defense Technical Information Center	Project (Number/Name) 001 / Defense Technical Information Center
<p>Total scientific and technical information (STI) holdings in DTIC collections: 4.16 Million</p> <p>STI added and updated to DTIC Collection: 98,397</p> <ul style="list-style-type: none">- Total STI (NIPRNET) Added: 71,966- Total STI (SIPRNET) Added: 828- Total STI (NIPRNET) Updated: 25,603 <p>STI records downloaded to Public: 40 Million-plus</p> <p>Records downloaded to DoD NIPRNET: 1.1 Million</p> <p>IAC Customer Technical Support Requests for Analysis: 5,580</p>		

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Technical Information Center										Date: May 2017		
Appropriation/Budget Activity 0400 / 6					R-1 Program Element (Number/Name) PE 0605801KA / Defense Technical Information Center				Project (Number/Name) 002 / Information Analysis Centers			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
002: Information Analysis Centers	12.801	5.748	5.748	5.074	-	5.074	5.016	5.016	5.016	5.016	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

DoD Information Analysis Centers (IACs), established under DoD Instruction 3200.14, serve as a vital resource in providing timely, relevant information directly to users when and where it is needed. IACs serve as a bridge between the warfighter and the Acquisition/Research community, providing essential technical analysis and data support to a diverse customer base, to include the Combatant Commands (CCMDs), the Office of the Secretary of Defense, Defense Agencies, and the Military Services. IACs actively partner and collaborate with Defense Research and Engineering (R&E) focus groups and communities of interest in areas of specialized fields or specific technologies. The IACs create and maintain comprehensive knowledge analysis centers that include historical, technical, scientific, and other data and information collected worldwide. They are staffed with scientists, engineers and information specialists to provide research and analysis to customers with diverse, complex and challenging requirements. IAC operations directly support the warfighter, and play an ongoing and critical role in solving key CCMD operational issues such as cyber security, unmanned aerial vehicle visual/audible signature reduction, and improvements to the ballistic resistance of body armor.

The IAC Program Management Office at DTIC performs contract acquisition, management, and operational support for IAC contract operations and the technical information that is generated as a result of research and studies. In a time of shrinking budgets and increasing responsibility, IACs are a valuable resource for accessing scientific and technical information culled from efforts to solve new and historic challenges. Direct IAC customer support activities, such as Technical Area Task (TAT) order processing, Basic Center Operations (BCO) support, Defense Finance and Accounting Service (DFAS) activities, contracting/acquisition related activities, etc., are funded in part through partnerships with the Defense R&E community and the annual collection of customer reimbursements for shared direct costs, in accordance with the IAC Reimbursable Review Board (IRRB) recommendations, with OSD-COMPT and Office of General Counsel concurrence. This represents the maximum cost-sharing with IAC customers allowable, per guidance from the OSD Office of General Counsel. Annual IAC efforts and accomplishments are dependent on the level of participation and collaboration by the R&E community at large.

B. Accomplishments/Planned Programs (\$ in Millions)

Title: Information Analysis Centers	FY 2016	FY 2017	FY 2018
	5.748	5.748	5.074
FY 2016 Accomplishments:			
- Supported the DTIC mission to provide technical information to DoD.			
- Provided administrative and operational oversight of basic core contract activities for DoD IACs to collect, analyze, synthesize and disseminate worldwide scientific and technical information (STI) in support of DoD's critical technologies and the warfighter.			
- Responded to 5,580 technical inquiries and provided in-depth science and technology (S&T) analysis; created and provided STI results via IAC websites; captured STI products from new/on-going analysis tasks; and supported the exchange of information among members of the operational and technical communities.			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Technical Information Center			Date: May 2017		
Appropriation/Budget Activity 0400 / 6		R-1 Program Element (Number/Name) PE 0605801KA / <i>Defense Technical Information Center</i>		Project (Number/Name) 002 / <i>Information Analysis Centers</i>	
B. Accomplishments/Planned Programs (\$ in Millions)			FY 2016	FY 2017	FY 2018
<ul style="list-style-type: none"> - Managed and supported Technical Area Tasks (TATs) ordered by the DoD and non-DoD customers; provided program strategy and ensured alignment with Department goals/direction. - Planned for the replacement of the Software, Networks, Information, Modeling and Simulation (SNIM) contract. - Completed award of new multi-award contract for Cyber Systems TAT. - Awarded approximately 71 new TATs and 30 new CATs totaling approximately \$2.2 Billion in new research and analysis work. This is approximately a 9 percent increase in the typical annual work load for the IAC program. - Increased the ceiling limit for the Defense Systems TAT (DS TAT) multi-award contract from its current \$3 Billion limit to about \$7 Billion (at its previous ceiling burn rate, DS TAT would have hit its ceiling in June 2016, about 2.5 years before it ends). <p>FY 2017 Plans:</p> <ul style="list-style-type: none"> - Support the DTIC mission to provide technical information to DoD. - Provide administrative and operational oversight of basic core contract activities for DoD IACs to collect, analyze, synthesize and disseminate worldwide scientific and technical information (STI) in support of DoD's critical technologies and the warfighter. - Respond to technical inquiries and provide in-depth science and technology (S&T) analysis; create and provide STI results via IAC websites; capture STI products from new/on-going analysis tasks; and support the exchange of information among members of the operational and technical communities. - Manage and support Technical Area Tasks (TATs) ordered by the DoD and non-DoD customers; provide program strategy and ensure alignment with Department goals/direction. - Continue to use ACC Picatinny for processing TAT awards; engage in aggressive customer outreach to initiate processing early. - Increase the ceiling limit for the Homeland Defense TAT (HD TAT) multi-award contract from its current \$900 Million limit to about \$1.3 Billion (at its present ceiling burn rate, HD TAT will hit its ceiling in Sept 2017, about 1.5 years before it ends). - Issue Request for Proposals (RFP) and conduct proposal evaluations for two follow-on IAC contracts: Cyber Systems IAC (CS IAC) and the IAC Multiple Award Contract (IAC MAC) <p>FY 2018 Plans:</p> <ul style="list-style-type: none"> - Support the DTIC mission to provide technical information to DoD. - Provide administrative and operational oversight of basic core contract activities for DoD IACs to collect, analyze, synthesize and disseminate worldwide scientific and technical information (STI) in support of DoD's critical technologies and the warfighter. - Respond to technical inquiries and provide in-depth science and technology (S&T) analysis; create and provide STI results via IAC websites; capture STI products from new/on-going analysis tasks; and support the exchange of information among members of the operational and technical communities. - Manage and support Technical Area Tasks (TATs) ordered by the DoD and non-DoD customers; provide program strategy and ensure alignment with Department goals/direction. - Continue to use ACC Picatinny for processing TAT awards; engage in aggressive customer outreach to initiate processing early. - Award Cyber Systems IAC contract, a \$49 Million contract, to a Small Business (1st Qtr, FY 2018). 					

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Technical Information Center		Date: May 2017	
Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0605801KA / <i>Defense Technical Information Center</i>	Project (Number/Name) 002 / <i>Information Analysis Centers</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
<ul style="list-style-type: none"> - Award IAC Multiple Award contract, a \$28 Billion contract, to teams of Large and Small Businesses (4th Qtr, FY 2018). - Award Homeland Defense IAC follow-on contract (value TBD) to a Small Business (4th Qtr, FY 2018). 			
Accomplishments/Planned Programs Subtotals		5.748	5.748
C. Other Program Funding Summary (\$ in Millions)			
N/A			
Remarks			
D. Acquisition Strategy			
N/A			
E. Performance Metrics			
Figures reflect FY 2016 end-of-year data.			
Number of: <ul style="list-style-type: none"> - IAC web inquiries: 746,287 - IAC technical inquiries: 5,580 - STI documents added to IAC collection: 29,328 - STI documents generated by Technical Area Task (TAT) activities: 4,380 - Training or meeting events: 2,579 - Number of training attendees: 12,682 - Documents uploaded to DTIC's online repository: 18,199 			
Amount of funding: <ul style="list-style-type: none"> - Provided by external customer requesting IAC technical analysis (TAT Funding): \$1.3 Billion - Provided by external customers purchasing IAC information products (Non-TAT funding): \$50,272 			
Customer satisfaction regarding: <ul style="list-style-type: none"> - IAC products and technical inquiry support (scale of 1 to 5, 5 being best): 4.8 - IAC TATs and training (scale of 1 to 5, 5 being best): 4.9 			

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Defense Technical Information Center										Date: May 2017		
Appropriation/Budget Activity					R-1 Program Element (Number/Name)							
0400: Research, Development, Test & Evaluation, Defense-Wide / BA 6: RDT&E Management Support					PE 0605998KA / Management HQ - Defense Technical Information Center (DTIC)							
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	0.000	0.000	4.400	4.187	-	4.187	3.987	3.787	3.836	3.886	Continuing	Continuing
001: Management HQ - Defense Technical Information Center (DTIC)	0.000	0.000	4.400	4.187	-	4.187	3.987	3.787	3.836	3.886	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This program element (PE) provides funding for the Management Headquarters (HQ) element of the Defense Technical Information Center (DTIC), a DoD Field Activity to the Assistant Secretary of Defense for Research and Engineering (ASD(R&E)/AT&L). The PE supports personnel compensation for HQ-assigned civilians, along with related administrative support costs. This second DTIC PE, established in FY 2017, is designed to track activities deemed as headquarters functions, with no operational efficiencies or enhancement to mission.

The PE supports the following HQ functions and mission essential activities critical to the success of DTIC's business operations, and mandated by law or regulation:

- Activity leadership, strategic planning, and Front Office support staff.
- The front office staff (6 authorizations) represents a small component of this PE. Most of the specialized functions and skill-sets described below are centralized activities within the PE, yet support the larger organization and its employees. These activities were consolidated as a means to improve efficiencies throughout DTIC, and are essential to the operation of DTIC's primary PE 0605801KA.
- Reductions to DTIC's HQ staffing levels continue, reducing civilian full time equivalents (FTEs) below FY 2017 levels.
- Financial Management and Comptroller. Provides integrated resource management at the Agency level to obtain, control, and execute budget and manpower authorities to support the organization's mission requirements. Develops and prepares agency budget documents and exhibits for submission to both OSD and Congress.
- Accounting support to DTIC's mission operations; partners with the Defense Finance and Accounting Service to present accurate financial reporting and Fund Balance with Treasury.
- Financial Improvement and Audit Readiness (FIAR) activities and oversight in compliance with the Department's audit goals, objectives, and milestones.
- Human Resources (HR) Liaison Support. Provides the DTIC enterprise with payroll processing and "Hire to Retire" mission support; oversees and organizes employee training, professional development, and certification programs (e.g., Acquisition, Financial Management, and IT programs).
- Coordinates recruitment placement and classification action for the mission areas; liaison to the Defense Finance and Accounting Service for HR servicing and the Defense Logistics Agency (DLA) for Equal Employment Opportunity (EEO) program maintenance.
- Mandatory Records Management compliance activities and administration programs.
- IT Management/Chief Information Officer (CIO). Collects, analyzes, and reports information necessary to effectively and efficiently manage enterprise IT resources; CIO functions are performed in compliance with DoD-CIO guidance, instructions and mandates.

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Defense Technical Information Center		Date: May 2017				
Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 6: RDT&E Management Support</i>		R-1 Program Element (Number/Name) PE 0605998KA / <i>Management HQ - Defense Technical Information Center (DTIC)</i>				
- IT Help Desk/Local Area Network (LAN). Office automation supports desktop computing customers; resolves IT-related equipment or system incidents; provides assured system and network availability, info delivery, and secure IT solutions to support current and future business and mission requirements.						
B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	
Previous President's Budget	0.000	4.400	4.187	-	4.187	
Current President's Budget	0.000	4.400	4.187	-	4.187	
Total Adjustments	0.000	0.000	0.000	-	0.000	
<ul style="list-style-type: none"> • Congressional General Reductions • Congressional Directed Reductions • Congressional Rescissions • Congressional Adds • Congressional Directed Transfers • Reprogrammings • SBIR/STTR Transfer 	-	-	-	-	-	
Change Summary Explanation The change between FY 2017 and the FY 2018 Base (a net decrease of \$0.213 Million in FY 2018) includes a decrease of \$.215 Million, which reflects a reduction in the number of civilian authorizations assigned to the Management Headquarters element of DTIC.						
C. Accomplishments/Planned Programs (\$ in Millions)				FY 2016	FY 2017	FY 2018
Title: Management HQ - Defense Technical Information Center				0.000	4.400	4.187
FY 2016 Accomplishments: - N/A.						
FY 2017 Plans: - Execute the program, activities and functions as described above in Section A, Mission Description of PE 0605998KA.						
FY 2018 Plans: - Execute the program, activities and functions as described above in Section A, Mission Description of PE 0605998KA.						
Accomplishments/Planned Programs Subtotals				0.000	4.400	4.187
D. Other Program Funding Summary (\$ in Millions) N/A						
Remarks						

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Defense Technical Information Center		Date: May 2017
Appropriation/Budget Activity 0400: Research, Development, Test & Evaluation, Defense-Wide / BA 6: RDT&E Management Support	R-1 Program Element (Number/Name) PE 0605998KA / Management HQ - Defense Technical Information Center (DTIC)	
E. Acquisition Strategy N/A		
F. Performance Metrics N/A		

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**Department of Defense
Fiscal Year (FY) 2018 Budget Estimates**

May 2017



Defense Threat Reduction Agency

Defense-Wide Justification Book Volume 5 of 5

Research, Development, Test & Evaluation, Defense-Wide

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Defense Threat Reduction Agency • Budget Estimates FY 2018 • RDT&E Program

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**Exhibit R-1, RDT&E Programs Defense
Threat Reduction Agency Fiscal
Year 2018-2022 President's Budget**

Appropriation: RDT&E, Defense-Wide

Date: May 2017

OVERVIEW

Weapons of mass destruction (WMD), improvised explosive devices (IEDs), and asymmetric techniques present immediate, persistent, and evolving threats to our nation's security. Countering weapons of mass destruction (CWMD) and countering improvised threats are at the forefront of Defense priorities and are the Defense Threat Reduction Agency's (DTRA's) primary focus. DTRA safeguards the United States and its allies from WMD and IEDs by integrating, synchronizing, and providing responsive expertise, technologies, and capabilities. This mission is directly aligned to strategic and operational planning guidance in the National Security Strategy, National Military Strategy, Defense Planning Guidance, Department of Defense (DoD) Agency Strategic Plan, Quadrennial Defense Review, 2014 DoD Strategy for Countering Weapons of Mass Destruction, 2014 Independent Review of the Department of Defense Nuclear Enterprise, 2010 Nuclear Posture Review, 2015 Implementation Directive for Better Buying Power 3.0, Assistant Secretary of Defense for Nuclear, Chemical, and Biological (NCB) Defense Programs Strategic Planning Guidance for FY 2018-2022, and DTRA/Strategic Command Center for Combating WMD (SCC-WMD) 2016-2020 Strategic Plan.

The Research, Development, Test & Evaluation (RDT&E) budget funds research supporting DTRA's chartered responsibilities and national commitments across the chemical, biological, radiological, nuclear, and high-yield explosives mission space. This research provides critical, cost-effective solutions to strategic, operational, and technical challenges associated with WMD surveillance, detection, defeat, prevention, nonproliferation, counterproliferation, consequence management, and monitoring and verification.

As a strategic component of the DTRA mission to safeguard the United States and its allies from global WMD, the Basic Research balances the imperatives of unconstrained exploration, discovery, and experimentation with near- and mid-term priorities arising because of continuously evolving threat environments. In support of this mission, the portfolio has two principle goals: (1) To facilitate innovative solutions and revolutionary technologies that transition to cost effective threat reduction capabilities; and (2) to actively promote the development of the next generation of scientists and researchers committed to maintaining U.S. technological superiority in achieving the Countering WMD (CWMD) mission.

The CounterWMD Applied Research portfolio advances DTRA's CWMD mission by balancing the following imperatives: (1) Invest in DTRA's applied research capabilities and increase the CWMD technology base to maximize future pay-off; (2) capitalize on opportunities to deliver innovative, cost-effective solutions to technical challenges that must be resolved prior to system-specific technology investigations and development; and (3) ensure applied research efforts are directly aligned to the mission-specific capability requirements of the Military Departments, Combatant Commanders, other DoD and federal agencies and international partners.

The Counter WMD Advanced Technology Development portfolio advances the CWMD mission by selecting initiatives that meet the following criteria: (1) Transitioning technologies meet mission-specific capability requirements of the Military Departments, Combatant Commanders, other DoD and federal agencies, and international partners; (2) preliminary assessments of components and subsystems confirm the highest potential for technological feasibility, operability, and producibility upon transition out of science and technology (S&T) research; and, (3) programs demonstrate cost effectiveness or cost reduction potential during field testing or simulation at scale. Additional investment in the Counter WMD Systems Development and portfolio supports International Monitoring System technology requirements under the Nuclear Arms Control Technology program. This portfolio directly supports U.S. and allied warfighter and national technical monitoring requirements and provides vital data used by the treaty monitoring community.

DTRA is committed to supporting Small Business Innovation Research and Small Business Technology Transfer programs. These programs stimulate technological innovation in the private sector, strengthen the role of small business in meeting DoD research and development needs, foster participation of minority and disadvantaged businesses in technological innovation, and increase the commercial application of DoD-supported research and development results.

DTRA rebalanced the overall Agency portfolio to align with strategic direction and minimize risk. The FY 2018 budget submission balances near term operational needs with future technical developments and capabilities. Reductions to the RDT&E portfolio impacted investment in efforts with lower return on investment, lower customer demand, or that were early in the development cycle. Additionally, the submission reflects Service Requirement Review Board reductions, as part of the Department of Defense reform agenda, for consolidation and reduction of service contracts.

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Department of Defense
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

25 Apr 2017

Appropriation	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO
Research, Development, Test & Eval, DW	503,342	461,305	461,305				
Total Research, Development, Test & Evaluation	503,342	461,305	461,305				

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Department of Defense
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

25 Apr 2017

Appropriation	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Research, Development, Test & Eval, DW	461,305	461,305		461,305	469,957		469,957
Total Research, Development, Test & Evaluation	461,305	461,305		461,305	469,957		469,957

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Department of Defense
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 • Total Obligational Authority
 (Dollars in Thousands)

25 Apr 2017

	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO
Summary Recap of Budget Activities							
Basic Research	38,288	35,436	35,436				
Applied Research	149,302	154,857	154,857				
Advanced Technology Development	298,123	266,444	266,444				
System Development And Demonstration	7,156	4,568	4,568				
Management Support	10,473						
Total Research, Development, Test & Evaluation	503,342	461,305	461,305				
Summary Recap of FYDP Programs							
Research and Development	503,342	461,305	461,305				
Total Research, Development, Test & Evaluation	503,342	461,305	461,305				

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Department of Defense
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

25 Apr 2017

	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Summary Recap of Budget Activities							
Basic Research	35,436	35,436		35,436	37,201		37,201
Applied Research	154,857	154,857		154,857	157,908		157,908
Advanced Technology Development	266,444	266,444		266,444	268,607		268,607
System Development And Demonstration	4,568	4,568		4,568	6,241		6,241
Management Support							
Total Research, Development, Test & Evaluation	461,305	461,305		461,305	469,957		469,957
Summary Recap of FYDP Programs							
Research and Development	461,305	461,305		461,305	469,957		469,957
Total Research, Development, Test & Evaluation	461,305	461,305		461,305	469,957		469,957

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Defense-Wide
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

25 Apr 2017

	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO
Summary Recap of Budget Activities							
Basic Research	38,288	35,436	35,436				
Applied Research	149,302	154,857	154,857				
Advanced Technology Development	298,123	266,444	266,444				
System Development And Demonstration	7,156	4,568	4,568				
Management Support	10,473						
Total Research, Development, Test & Evaluation	503,342	461,305	461,305				
Summary Recap of FYDP Programs							
Research and Development	503,342	461,305	461,305				
Total Research, Development, Test & Evaluation	503,342	461,305	461,305				

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Defense-Wide
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

25 Apr 2017

	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total
<u>Summary Recap of Budget Activities</u>							
Basic Research	35,436	35,436		35,436	37,201		37,201
Applied Research	154,857	154,857		154,857	157,908		157,908
Advanced Technology Development	266,444	266,444		266,444	268,607		268,607
System Development And Demonstration	4,568	4,568		4,568	6,241		6,241
Management Support							
Total Research, Development, Test & Evaluation	461,305	461,305		461,305	469,957		469,957
<u>Summary Recap of FYDP Programs</u>							
Research and Development	461,305	461,305		461,305	469,957		469,957
Total Research, Development, Test & Evaluation	461,305	461,305		461,305	469,957		469,957

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Defense-Wide
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

25 Apr 2017

Appropriation	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO
Defense Threat Reduction Agency	503,342	461,305	461,305				
Total Research, Development, Test & Evaluation	503,342	461,305	461,305				

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Defense-Wide
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

25 Apr 2017

Appropriation	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Defense Threat Reduction Agency	461,305	461,305		461,305	469,957		469,957
Total Research, Development, Test & Evaluation	461,305	461,305		461,305	469,957		469,957

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Defense-Wide
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

25 Apr 2017

Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO	S e c
1	0601000BR	DTRA Basic Research	01	38,288	35,436	35,436					U
		Basic Research		38,288	35,436	35,436					
20	0602718BR	Counter Weapons of Mass Destruction Applied Research	02	149,302	154,857	154,857					U
		Applied Research		149,302	154,857	154,857					
26	0603160BR	Counter Weapons of Mass Destruction Advanced Technology Development	03	298,123	266,444	266,444					U
		Advanced Technology Development		298,123	266,444	266,444					
123	0605000BR	Counter Weapons of Mass Destruction Systems Development	05	7,156	4,568	4,568					U
		System Development And Demonstration		7,156	4,568	4,568					
154	0605502BR	Small Business Innovation Research	06	10,473							U
		Management Support		10,473							
Total Research, Development, Test & Eval, DW				503,342	461,305	461,305					

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Defense-Wide
FY 2018 President's Budget Request
Exhibit R-1 FY 2018 President's Budget Request
Total Obligational Authority
(Dollars in Thousands)

25 Apr 2017

Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total	S e c
1	0601000BR	DTRA Basic Research	01	35,436	35,436		35,436	37,201		37,201	U
		Basic Research		35,436	35,436		35,436	37,201		37,201	
20	0602718BR	Counter Weapons of Mass Destruction Applied Research	02	154,857	154,857		154,857	157,908		157,908	U
		Applied Research		154,857	154,857		154,857	157,908		157,908	
26	0603160BR	Counter Weapons of Mass Destruction Advanced Technology Development	03	266,444	266,444		266,444	268,607		268,607	U
		Advanced Technology Development		266,444	266,444		266,444	268,607		268,607	
123	0605000BR	Counter Weapons of Mass Destruction Systems Development	05	4,568	4,568		4,568	6,241		6,241	U
		System Development And Demonstration		4,568	4,568		4,568	6,241		6,241	
154	0605502BR	Small Business Innovation Research	06								U
		Management Support									
Total Research, Development, Test & Eval, DW				461,305	461,305		461,305	469,957		469,957	

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Defense Threat Reduction Agency
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

25 Apr 2017

Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO	S e c
1	0601000BR	DTRA Basic Research	01	38,288	35,436	35,436					U
		Basic Research		38,288	35,436	35,436					
20	0602718BR	Counter Weapons of Mass Destruction Applied Research	02	149,302	154,857	154,857					U
		Applied Research		149,302	154,857	154,857					
26	0603160BR	Counter Weapons of Mass Destruction Advanced Technology Development	03	298,123	266,444	266,444					U
		Advanced Technology Development		298,123	266,444	266,444					
123	0605000BR	Counter Weapons of Mass Destruction Systems Development	05	7,156	4,568	4,568					U
		System Development And Demonstration		7,156	4,568	4,568					
154	0605502BR	Small Business Innovation Research Management Support	06	10,473							U
				10,473							
Total Defense Threat Reduction Agency				503,342	461,305	461,305					

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Defense Threat Reduction Agency
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

25 Apr 2017

Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total	S e c
1	0601000BR	DTRA Basic Research	01	35,436	35,436		35,436	37,201		37,201	U
	Basic Research			35,436	35,436		35,436	37,201		37,201	
20	0602718BR	Counter Weapons of Mass Destruction Applied Research	02	154,857	154,857		154,857	157,908		157,908	U
	Applied Research			154,857	154,857		154,857	157,908		157,908	
26	0603160BR	Counter Weapons of Mass Destruction Advanced Technology Development	03	266,444	266,444		266,444	268,607		268,607	U
	Advanced Technology Development			266,444	266,444		266,444	268,607		268,607	
123	0605000BR	Counter Weapons of Mass Destruction Systems Development	05	4,568	4,568		4,568	6,241		6,241	U
	System Development And Demonstration			4,568	4,568		4,568	6,241		6,241	
154	0605502BR	Small Business Innovation Research	06								U
	Management Support										
Total Defense Threat Reduction Agency				461,305	461,305		461,305	469,957		469,957	

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1	01	0601000BR	*DTRA Basic Research.....	Volume 5 - 545

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20	02	0602718BR	*Counter Weapons of Mass Destruction Applied Research.....	Volume 5 - 551

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26	03	0603160BR	*Counter Weapons of Mass Destruction Advanced Technology Development.....	Volume 5 - 585

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123	05	0605000BR	*Counter Weapons of Mass Destruction Systems Development.....	Volume 5 - 619

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*Counter Weapons of Mass Destruction Applied Research	0602718BR	20	02.....	Volume 5 - 551
*Counter Weapons of Mass Destruction Systems Development	0605000BR	123	05.....	Volume 5 - 619
*DTRA Basic Research	0601000BR	1	01.....	Volume 5 - 545
Small Business Innovation Research	0605502BR	154	06.....	Volume 5 - 627

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ACRONYMS

AA-HPRT	Analytics Hard Problem Research Team
ACES	Arms Control Enterprise System
AD	Agent Defeat
ADMB	Agent Defeat Modeling and Simulation Baseline
AEHF	Advanced Extremely High Frequency
AFX	Air Force Explosive
AI	Active Interrogation
AOR	Area of Responsibility
ARAT	Adversarial Route Analysis Tool
ARIEL	Autonomous Reconnaissance Infrared Electro-optical Loitering
ASIC	Application Specific Integrated Circuit
ATAC	Advanced Targeting Assessment Capability
ATD	Advanced Technology Development
AUV	Autonomous Underwater Vehicle
AWE	Atomic Weapons Establishment
BAA	Broad Agency Announcement
BDA	Battle Damage Assessment
BDI	Battle Damage Information
BLADE	BDI Link Advanced Demonstrator
BLU	Bomb, Live Unit
C4I	Command, Control, Communications, Computers, and Intelligence
CANES	Consolidated Afloat Network and Enterprise Services
CAPE	Cost Assessment and Program Evaluation
CARDS	CBRN Air-droppable Remotely Deployed Sensor System
CATTS	Cost Analysis Tool for Test Sites
C-B	Chemical-Biological
CBP	Customs and Border Protection
CBRNE	Chemical, Biological, Radiological, Nuclear, and High-yield Explosives
CCDR	Combatant Commander
CFD	Computational Fluid Dynamics
CHAMP	Counter Electronics High Power Microwave Advanced Missile Project
CJCS	Chairman, Joint Chiefs of Staff
CNDSP	Computer Network Defense Service Provider
CCMD	Combatant Command
COE	Consequence of Execution
CoE-NI	Consequence of Execution – Nuclear Integration
COI	Community of Interest
CONOPS	Concept of Operations
CONUS	Continental United States
COOP	Continuity of Operations
COP	Common Operating Picture
CP	Counter-proliferation

CPGS	Conventional Prompt Global Strike
CSM	Computational Structure Mechanics
CTBT	Comprehensive Nuclear Test Ban Treaty
CT/CP	Counterterrorism / Counterproliferation
CTS	Component Test Structure
CTTS	CBRNE Tactical Training System
C-WAC	Counter-WMD Analysis Center
CWMD	Countering Weapons of Mass Destruction
CWMD-T	Combating Weapons of Mass Destruction –Terrorism
DAPSS	Denied Area Persistent Sensor System
DEL	DTRA Experimentation Lab
DHS	Department of Homeland Security
DIAMONDS	Defense Integration and Management of Nuclear Data Services
DIOCC/DIA	Defense Intelligence Operations Coordination Center/Defense Intelligence Agency
DITEC	DTRA Integration Technical Experimentation Center
DoD	Department of Defense
DO	DISCREET OCULUS
DOE	Department of Energy
DOJ	Department of Justice
DPG	Dugway Proving Ground
DPPG	Defense Policy and Planning Guidance
DRDC	Defence Research and Development Canada
DSCS	Defense Satellite Communications System
DTRA	Defense Threat Reduction Agency
DT&E	Development, Test and Evaluation
ECBC	Edgewood Chemical Biological Center
EDTC	Engineering and Development Test Center
EM-1	Capabilities of Nuclear Weapons: Effects Manual Number 1
EMP	Electromagnetic Pulse
EMREP	Electromagnetic Reliability and Effects Predictions
EOD	Explosive Ordnance Disposal
EPA	Environmental Protection Agency
FEFLO	Finite Element Flow Solver
FFRDC	Federally Funded Research and Development Center
FinFets	Fin-Shaped Field Effect Transistors
FOC	Full Operational Capability
FYDP	Future Years Defense Program
GCC	Global Command and Control
GEF	Guidance for Employment of the Force
GKMC	Global Knowledge Management System
GSA	Global Situational Awareness
GSM	Global System for Mobile Communications
GUI	Graphical User Interface

HAMMER	Heated and Mobile Munitions Employing Rockets
HANE	High Altitude Nuclear Environments
HARP	High Altitude Radiological Phenomenology
HEBX	Hybridized Enhanced Blast Explosive
HEMP	High Altitude Electro Magnetic Pulse
HDBT	Hard and Deeply Buried Target
HPAC	Hazard Prediction and Assessment Capability
HPC	High Performance Computing
HPCMP	High Performance Computing Modernization Program
HTD	Hard Target Defeat
IBRD	Interagency Biological Restoration Demonstration
ICEPIC	Improved Concurrent Electromagnetic Particle-in-Cell
IED	Improvised Explosive Device
IMEA	Integrated Munitions Effects Assessment
IMS	International Monitoring System
IOC	Initial Operational Capability
IPODS	Integrated Precision Ordnance Delivery System
ISIS	Integrated Stand-off Inspection System
ISR	Intelligence, Surveillance, Reconnaissance
ISS	Integrated Sensor System
IR	Infrared
IT	Information Technology
ITD	Integrated Technology Demonstration
IWMDT	Integrated Weapons of Mass Destruction Toolset
JAIEG	Joint Atomic Information Exchange Group
JCAM	Joint Collaborative Analysis Model
JCDE	Joint Concept Development & Experimentation
JCIDS	Joint Capabilities Integration and Development System
JCTD	Joint Concept Technology Demonstration
JDAM	Joint Direct Attack Munition
JEM	Joint Effects Model
JMEWS	Joint Multi-Effects Warhead System
JSAF	Joint Semi-Automated Forces
JWICS	Joint Worldwide Intelligence Communications System
KAFB	Kirtland Air Force Base
keV	kilo-electronvolt
LCP	Large Caliber Penetrator
LLE	Laboratory for Laser Energetics
LLNL	Lawrence Livermore National Laboratory
LTS	Large Test Structure
MACS	Modular Autonomous Countering WMD System
MASS	MILSATCOM Atmospheric Scintillation Simulator
MCNP	Monte Carlo N-Particle
MDA	Missile Defense Agency

M&S	Modeling and Simulation
MEEC	Maxwell's Equivalent Equations Circuit
MET	Modernization of Enterprise Terminals
MILSATCOM	Military Satellite Communications
MFK-R	Mobile Field Kit – Radiological
MIL STD	Military Standard
MPAS	Mission Planning and Assessment System
NACT	Nuclear Arms Control Technology
NATO	North Atlantic Treaty Organization
NAVSATCOMMFAC	Naval Satellite Communications Facility
NBCRV	Nuclear Biological Chemical Reconnaissance Vehicle
NCNS	National Center for Nuclear Security
NCPC	National Counterproliferation Center
NIF	National Ignition Facility
NLP	Natural Language Processing
nm	nanometer
NM	Nuclear Matters
NMCC	National Military Command Center
NNSA	National Nuclear Security Administration
NNSS	Nevada National Security Site
NPS	Naval Postgraduate School
NSB	Navy Standardization Board
NSPD	National Security Presidential Directive
NST	New START Treaty
NTNF	National Technical Nuclear Forensics
NTPR	Nuclear Test Personnel Review
NuCS	Nuclear Capability Services
NWE	Nuclear Weapon Effects
NWEN	Nuclear Weapon Effects Network
NWEDS	Nuclear Weapons Effects Database System
NWRM	Nuclear Weapons Related Materiel
OCO	Overseas Contingency Operations
OCONUS	Outside the Continental United States
ODX	Operationally demonstrated/exercised
O&M	Operation and Maintenance
ORNL	Oak Ridge National Laboratory
OSD CAPE	Office of the Secretary of Defense Capability Assessment and Program Evaluation
OSTP	Office of Science and Technology Policy
PASCC	Project on Advanced Systems and Concepts for Countering WMD
PDCALC	Probability of Damage Calculator
PDV	Product Demonstration Vehicle

PMESII	Political, Military, Economic, Social, Infrastructure, and Information
PNAF	Prime Nuclear Airlift Forces
PPD	Presidential Policy Directive
PTS	Provisional Technical Secretariat
QDR	Quadrennial Defense Review
R2TD	Rapid Reaction Tunnel Detection
R&D	Research and Development
RadHard	Radiation Hardened
RFIS	Robust Fuzewell Instrumentation System
RHBD	Radiation Hardened by Design
RHM	Radiation Hardened Microelectronics
RL-16	US radionuclide laboratory
R/N	Radiological/Nuclear
ROM	Rough Order of Magnitude
S&T	Science & Technology
SBIR	Small Business Innovative Research
SCSP	Special Operations Command CWMD-Terrorism Support Program
SEE	Single Event Effects
SGEMP	System-Generated Electromagnetic Pulse
SHAMRC	Second-order Hydrodynamic Automatic Mesh Refinement Code
SHAPE	Supreme Headquarters Allied Powers, Europe
SHIST	Seismic Hardrock in Situ Test
SMDC	US Army Space and Missile Development Command
SNL	Sandia National Laboratory
SNM	Special Nuclear Material
SOF	Special Operations Forces
SOX	Standoff Operational Exercise
SPE	Source Physics Experiment
SPG	Short Pulse Gamma
SREMP	Source Region Electromagnetic Pulse
START	Strategic Arms Reduction Treaty
STTR	Small Business Technology Transfer
TACBRD	TransAtlantic Collaboration Biological Resiliency Demo
TB	Test Bed
TEAMS	Technical Evaluation Assessment and Monitor Site
TNF	Technical Nuclear Forensics
TOA	Total Obligation Authority
TOW	Tube-launched, Optically-tracked, Wireless-guided
TPMM	Technology Program Management Model
TRAC	Threat Reduction Advisory Committee
TRL	Technology Readiness Level
TSG	Technical Support Group
TTL	Tag, Track, Locate

TWAC	Targeting and Weaponneering Analysis Cell
TXL	Transportable Xenon Laboratory
UAS	Unmanned Aerial Systems
UCP	Unified Command Plan
UGF	Underground Facility
UGT	Underground Test
UHPC	Ultra-High Performance Concrete
UK	United Kingdom
USANCA	U.S. Army Nuclear and Combating WMD Agency
USEUCOM	U.S. European Command
USFK	U.S. Forces Korea
USG	United States Government
USNORTHCOM	U.S. Northern Command
USPACOM	U.S. Pacific Command
USSOCOM	U.S. Special Operations Command
USSTRATCOM	U.S. Strategic Command
UTAS	Underground Targeting and Analysis System
VAPO	Vulnerability Assessment Protection Option
VEO	Violent Extremist Organization
VOIP	Voice Over Internet Protocol
WACS	WMD Aerial Collection System
WCF	West Coast Facility
WEP	Weapon Effects Phenomenology
WESC	Weapon Effects Steering Committee
WMD	Weapons of Mass Destruction
WSMR	White Sands Missile Range

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Defense Threat Reduction Agency	Date: May 2017
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Appropriation/Budget Activity	R-1 Program Element (Number/Name)											
0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 1: Basic Research</i>	PE 0601000BR / <i>*DTRA Basic Research</i>											
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	216.027	38.288	35.436	37.201	-	37.201	37.340	37.563	38.609	39.644	Continuing	Continuing
RU: <i>**Basic Research for Countering WMD</i>	216.027	38.288	35.436	37.201	-	37.201	37.340	37.563	38.609	39.644	Continuing	Continuing

Note

*Program Element 0601000BR name changes from DTRA Basic Research Initiative to DTRA Basic Research beginning in FY 2018.

**Project RU title changes from Fundamental Research for Combating WMD to Basic Research for Countering WMD beginning in FY 2017.

A. Mission Description and Budget Item Justification

Defense Threat Reduction Agency (DTRA) Basic Research funds research across physical, material, engineering, computational, and life sciences directed toward greater knowledge and understanding of the fundamental aspects of observable phenomena associated with weapons of mass destruction (WMD).

DTRA's Basic Research is the Nation's only basic research program solely dedicated to countering weapons of mass destruction (CWMD). It provides for the discovery and development of basic knowledge by research performers comprised from academia and world-class research institutions in government and industry. This investment helps motivate the scientific community to conduct research benefiting WMD-related defense missions, advancing the body of CWMD knowledge, and improving knowledge of research efforts that benefit nonproliferation, counter proliferation, and consequence management efforts. These efforts are closely coordinated with DTRA's Chemical and Biological Technologies Department, which executes a basic research program under DoD's Chemical and Biological Defense Program.

Each year, program and technical managers conduct formal assessments of the portfolio, leveraging deep Science and Technology (S&T) expertise within DTRA, as well as from the Defense Basic Research Advisory Group, independent external panel reviews, and other CWMD-focused stakeholders. This coordination facilitates unique, CWMD-relevant basic research while eliminating unintended duplication of effort in the broader defense S&T community.

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Defense Threat Reduction Agency	Date: May 2017
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Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 1: Basic Research</i>	R-1 Program Element (Number/Name) PE 0601000BR / <i>*DTRA Basic Research</i>
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B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	38.436	35.436	38.408	-	38.408
Current President's Budget	38.288	35.436	37.201	-	37.201
Total Adjustments	-0.148	0.000	-1.207	-	-1.207
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-0.075	-			
• SBIR/STTR Transfer	-0.073	-			
• Realignment	-	-	-1.207	-	-1.207

Change Summary Explanation

The decrease in FY 2018 from the previous President's Budget submission is due to a shift in investment priorities to fund Special Test Bed capability requirements for missile defeat in Program Element 0603160BR.

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Threat Reduction Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 1					R-1 Program Element (Number/Name) PE 0601000BR / *DTRA Basic Research				Project (Number/Name) RU / **Basic Research for Countering WMD			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
RU: **Basic Research for Countering WMD	216.027	38.288	35.436	37.201	-	37.201	37.340	37.563	38.609	39.644	Continuing	Continuing

Note

*Project RU title changes from Fundamental Research for Combating WMD to Basic Research for Countering WMD beginning in FY 2017.

A. Mission Description and Budget Item Justification

The Basic Research for Countering WMD project, as the nation's only basic research solely dedicated to countering weapons of mass destruction (CWMD), is a core strategic investor in future scientific and technological progress across the full spectrum of Defense Threat Reduction Agency's (DTRA's) CWMD mission areas. This project concentrates on high risk, high-payoff basic research, leveraging world-class expertise in academia, government, and industry to increase the foundational body of scientific knowledge supporting DTRA's Applied Research and Advanced Technology Development projects. This Initiative aligns with DTRA's strategic objectives that directly support policy and planning guidance from the Office of the President, the Department of Defense (DoD), and the broader WMD threat reduction community. The portfolio addresses this guidance through capability enhancements, projects, and Science and Technology (S&T) investments that support CWMD and reduce global nuclear dangers. Specifically, they include: Accelerating the development of standoff radiological/nuclear detection capabilities; researching countermeasures and defenses to non-traditional agents; enhancing nuclear forensics; securing vulnerable materials; developing new verification technologies; developing an in-depth understanding of the capabilities, values, intent, and decision making of potential adversaries, whether they are states, networks, or individuals; defeating WMD agents; researching biologically-based and inspired materials for DoD applications; and leveraging science, technology, and innovation through domestic and international partnerships and agreements. This project solicits, coordinates, and conducts basic research aligned to five Thrust Areas. Each Thrust Area Manager coordinates an independently reviewed portfolio of research projects selected for scientific merit, technical quality, and the potential for innovation.

Thrust Area 1: Science of WMD Sensing and Recognition. This thrust area explores novel methodologies to investigate physical properties of sensitive materials as they interact with phenomena associated with WMD, such as ionizing radiation. This research provides the basis for developing capabilities to discover the presence, identity, and quantity of material or energy in the environment that may be significant, in turn providing the means to develop advanced forensic applications that enable detection, characterization, and attribution, particularly in post-detonation radiative environments.

Thrust Area 2: Network Sciences. This thrust area explores analytical, numerical, computational, and other mathematical approaches to model and simulate the behavior of layered, interdependent physical networks affected by WMD. This interdisciplinary, theoretical research provides the basis for developing advanced algorithms and analytical frameworks that accurately predict and depict WMD environments by characterizing impacts and vulnerabilities, representing root causes of cascading failures, and assessing robustness, resilience, restoration, and recovery in varying degrees of disruption.

Thrust Area 3: Science for Protection. This thrust area employs experimental, computational, and theoretical approaches to explore and understand the causal mechanisms and deleterious characteristics of ionizing radiation and the tolerance, response, and resistance characteristics of affected sensitive electronic systems and microorganisms. This research provides the basis for engineering resilient systems and technologies, offering radical improvements to the survivability and performance of mission-critical electronic equipment and personnel in hostile radiative environments.

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Threat Reduction Agency		Date: May 2017	
Appropriation/Budget Activity 0400 / 1	R-1 Program Element (Number/Name) PE 0601000BR / *DTRA Basic Research	Project (Number/Name) RU / **Basic Research for Countering WMD	
<p>Thrust Area 4: Science to Defeat WMD. Through experimentation and computational modeling and simulation, this thrust area investigates phenomena associated with penetration physics, shock propagation and turbulence dynamics, and researches novel energetic and reactive materials for defeat of targets containing WMD. This research provides the scientific foundation necessary to develop advanced solutions for: (1) Accessing WMD in hardened and deeply buried infrastructure, (2) defeating (non-nuclear) targets with minimal unintended collateral effects, and (3) predicting post-detonation (non-nuclear) weapon effects.</p> <p>Thrust Area 5: Science to Secure WMD. This thrust area leverages a wide range of scientific and mathematical disciplines to explore phenomena related to physical, biological, and chemical interactions with radioactive particles and waveforms. This research provides the technical basis for development of innovative, unconventional applications to improve security oversight and control of WMD materials and facilities and to improve monitoring and surveillance systems related to arms control and nonproliferation.</p> <p>The decrease from FY 2016 to FY 2017 balances near term operational needs with future technical developments and capabilities. The increase from FY 2017 to FY 2018 is due to the relative impact of the decrease in FY 2017.</p>			
B. Accomplishments/Planned Programs (\$ in Millions)	FY 2016	FY 2017	FY 2018
<p>Title: Project RU: Basic Research for Countering WMD</p> <p>Description: Project RU funds the exploration and discovery of fundamental scientific knowledge related to DTRA’s CWMD mission by research performers from academia, government, and industry.</p> <p>FY 2016 Accomplishments:</p> <ul style="list-style-type: none">- Managed over 150 active basic research awards on a three to five year cycle. The Agency’s Basic Research portfolio directly addresses the DoD CWMD S&T priority and supports the specific priorities on Autonomy, Data to Decisions, Electronic Protection, and Engineered Resilient Systems.- Supported the development of the future Science, Technology, Engineering, and Mathematics workforce by supporting world-class talent in WMD research at universities and laboratories.- Conducted an annual technical review of each grant to assess the scientific advancements and progress in meeting the award’s technical objectives and to foster collaboration and build relationships within the scientific community.- Conducted an annual external panel review of the basic research program that is open to DoD research stakeholders. The review will assess the focus and scope of the program concerning CWMD challenges and assess the coordination of CWMD basic research across the DoD mission space and the broader basic research community to avoid duplication and ensure successful partnerships.- Researchers discovered that cognitive impairment from radiation exposure occurs at much lower levels, and on later timelines than previously thought. New data rewrites the exposure/protection guidelines in consideration of after-battlefield effects.- Researchers developed a new model to characterize and assess power grid responses to WMD events on a country-wide scale. The Defense Advanced Research Projects Agency, the National Science Foundation, and Advanced Research Projects Agency-Energy have awarded research grants based on these results.	38.288	35.436	37.201

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Threat Reduction Agency			Date: May 2017		
Appropriation/Budget Activity 0400 / 1		R-1 Program Element (Number/Name) PE 0601000BR / <i>*DTRA Basic Research</i>		Project (Number/Name) RU / <i>**Basic Research for Countering WMD</i>	
B. Accomplishments/Planned Programs (\$ in Millions)			FY 2016	FY 2017	FY 2018
<ul style="list-style-type: none"> - Researchers found the use of micro-vesicles harvested from normal adult stem cells could reverse the effects of radiation-induced cognitive impairment. The finding has potential to lead to a new class of therapeutics to counteract battlefield radiation exposure. - Researchers developed a novel spectroscopic technique to differentiate isotopic signatures in molecules. The findings suggest shortened timelines for developing capabilities to perform rapid in-field isotopic analysis of nuclear debris, critical for nuclear forensics. - Researchers developed a new method to reduce noise 100x below the classical limit for atom interferometric sensors; published in Nature. The findings show the potential to greatly improve gravimetric sensors for radiological/nuclear search and tunnel detection. - Researchers developed new low-noise contacts for solid-state radiation detectors by taking advantage of a photon-exchange effect. This research has the potential to eliminate the need for cooling, leading to the development of field ready, high-resolution radiological/nuclear detectors. This research has transitioned to Iljin Radiation Engineering for further development. - A DTRA-funded researcher was chosen as a DoD National Security Science and Engineering Faculty Fellow and another researcher was awarded the Presidential Early Career Award for Scientists and Engineers. These prestigious DoD and Presidential awards showcase the quality of DTRA-funded principal investigators working within the CWMD science and technology mission space. <p>FY 2017 Plans:</p> <ul style="list-style-type: none"> - Manage over 150 active basic research awards on a three to five year cycle. The Agency's Basic Research portfolio directly addresses the DoD priority on CWMD S&T and supports specific priorities on Autonomy, Data to Decisions, Electronic Protection, and Engineered Resilient Systems. - Support the development of the future Science, Technology, Engineering, and Mathematics workforce by supporting world-class talent in WMD research at universities and laboratories. - Conduct an annual technical review of each grant to assess the scientific advancements and progress in meeting the award's technical objectives and to foster collaboration and build relationships within the scientific community. - Conduct an annual external panel review of the basic research program that is open to DoD research stakeholders. The panel will assess the focus and scope of the program related to CWMD challenges and will assess the coordination of CWMD basic research across the DoD mission space and the broader basic research community to avoid duplication and ensure successful partnerships. <p>FY 2018 Plans:</p> <ul style="list-style-type: none"> - Shape and oversee the CWMD Basic Research portfolio, comprised of approximately 150 active basic research awards on a three to five year cycle. This portfolio continues to address the DoD priority on CWMD science and technology, and supports specific priorities on Autonomy, Data-driven Decisions, Electronic Protection, System Resiliency and other emerging areas of interest. 					

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Threat Reduction Agency		Date: May 2017	
Appropriation/Budget Activity 0400 / 1	R-1 Program Element (Number/Name) PE 0601000BR / <i>*DTRA Basic Research</i>	Project (Number/Name) RU / <i>**Basic Research for Countering WMD</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
<ul style="list-style-type: none"> - Support world-class talent in WMD research at universities and laboratories to bolster the development of the future Science, Technology, Engineering, and Mathematics workforce by supporting. - Assess entire CWMD Basic Research portfolio on an annual basis. - Assure progress toward technical objectives and support collaborative relationships within the scientific community through an annual technical review of each grant to assess scientific advancement. - Assess the focus and scope of the program related to CWMD challenges and assess the coordination of CWMD basic research across the DoD mission space and the broader basic research community to avoid duplication and ensure successful partnerships via an External Panel Review. 			
Accomplishments/Planned Programs Subtotals		38.288	35.436
C. Other Program Funding Summary (\$ in Millions)			
N/A			
Remarks			
*Prior year funds are related to this project in program element 0602718BR.			
D. Acquisition Strategy			
Procurement methods include competitive selection awards through DTRA's Broad Agency Announcement and collaborative funding through other organizations.			
E. Performance Metrics			
Project performance is measured via a combination of statistics including the number of publications generated, number of students trained in sciences and engineering supporting DoD educational goals, number of participating research organizations, and percentage of awards transitioned to other programs for further development.			

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Defense Threat Reduction Agency **Date:** May 2017

Appropriation/Budget Activity 0400: Research, Development, Test & Evaluation, Defense-Wide / BA 2: Applied Research					R-1 Program Element (Number/Name) PE 0602718BR / *Counter Weapons of Mass Destruction Applied Research							
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	831.914	149.302	154.857	157.908	-	157.908	160.417	160.386	162.878	166.692	Continuing	Continuing
RA: Information Sciences and Applications	160.287	29.133	29.127	30.270	-	30.270	32.325	28.286	29.083	30.077	Continuing	Continuing
**RD: Detection Technologies	0.000	15.083	15.936	14.769	-	14.769	17.005	18.451	17.677	18.035	Continuing	Continuing
RE: Counter-Terrorism Technologies	7.677	0.795	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
**RF: Forensics Technologies	196.608	10.525	10.008	10.274	-	10.274	10.345	10.560	10.771	10.991	Continuing	Continuing
RG: Defeat Technologies	75.082	10.946	11.304	11.060	-	11.060	11.290	11.530	11.770	12.017	Continuing	Continuing
RI: Nuclear Survivability	98.286	30.896	34.051	34.103	-	34.103	34.736	35.438	36.161	36.896	Continuing	Continuing
RL: Nuclear & Radiological Effects	130.489	28.333	28.668	29.228	-	29.228	29.640	30.324	30.999	31.695	Continuing	Continuing
RM: WMD Counterforce Technologies	79.780	12.873	12.097	14.552	-	14.552	12.612	12.852	13.129	13.395	Continuing	Continuing
***RR: Countering WMD Test and Evaluation	62.395	10.718	13.666	13.652	-	13.652	12.464	12.945	13.288	13.586	Continuing	Continuing
****RU: Basic Research for Countering WMD	21.310	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	21.310

Note

*Program Element 0602718BR name changes from WMD Defeat Technologies to Counter Weapons of Mass Destruction Applied Research beginning in FY 2018.

**Project RF-Detection and Forensics Technologies subdivided into Projects RD-Detection Technologies and RF-Forensics Technologies in FY 2016.

***Project RR title changes from Combating WMD Test and Evaluation to Countering WMD Test and Evaluation beginning in FY 2017.

****Project RU title changes from Fundamental Research for Combating WMD to Basic Research for Countering WMD beginning in FY 2017.

A. Mission Description and Budget Item Justification

The Defense Threat Reduction Agency (DTRA) Counter Weapons of Mass Destruction (WMD) Applied Research program element funds the expansion and application of basic scientific knowledge in order to develop novel materials, devices, systems, and methods supporting next generation concepts and technologies that enable advances in WMD surveillance, detection, defeat, prevention, nonproliferation, counterproliferation, consequence management, and treaty verification.

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Defense Threat Reduction Agency **Date:** May 2017

Appropriation/Budget Activity 0400: Research, Development, Test & Evaluation, Defense-Wide I BA 2: Applied Research	R-1 Program Element (Number/Name) PE 0602718BR I *Counter Weapons of Mass Destruction Applied Research
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This Applied Research portfolio is aligned with strategic planning objectives as well as with Science and Technology (S&T) investment direction which is established annually by DTRA. The objectives directly support policy and planning guidance from the Office of the President, the Department of Defense (DoD), and the broader WMD threat reduction community.

The portfolio advances DTRA's Countering WMD (CWMD) mission by balancing the following imperatives: invest in DTRA's applied research capabilities and increase the CWMD technology base to maximize future pay-off; capitalize on opportunities to deliver innovative, cost-effective solutions to technical challenges that must be resolved prior to system-specific technology investigations and development; and ensure applied research efforts are directly aligned to mission-specific capability requirements of DTRA, the Military Departments, Combatant Commanders, other DoD and federal agencies, and international partners.

B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	152.915	154.857	163.514	-	163.514
Current President's Budget	149.302	154.857	157.908	-	157.908
Total Adjustments	-3.613	0.000	-5.606	-	-5.606
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-3.613	-			
• Realignments	-	-	-5.606	-	-5.606

Change Summary Explanation

The decrease in FY 2018 from the previous President's Budget submission is due to a shift in investment priorities to fund a test and technology capability gap in this program element and incremental Service Requirement Review Board reductions, as part of the Department of Defense reform agenda, for consolidation and reduction of service contracts.

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Threat Reduction Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 2					R-1 Program Element (Number/Name) PE 0602718BR / *Counter Weapons of Mass Destruction Applied Research				Project (Number/Name) RA / Information Sciences and Applications			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
RA: Information Sciences and Applications	160.287	29.133	29.127	30.270	-	30.270	32.325	28.286	29.083	30.077	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Information Sciences and Applications project develops concepts and technologies in the areas of high-speed information processing, modeling and simulation, signal detection, and data-driven decision analysis in support of the Defense Threat Reduction Agency's (DTRA's) technical reachback teams. This project develops and maintains continuously improving collaborative architectures and Chemical, Biological, Radiological, Nuclear and High-yield Explosives (CBRNE) modeling & simulation codes that drive an integrated suite of decision support tools serving the Combatant Commands, other Department of Defense (DoD) agencies, and national and international Countering Weapons of Mass Destruction (CWMD) partners. This effort also provides management and support of the Threat Reduction Advisory Committee through FY 2017. The committee is a senior-level federal advisory committee, which provides independent expert advice on CWMD to the Secretary of Defense through the Under Secretary of Defense for Acquisition, Technology, and Logistics, and the Assistant Secretary of Defense for Nuclear, Chemical, and Biological Defense Matters. This effort also funds the Next Generation Nuclear Professionals (NextGen) activities. This outreach effort encourages collaboration between those currently in the nuclear field and those who are considering entering that field. The effort consists of conferences, working groups, a debate series, publications, international outreach, an online presence, and a Nuclear Scholars effort.

The increase from FY 2017 to FY 2018 is due to the net effect of increased investment in hazard and effects characterization and technology-driven WMD threat forecasting and decreased investment in advanced analytics and operations analysis, modeling, and simulations.

B. Accomplishments/Planned Programs (\$ in Millions)

Title: RA: Information Sciences and Applications	FY 2016	FY 2017	FY 2018
Description: Project RA develops concepts and technologies in the areas of high speed information processing, modeling and simulation, signal detection, and data-driven decision analysis.	29.133	29.127	30.270
FY 2016 Accomplishments:			
- Delivered Integrated Weapons of Mass Destruction Toolset (IWMDT) V4.0 with 100% updated commercial-off-the-shelf software necessary for compliance with Defense Information Systems Agency Information Assurance standards. This release updates and enhances nuclear models, 3D mapping and scenario visualization capabilities, and supports explicit vulnerability modeling for the Defense Intelligence Agency and U.S. Army Nuclear and Chemical Agency.			
- Delivered Virtual Radiation Through Ubiquitous System (VIRTUS) 1.0 to the Department of Energy Counter Terrorism Operations Support and National Guard Bureau. This baseline virtual training suite of applications for smartphones serves as the basis of curricula training for first responders performing radiation searches and for new sensor familiarization for 57 Weapons of Mass Destruction (WMD) Civil Support Teams.			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Threat Reduction Agency		Date: May 2017		
Appropriation/Budget Activity 0400 / 2	R-1 Program Element (Number/Name) PE 0602718BR / *Counter Weapons of Mass Destruction Applied Research	Project (Number/Name) RA / Information Sciences and Applications		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017	FY 2018
<ul style="list-style-type: none">- Deployed and provided training on Enhanced Mapping and Positioning System (EMAPS) at training exercises in the San Diego, CA area with the 9th, 42nd, 91st WMD Civil Support Team (CST), Customs and Border Patrol, Department of Energy Radiological Assistance Program Team 7, and Federal Bureau of Investigation. EMAPS is currently the only capability enabling mapping and tracking of personnel in GPS-denied settings. The 9th CST will be generating an official requirement for EMAPS to the National Guard Bureau.- Deployed CITRUS text analytic technology to Sandia National Laboratory for use and evaluation with real world application. This technology was demonstrated to be effective in a WMD counter-trafficking mission.- Collaborated with the U.S. Air Force to successfully connect and distribute data from airborne cloud instantiations to ground cloud instantiations via a commercial mesh network. This collaboration prepared two national labs to deploy technology flight tests with integrated advanced analytic imagery based-capabilities.- Participated in an interagency, large-scale test series of dense gas release. Analyzed data and developed models to improve atmospheric hazard predictions to enhance Consequence Management decision support.- Developed environmental degradation parameters of airborne chemical agents to better characterize collateral effects after a strike on a WMD facility.- In support of the U.S. Strategic Command (USSTRATCOM), developed capabilities to support analysis of higher order effects, such as infrastructure and economic impacts, from nuclear strike.- Developed high fidelity Force-on-Force (phenomenology and effects) computational modeling and simulation capabilities integrated with real and virtual sensor responses.- Developed high fidelity radiation detection trainer technologies utilizing mobile devices and augmented reality displays to enable training with virtual radiation source surrogates.- Integrated commercial graphical processor technologies to enable near real-time high fidelity radiation transport calculations.- Integrated new first principle high fidelity blast and nuclear fallout codes into the DOD/DHS/DOE radiation particle transport code suite.- Developed a CWMD sensor framework with the Night Vision Laboratory to enable real-time data fusion of deployed sensors with modeling and simulation tools.- Continued to develop and deploy mobile device-based situational awareness, mission planning, and training tools for the warfighter featuring up-to-date capabilities for route planning, force tracking, and geo-tagging items of interest.- Continued to develop, deploy, and support implementation of faster than real-time analysis code with large-scale exercises in support of nuclear physical security threat and vulnerability assessments.- Continued to develop and deploy automated methods to consolidate multiple geospatial terrain types into a single virtual globe capable of supporting multiple modeling and simulation platforms. <p>FY 2017 Plans:</p>				

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Threat Reduction Agency		Date: May 2017	
Appropriation/Budget Activity 0400 / 2	R-1 Program Element (Number/Name) PE 0602718BR / <i>*Counter Weapons of Mass Destruction Applied Research</i>	Project (Number/Name) RA / <i>Information Sciences and Applications</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
<ul style="list-style-type: none"> - Initiate development of concepts and explore capabilities for enabling data collection, fusion, and analysis supporting DTRA's Technology-Driven WMD Threat Forecasting program. - Continue to conduct a large-scale test series in collaboration with interagency on dense gas release and to develop models to improve atmospheric hazard predictions and consequence management. Develop enhancements and modifications to codes supporting analysis of test results. - Continue to develop and integrate a CWMD sensor framework in collaboration with the Night Vision Laboratory and Common CBRN Sensor Interface sponsors (DTRA's Nuclear Technologies and Counterterrorism Technologies Divisions and the Joint Program Executive Office for Chemical and Biological Defense) to enable real-time data fusion of deployed sensors with modeling and simulation tools. - Continue to develop environmental degradation parameters of airborne non-traditional chemical agents to better characterize collateral effects after a strike on a WMD facility. - Continue to develop high fidelity Force-on-Force (phenomenology and effects) computational modeling and simulation capabilities integrated with real and virtual sensor responses. - Continue to develop and enhance high fidelity radiation detection training applications for use in mobile devices. - Continue to develop augmented reality displays for mobile devices to enable training with virtual radiation source surrogates. - Continue to develop data anomaly detection and analysis technology as part of DoD Distributed Common Ground/Surface System and Intelligence Community Information Technology Enterprise-compliant architectures. - Continue to develop enhancements to modeling, simulation, and data architecture capabilities for analysis of higher order effects from nuclear detonation, to include physical infrastructure, political, and economic impacts. - Continue to develop automated methods to consolidate multiple geospatial terrain types into a single virtual globe capable of supporting multiple modeling and simulation platforms. - Continue to develop mobile device-based route planning, force tracking, and geo-tagging applications to support warfighter-unique CWMD missions. - Continue to develop faster-than-real-time analysis code for use in large-scale nuclear physical security threat and vulnerability assessments, and conduct independent validation and verification for DoD level accreditation. - Continue to manage and support the Threat Reduction Advisory Committee. The Committee will be completing a top to bottom review of the chemical, biological, and nuclear issues on the Korean Peninsula. - Continue Project on Advanced Systems and Concepts for Countering WMD through the Naval Postgraduate School, and grant 20 to 25 research awards that support CWMD efforts. - Continue NextGen activities. The effort will attempt to expand interest in the nuclear enterprise by engaging the French nuclear non-governmental organizations. <p>FY 2018 Plans:</p>			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Threat Reduction Agency		Date: May 2017	
Appropriation/Budget Activity 0400 / 2	R-1 Program Element (Number/Name) PE 0602718BR / <i>*Counter Weapons of Mass Destruction Applied Research</i>	Project (Number/Name) RA / <i>Information Sciences and Applications</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
<ul style="list-style-type: none"> - Continue to pursue methodologies and explore capabilities for enabling data collection, toolset automation, and distributed analysis / synthesis of emerging and disruptive technology information that supports the Technology-Driven WMD Threat Forecasting program. - Continue to develop data anomaly detection and analysis technology as part of DoD Distributed Common Ground/Surface System and Intelligence Community Information Technology Enterprise-compliant architectures. - Continue to develop enhancements to modeling, simulation, and data architecture capabilities for analysis of higher order effects from nuclear detonation, to include physical infrastructure, political, and economic impacts. - Continue maturation of DTRA Experimental Laboratory capabilities in support of whole-of-government CWMD research and development mission areas. - Enhance the software stack to include a minimum of two new nuclear effect phenomenology code capabilities in support of the Mission Planning Analysis System (MPAS) allowing the use of the user interface and web services to acquire effects assessments within the USSTRATCOM operational environment - Continue to develop high fidelity Force-on-Force (phenomenology and effects) computational modeling and simulation capabilities integrated with real and virtual sensor responses. - Continue to conduct a large-scale test series in of with interagency on dense gas release and to develop enhancement of models to improve atmospheric hazard predictions; improvement of models reduces uncertainty of analyses used by staff planners and first responders. Develop enhancements and modifications to codes supporting analysis of test results. - Complete development of environmental degradation parameters of airborne non-traditional chemical agents to characterize collateral effects after a strike on a WMD facility; improvement of models reduces uncertainty in collateral effects from WMD in support of combat operations. - Continue to develop and integrate a CWMD sensor framework in collaboration with the Night Vision Laboratory and Common CBRN Sensor Interface sponsors (DTRA's Nuclear Technologies and Counterterrorism Technologies Divisions and the Joint Program Executive Office for Chemical and Biological Defense) to enable real-time data fusion of deployed sensors with modeling and simulation tools. - Continue to develop and enhance high fidelity radiation detection training applications for use in mobile devices. - Continue to develop augmented reality displays for mobile devices to enable training with virtual radiation source surrogates. - Continue to develop automated methods to consolidate multiple geospatial terrain types into a single virtual globe capable of supporting multiple modeling and simulation platforms. - Continue to develop mobile device-based route planning, force tracking, and geo-tagging applications to support warfighter-unique CWMD missions. 			
Accomplishments/Planned Programs Subtotals		29.133	29.127
		30.270	

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Threat Reduction Agency									Date: May 2017			
Appropriation/Budget Activity 0400 / 2				R-1 Program Element (Number/Name) PE 0602718BR / *Counter Weapons of Mass Destruction Applied Research				Project (Number/Name) RA / Information Sciences and Applications				
C. Other Program Funding Summary (\$ in Millions)												
Line Item	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost	
• 26/0603160BR: Counter Weapons of Mass Destruction Advanced Technology Development	11.494	11.422	10.229	-	10.229	11.983	12.183	12.468	12.733	Continuing	Continuing	
• 154/0605502BR: Small Business Innovation Research	10.473	-	-	-	-	-	-	-	-	Continuing	Continuing	
Remarks												
D. Acquisition Strategy												
Competitive selection of most appropriate performers to fulfill science and technology development needs. Performer base includes best-of-breed researchers across DoD and other government agency laboratories, academia, industry, and international partner organizations.												
E. Performance Metrics												
Percentage of CWMD technologies selected for transition to advanced technology development (6.3) and advanced component development and prototypes (6.4).												

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Threat Reduction Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 2					R-1 Program Element (Number/Name) PE 0602718BR / *Counter Weapons of Mass Destruction Applied Research				Project (Number/Name) **RD / Detection Technologies			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
**RD: Detection Technologies	0.000	15.083	15.936	14.769	-	14.769	17.005	18.451	17.677	18.035	Continuing	Continuing

Note

*Project RF-Detection and Forensics Technologies subdivides into Projects RD-Detection Technologies and RF-Forensics Technologies in FY 2016.

A. Mission Description and Budget Item Justification

The Detection Technologies mission is to conduct Research, Development, Test, & Evaluation to (1) identify, develop, and exploit signatures associated with nuclear threat enablers such as nuclear expertise, financing, or unique materials to advance U.S. capabilities to detect and interdict such threats; and (2) locate, identify, and track special nuclear material and improve detection factors such as range, time, sensitivity, or accuracy to enhance Service/Special Mission Unit capabilities. These efforts support Department of Defense (DoD) requirements for countering terrorism, counter/nonproliferation, and homeland defense.

The increase from FY 2016 to FY 2017 is due to increased investment in radiation detection and nuclear threat detection intelligence, surveillance, and reconnaissance. The decrease from FY 2017 to FY 2018 is due to a shift in investment priorities to fund test and technology development requirements and full effects modeling.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018
Title: RD: Detection Technologies	15.083	15.936	14.769
Description: Project RD develops direct and indirect technologies for the detection of radiation and non-radiative signatures associated with nuclear threats, and to advance warfighter capabilities to rapidly locate, characterize, and counter such threats.			
FY 2016 Accomplishments: <ul style="list-style-type: none"> - Discovered/identified nuclear threat signatures, characteristics, and corresponding detection modalities and collection systems. - Developed algorithms for rapidly and effectively analyzing all-source intelligence to identify nuclear threats. - Developed prototype systems to remotely monitor small and wide areas that may produce or contain nuclear threats. - Developed algorithms to synthesize the collection and analysis of multiple nuclear threat signatures to improve assessment confidence and cuing of potential nuclear threat events. - Executed robust and operationally relevant testing and evaluation of developmental radiation detection systems to determine and select the best performing technologies and techniques for further development and transition to user groups. - Down-selected sensor materials for integration into detection systems. - Down-selected detection system algorithms for processing and integration into detection systems to improve user capabilities. - Researched and developed advanced three-dimensional imaging technologies for high-resolution source characterization and identification to provide new and improved capabilities to detect, locate, identify, and characterize threat materials. - Investigated viability of ultra-low power, long-duration programmable remote radiation monitoring systems. 			

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B. Accomplishments/Planned Programs (\$ in Millions)			FY 2016	FY 2017	FY 2018
<div>- Investigated organic semiconductors and photo-detectors to improve detection system performance.</div> <div>FY 2017 Plans:<div><div>- Continue to develop technologies to identify and catalogue nuclear threat signatures and characteristics and to formulate corresponding detection modalities and collection systems.</div><div>- Continue to develop algorithms and tools for rapid analysis of all-source intelligence to identify nuclear threats.</div><div>- Continue to develop initial technologies and subsystems to remotely monitor small and wide areas that may produce or contain nuclear threats.</div><div>- Continue to develop algorithms and tools to synthesize the collection and analysis of multiple nuclear threat signatures in order to improve assessment confidence and cuing of potential nuclear threat events.</div><div>- Continue to test and evaluate developmental radiation detection systems to identify the best performing technologies and techniques for transition to advanced technology development efforts.</div><div>- Develop technologies for next generation nuclear imaging devices with neutron and dual gamma and neutron imaging capability, enabling warfighters to rapidly pinpoint and identify detected radioisotopes.</div><div>- Develop technologies enabling interoperable architectures for enhanced, real-time mission analysis and common operational pictures within a shared or distributed area of operations.</div><div>- Develop techniques and technologies for alternative signature detection, processing, and exploitation methods to detect and locate nuclear threats.</div><div>- Develop novel detection materials and advanced Helium-3 replacement technologies into prototype radiation detection systems to increase range, sensitivity, and accuracy of detection and enable warfighters to more rapidly locate targeted material.</div><div>- Develop, integrate, and demonstrate prototype radiation detection algorithms to enhance the range of detectability of targeted material.</div></div></div> <div>FY 2018 Plans:<div><div>- Continue to develop radiation and nuclear threat detection systems to identify the best performing technologies and techniques for transition to advanced technology development efforts.</div><div>- Continue to develop technologies for next generation nuclear imaging devices with dual gamma and neutron imaging capability, enabling warfighters to rapidly pinpoint and identify detected radioisotopes.</div><div>- Continue to develop technologies to enable interoperable architectures for enhanced, real-time mission analysis and common operational pictures within a shared or distributed area of operations.</div><div>- Continue to develop and integrate novel detection materials and advanced helium-3 replacement technologies into prototype radiation detection systems to increase range, sensitivity, and accuracy of detection and enable warfighters to rapidly locate targeted material.</div><div>- Continue to develop, integrate, and demonstrate prototype radiation and nuclear threat detection algorithms, electronics and communications capabilities to enhance the range of detectability of targeted material.</div></div></div>					

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Threat Reduction Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 2				R-1 Program Element (Number/Name) PE 0602718BR / *Counter Weapons of Mass Destruction Applied Research				Project (Number/Name) **RD / Detection Technologies				
B. Accomplishments/Planned Programs (\$ in Millions)										FY 2016	FY 2017	FY 2018
<ul style="list-style-type: none"> - Initiate investigation of computer learning and computer vision technologies to enhance nuclear threat situational awareness and nuclear threat identification. - Initiate investigation of various sensor capabilities for far-field identification and tracking of nuclear threats. - Identify exploitable observables to inform technology development and investigate emerging technologies that indicate the presence of nuclear threats. 												
Accomplishments/Planned Programs Subtotals										15.083	15.936	14.769
C. Other Program Funding Summary (\$ in Millions)												
Line Item	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost	
• 26/0603160BR: Counter Weapons of Mass Destruction Advanced Technology Development	26.415	17.775	17.556	-	17.556	18.530	20.697	21.250	21.681	Continuing	Continuing	
Remarks												
D. Acquisition Strategy												
Competitive selection of most appropriate performers to fulfill science and technology development needs. Performer base includes best-of-breed researchers across the Department of Defense and other government agency laboratories, academia, industry and international partner organizations.												
E. Performance Metrics												
Percentage of CWMD technologies selected for transition to advanced technology development (6.3) and advanced component development and prototypes (6.4).												

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Threat Reduction Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 2					R-1 Program Element (Number/Name) PE 0602718BR / *Counter Weapons of Mass Destruction Applied Research				Project (Number/Name) RE / Counter-Terrorism Technologies			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
RE: Counter-Terrorism Technologies	7.677	0.795	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
A. Mission Description and Budget Item Justification												
The Counter-Terrorism Technologies project is an over-arching project that develops and transitions a full spectrum of new technologies to counter emergent Weapons of Mass Destruction (WMD) thus enabling warfighters to improve their ability to detect, disable, interdict, neutralize, and destroy chemical, biological, nuclear production, storage, and weaponization facilities. See paragraph C. for other program funding.												
The decrease from FY 2016 to FY 2017 is due to the relative impact of a one-time increase in the year of budget execution in FY 2016 for investment in a chemical sampling tool.												
B. Accomplishments/Planned Programs (\$ in Millions)										FY 2016	FY 2017	FY 2018
Title: RE: Counter-Terrorism Technologies										0.795	-	-
Description: Project RE provides research and development (R&D) support to Joint U.S. Military Forces, specifically United States Special Operations Command (USSOCOM), in the areas of Explosive Ordnance Disposal Device Defeat; Counter WMD technologies for warfighters; the USSOCOM Countering WMD – Terrorism Support program, and oversight of counterproliferation R&D resources sent directly to USSOCOM for warfighter-unique counterproliferation technologies.												
FY 2016 Accomplishments: - Developed a chemical sampling tool to fit a specific form factor. This tool prevents chemical hazard exposure to personnel and the environment.												
Accomplishments/Planned Programs Subtotals										0.795	-	-
C. Other Program Funding Summary (\$ in Millions)												
Line Item	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost	
• 26/0603160BR: Counter Weapons of Mass Destruction Advanced Technology Development	107.265	102.976	103.869	-	103.869	105.915	108.099	110.632	112.871	Continuing	Continuing	
Remarks												

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Threat Reduction Agency		Date: May 2017
Appropriation/Budget Activity 0400 / 2	R-1 Program Element (Number/Name) PE 0602718BR / <i>*Counter Weapons of Mass Destruction Applied Research</i>	Project (Number/Name) RE / <i>Counter-Terrorism Technologies</i>
<u>D. Acquisition Strategy</u> N/A		
<u>E. Performance Metrics</u> Number of technologies developed and delivered, and/or proof of concept, or successful Military Utility Assessments conducted that increase the potential mission success and reduce the number of current gaps in Special Operations Forces capabilities to counter weapons of mass destruction.		

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Threat Reduction Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 2					R-1 Program Element (Number/Name) PE 0602718BR / *Counter Weapons of Mass Destruction Applied Research				Project (Number/Name) **RF / Forensics Technologies			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
**RF: Forensics Technologies	196.608	10.525	10.008	10.274	-	10.274	10.345	10.560	10.771	10.991	Continuing	Continuing

Note

*Project RF-Detection and Forensics Technologies subdivides into Projects RD-Detection Technologies and RF-Forensics Technologies in FY 2016.

A. Mission Description and Budget Item Justification

The Forensics Technologies project develops post-detonation nuclear forensics technologies providing accurate, rapid, and reliable means to collect, analyze, and evaluate prompt data and debris from a nuclear or radiological event in support of exploitation and attribution efforts. These forensics technologies also enable the Defense Threat Reduction Agency (DTRA) and its trusted partners to detect, locate, identify, track, and interdict nuclear and radiological threats, including weapons and material and enablers to their acquisition and development. In accordance with Department of Defense Directive S-2060.04, DTRA serves as the U.S. Government lead for post-detonation National Technical Nuclear Forensics (NTNF) research and development (R&D). As the central NTNF R&D coordinator, DTRA works in consultation with interagency partners to develop and improve ground-based capabilities supporting exploitation and attribution missions.

The decrease from FY 2016 to FY 2017 is due to decreased investment in prompt nuclear effects exploitation for attribution. The increase from FY 2017 to FY 2018 is due to increased investment in nuclear device characterization for forensics.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018
Title: RF: Forensics Technologies	10.525	10.008	10.274
Description: Project RF develops post-detonation nuclear forensics technologies providing accurate, rapid and reliable means to collect, analyze, and evaluate prompt data and debris from a nuclear or radiological event in support of exploitation and attribution efforts.			
FY 2016 Accomplishments: <ul style="list-style-type: none"> - Accelerated development of the propagation of prompt diagnostics phenomenology to support the deployment of ground-based sensor capabilities in three U.S. cities for post-detonation prompt diagnostics under the DISCREET OCULUS program. - Developed, tested, and demonstrated upgraded technical capabilities for prompt diagnostics, debris collection, sample analysis, and modeling to support nuclear device reconstruction, and forensics data to decrease timeline, lower uncertainties, and increase confidence in technical nuclear forensics conclusions. Utilized cooperative R&D relationship with the UK to conduct peer review of nuclear forensics technologies and validation of U.S. DISCREET OCULUS system models. 			
FY 2017 Plans:			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Threat Reduction Agency		Date: May 2017	
Appropriation/Budget Activity 0400 / 2	R-1 Program Element (Number/Name) PE 0602718BR / <i>*Counter Weapons of Mass Destruction Applied Research</i>	Project (Number/Name) <i>**RF / Forensics Technologies</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
<ul style="list-style-type: none"> - Develop, test, and evaluate new and improved technologies for prompt diagnostics, debris collection, data analysis, debris diagnostics, and technical capability modeling to support nuclear device reconstruction, as well as to decrease timeline, lower uncertainty, and increase confidence in technical nuclear forensics conclusions supporting attribution. - Develop, test, and evaluate new and improved technologies and processes for National Technical Nuclear Forensics validation and verification in order to decrease timeline, lower uncertainty, and increase confidence in technical nuclear forensics conclusions supporting attribution. - Investigate and develop novel concepts enabling radical reductions in the time required to reach target areas, to collect fallout debris and conduct analyses in the field, and to obtain significant forensic results and attribution conclusions. - Investigate and develop techniques and algorithms to analyze, combine, and integrate speed-of-light (SoL) and speed-of-sound (SoS) phenomena in an urban environment to increase the effectiveness of nuclear detonation yield determinations. - Evaluate and expand current understanding of propagation and transport of prompt diagnostics phenomenologies (SoL, SoS) in an urban environment to support the planned deployment of ground-based sensor capabilities (U.S. Prompt Diagnostics System). - Conduct interagency and international research evaluation events to assess process improvements and identify potential capability gaps in forensic conclusion confidence, timeliness, and accuracy. - Engage with partner nations under appropriate international agreements to improve the understanding of prompt phenomenology, improve modeling tools, and improve sensor technologies. - Expand international collaboration in the area of experiments and modeling in order to improve device reconstruction tools and analysis. <p>FY 2018 Plans:</p> <ul style="list-style-type: none"> - Continue to develop and evaluate new and improved prompt diagnostics, debris collection, analysis and diagnostics, and device modeling concepts and methodologies to support nuclear device reconstruction, as well as decrease timelines for, lower uncertainty of, and increase confidence in technical nuclear forensics conclusions supporting attribution. - Continue to engage with partner nations under appropriate international agreements to improve understanding of prompt phenomenology, improve modeling tools, and improve sensor technologies. - Continue to develop and improve techniques and algorithms to analyze, combine, and integrate speed-of-light (SoL) and speed-of-sound (SoS) phenomena in an urban environment to increase the effectiveness and accuracy of nuclear detonation yield determinations and weapon characterizations. - Initiate investigation and evaluation of innovative ground-based prompt diagnostic sensor concepts and technologies, such as ubiquitous networks and sensors with reduced size, weight, and power consumption, to improve sensor portability and expand operational capability and flexibility. - Continue to expand international collaboration in the areas of experiments and weapons modeling to improve device reconstruction tools and analysis. 			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Threat Reduction Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 2				R-1 Program Element (Number/Name) PE 0602718BR / *Counter Weapons of Mass Destruction Applied Research				Project (Number/Name) **RF / Forensics Technologies				
B. Accomplishments/Planned Programs (\$ in Millions)										FY 2016	FY 2017	FY 2018
- Continue to develop and evaluate new and improved validation and verification technologies and methodologies, such as surrogate debris and representative isotopes, to support post-detonation National Technical Nuclear Forensics laboratory analysis and decrease timelines, lower uncertainties, and increase confidence in technical nuclear forensics conclusions supporting attribution.												
- Continue to investigate and develop novel concepts enabling radical reductions in the time required to conduct ground fallout debris collections, conduct analyses in the field, and obtain nuclear forensic results.												
Accomplishments/Planned Programs Subtotals										10.525	10.008	10.274
C. Other Program Funding Summary (\$ in Millions)												
Line Item	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost	
• 26/0603160BR: Counter Weapons of Mass Destruction Advanced Technology Development	40.373	38.540	40.286	-	40.286	42.580	40.925	42.144	43.124	Continuing	Continuing	
• 123/0605000BR: Counter Weapons of Mass Destruction Systems Development	7.156	4.568	6.727	-	6.727	6.710	5.367	5.899	6.172	Continuing	Continuing	
Remarks												
D. Acquisition Strategy												
Competitive selection of most appropriate performers to fulfill science and technology development needs. Performer base includes best-of-breed researchers across DoD and other government agency laboratories, academia, industry, and international partner organizations.												
E. Performance Metrics												
Percentage of Counter WMD technologies selected for transition to advanced technology development (6.3) and advanced component development and prototypes (6.4).												

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Threat Reduction Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 2					R-1 Program Element (Number/Name) PE 0602718BR / *Counter Weapons of Mass Destruction Applied Research				Project (Number/Name) RG / Defeat Technologies			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
RG: Defeat Technologies	75.082	10.946	11.304	11.060	-	11.060	11.290	11.530	11.770	12.017	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Defeat Technologies project develops innovative kinetic and non-kinetic weapon technologies to expand traditional and asymmetric options available to Combatant Commanders to deny, disrupt, and defeat adversarial use of Weapons of Mass Destruction (WMD) while minimizing collateral effects. Technology development focuses on the physical or functional defeat of WMD threat materials, an adversary's ability to deliver the same, and the physical and nonphysical support networks enabling both. It does so through the systematic identification and maturation of technologies capable of defeating WMD agents or agent-based processes and selecting technologies for integration into weapons, delivery systems, or rapid WMD elimination capabilities. This effort includes developing specific WMD agent/agent-based process simulants, sub-scale test infrastructure, and sampling capability required for effective development, testing, and evaluation of next-generation Countering WMD (CWMD) capabilities. The project places a high priority on understanding, characterizing, and validating potential weapon effects within mathematical confidence as it relates to the unintended release of hazardous threat materials. Technologies with the potential for weapon and capability integration are transitioned to the advanced technology development effort under this project. On a limited basis, technology test data is shared with coalition partners.

The increase from FY 2016 to FY 2017 is due to increased investment in CWMD weapons technologies. The decrease from FY 2017 to FY 2018 supports the funding profile for CWMD weapons technologies' planned activities.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018
Title: RG: Defeat Technologies	10.946	11.304	11.060
Description: Project RG develops innovative kinetic and non-kinetic weapon technologies to expand traditional and asymmetric options available to Combatant Commanders to deny, disrupt, and defeat adversarial use of WMD while minimizing collateral effects.			
FY 2016 Accomplishments: <ul style="list-style-type: none"> - Developed and demonstrated autonomous air and ground vehicle collaboration for the Modular Autonomous Countering WMD System, Increment B. This demonstration proved interoperability concepts for a robust family-of-systems approach to functionally defeating targets of interest, integrating mapping, improved communications, sensor/payload execution, and intelligence gathering capabilities. - Conducted static demonstration of initial capability of access denial and denial-of-use technologies against WMD representative targets. - Completed electronics susceptibility to electromagnetic fields algorithm development and characterization testing. - Down-selected electromagnetic source and initiated system development and integration. - Conducted sub-scale tests to assess capability to accurately measure WMD simulant released in a plume. 			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Threat Reduction Agency		Date: May 2017	
Appropriation/Budget Activity 0400 / 2	R-1 Program Element (Number/Name) PE 0602718BR / *Counter Weapons of Mass Destruction Applied Research	Project (Number/Name) RG / Defeat Technologies	

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2016	FY 2017	FY 2018
<ul style="list-style-type: none"> - Continued classified system design and integration work and initiated demonstrations. <p>FY 2017 Plans:</p> <ul style="list-style-type: none"> - Continue classified component/system design and development. - Continue static demonstrations of access denial and denial-of-use technologies against representative WMD threats. - Conduct sub-scale tests of new standoff weapon payloads to defeat chemical and biological warfare targets. - Continue sub-scale tests to assess capability to accurately measure WMD simulant released in a plume. - Continue to develop electromagnetic source to functionally defeat WMD threats. <p>FY 2018 Plans:</p> <ul style="list-style-type: none"> - Continue static demonstrations of access denial and denial-of-use technologies against representative WMD threats. - Conduct scaled demonstrations of access denial and denial-of-use technologies against representative WMD threats. - Continue sub-scale tests of new standoff weapon payloads to defeat chemical and biological warfare targets. - Continue sub-scale tests of emergent technologies to accurately measure WMD simulant released in a plume. 			
Accomplishments/Planned Programs Subtotals	10.946	11.304	11.060

C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u> <u>Base</u>	<u>FY 2018</u> <u>OCO</u>	<u>FY 2018</u> <u>Total</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• 26/0603160BR: Counter Weapons of Mass Destruction Advanced Technology Development	21.002	20.710	22.161	-	22.161	22.557	23.031	23.145	23.619	Continuing	Continuing
Remarks											
D. Acquisition Strategy											
Competitive selection of most appropriate performers to fulfill science and technology development needs. Performer base includes best-of-breed researchers across DoD and other government agency laboratories, academia, industry, and international partner organizations.											
E. Performance Metrics											
Percentage of CWMD technologies selected for transition to advanced technology development (6.3) and advanced component development and prototypes (6.4).											

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Threat Reduction Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 2					R-1 Program Element (Number/Name) PE 0602718BR / *Counter Weapons of Mass Destruction Applied Research				Project (Number/Name) RI / Nuclear Survivability			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
RI: Nuclear Survivability	98.286	30.896	34.051	34.103	-	34.103	34.736	35.438	36.161	36.896	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Nuclear Survivability project develops innovative technologies for the protection of mission-essential personnel, critical military and national defense capabilities, and associated control and support systems during a nuclear event. Research under this project supports the mission critical systems identified under Department of Defense Instruction 3150.09, Chemical, Biological, Radiological, and Nuclear Survivability Policy. The Defense Threat Reduction Agency is designated by the Department of Defense (DoD) as the center of excellence for electromagnetic pulse (EMP) survivability assessments. The System Vulnerability and Assessment effort develops nuclear assessment capabilities to support operational planning, weapons effects predictions, and strategic system design. This activity also provides the DoD's nuclear design and protection standards for new and existing systems, e.g., command and control facilities and aircraft. Key systems include the Nuclear Command and Control System, the net-centric thin-line, and both military and civilian satellites and associated support systems. The radiation hardened nano-electronics effort develops and demonstrates radiation-hardened, high-performance prototype nano-electronics to meet DoD space and strategic system requirements. Experimental Capabilities activities provide the warfighter with unique x-ray, gamma ray, and EMP test capabilities in support of system survivability development, certification, and sustainment. This effort leverages research from and coordinates with the National Nuclear Security Administration (United States) and the Atomic Weapons Establishment (United Kingdom) to develop enabling technologies for improved nuclear weapon effects experimentation capabilities. Nuclear Technology Analysis Support provides detailed planning related to policy, strategy, objectives, and programmatic integration. This project also supports international collaboration, user groups, case study reviews, and the Joint Atomic Information Exchange Group. The Human Survivability effort conducts research to develop and validate mortality and morbidity models associated with radiological and nuclear weapon effects.

The increase from FY 2016 to FY 2017 is due to the net effect of increased investment in system vulnerability and assessment, nuclear weapons effects experimentation, and nuclear technology analysis support and decreased investment in radiation-hardened nano-electronics.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018
Title: RI: Nuclear Survivability	30.896	34.051	34.103
Description: Project RI provides the capability for DoD nuclear forces and their associated control and support systems and facilities to avoid, repel, endure, or withstand attack or other hostile action, to the extent that essential functions can continue or be resumed after the onset of hostile action.			
FY 2016 Accomplishments: <ul style="list-style-type: none"> - Completed redesign and testing of critical communications radios for new fleet of presidential helicopters to meet C3 systems survivability standards for High-Altitude Electromagnetic Pulse (HEMP) events. This technology transitioned to the U.S. Navy and the White House Military Office. - Initiated HEMP survivability testing and risk assessments for the F-15E Dual Capable Aircraft platform as part of Continuous Wave Illumination planning and testing efforts. This was the first such test for a combat Dual Capable Aircraft. 			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Threat Reduction Agency		Date: May 2017	
Appropriation/Budget Activity 0400 / 2	R-1 Program Element (Number/Name) PE 0602718BR / <i>*Counter Weapons of Mass Destruction Applied Research</i>	Project (Number/Name) RI / <i>Nuclear Survivability</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
<ul style="list-style-type: none"> - Transitioned Single Event Transient research and mitigation from legacy to 32 nanoscale technology nodes. - Developed innovative techniques to produce 5X improvement in warm x-ray (10-50 keV) test capability for Double-Eagle simulator. - Performed a System Generated Electro-Magnetic Pulse radiation effects experiment for 2-dimensional code validation on the National Ignition Facility (NIF). - Initiated development of Satellite System Nuclear Survivability protection design handbook. - Initiated a low power design using one 1-D grid design guidelines in a RadHard foundry. - Conducted electromagnetic pulse assessments on defense critical infrastructure for electric power and telecommunications networks. - Upgraded electron-beam (cold x-ray) test capability at the DTRA West Coast Facility to allow testing at 2X current capability. - Updated cost estimates to harden methodology protocols for aircraft, missile, and satellite systems. - Published MIL-STD-4023, High-Altitude Electromagnetic Pulse Protection for Maritime Assets and Comprehensive Atmospheric Nuclear Environment military standards. - Updated MIL-STD-188-125 -1/2, High-Altitude Electromagnetic Pulse Protection for Fixed and Transportable Facilities and Systems. - Updated MIL-HDBK-423 High-Altitude Electromagnetic Pulse Protection for Fixed facilities. - Published Aircraft High Altitude EMP Protection Handbook. - Published Satellite System Nuclear Survivability Protection Military Standard. <p>FY 2017 Plans:</p> <ul style="list-style-type: none"> - Complete manufacture of maskless e-beam lithography tool prototype in a trusted foundry. - Develop and integrate the latest human radiation exposure models into current predictive modeling software. - Develop model to evaluate synergistic effects of nuclear weapon combined injuries. - Develop advanced warm x-ray source concepts. - Develop well-characterized x-ray test environments at the NIF. - Continue to develop a RadHard-by-Design microprocessor with less than 22nm commercial technology. - Evaluate High Altitude Electromagnetic Pulse (HEMP) threat survivability for Aegis Ashore-Poland and satellite communication ground facilities. - Investigate electromagnetic pulse effects on power grid transformers, as part of a collaborative research effort with the United Kingdom on critical civilian and defense infrastructure. - Provide nuclear scintillation expertise to DoD and Service Program Executive Offices (PEOs) to assist in certification of disturbed channel simulators and new survivable satellite communication systems. - Publish a Surface/Near-Surface Nuclear Weapon Environment Military Standard to assist DoD and Service PEOs. 			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Threat Reduction Agency		Date: May 2017	
Appropriation/Budget Activity 0400 / 2	R-1 Program Element (Number/Name) PE 0602718BR / <i>*Counter Weapons of Mass Destruction Applied Research</i>	Project (Number/Name) RI / <i>Nuclear Survivability</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
<ul style="list-style-type: none"> - Publish update to MIL-STD-188-125-1, HEMP Protection for Ground-Based C4I Facilities Performing Critical, Time-Urgent Missions: Part 1 Fixed Facilities. - Publish Nuclear Disturbed Communications Environment Annex to the Consolidated Afloat Networks and Enterprise Services Military Standard to assist DoD and Service PEOs. <p>FY 2018 Plans:</p> <ul style="list-style-type: none"> - Initiate nuclear countermeasure and glass penetration injury criteria modeling in DTRA's existing Health Effects from Radiological & Nuclear Environments (HENRE) R&D computer code and, upon validation and verification, update United States Strategic Command (USSTRATCOM) and DTRA operational codes; this modeling will assist DoD and other federal agencies in selecting and supporting specific nuclear countermeasures. - Complete development of and implement a methodology for comprehensive analysis of the DoD Chemical, Biological, Radiological, and Nuclear Mission-Critical Reports for nuclear survivability and hardening of Mission-Critical Systems/Equipment per DoDI 3150.09. - Continue to evaluate High Altitude Electromagnetic Pulse (HEMP) threat survivability for Aegis Ashore-Poland and satellite communication ground facilities. - Continue to investigate electromagnetic pulse effects on power grid transformers, as part of a collaborative research effort with the United Kingdom on critical civilian and defense infrastructure. - Continue to provide nuclear scintillation expertise to DoD and Service Program Executive Offices (PEOs) to assist in certification of disturbed channel simulators and new survivable satellite communication systems. - Publish update to MIL-STD-188-125-1, HEMP Protection for Ground-Based C4I Facilities Performing Critical, Time-Urgent Missions: Part 1 Fixed Facilities and update to MIL-HDBK-423 HEMP Protection for Ground-based, Mission-Critical Facilities Part 1 Fixed Facilities, Part I. - Publish Nuclear Disturbed Communications Environment Annex to the Consolidated Afloat Networks and Enterprise Services Military Standard to assist DoD and Service PEOs. - Complete HEMP Certification recommendation to USSTRATCOM for the Missile Defense Complex, Ft. Greely, AK. - Apply advanced electron beam diagnostics to characterize the PITHON test capability at the DTRA West Coast Facility for strategic reentry systems survivability. - Continue to develop or initiate development of and demonstrate an advanced warm x-ray spectrometer to reduce uncertainties and design margins for code validation and electronics certification. - Demonstrate an advanced Single Wire Radiator array warm x-ray source on Double-EAGLE at the DTRA West Coast Facility for strategic reentry systems survivability. - Demonstrate multi-point x-ray sources at the National Ignition Facility to improve cold x-ray test capabilities for strategic and missile defense systems. 			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Threat Reduction Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 2				R-1 Program Element (Number/Name) PE 0602718BR / *Counter Weapons of Mass Destruction Applied Research				Project (Number/Name) RI / Nuclear Survivability				
B. Accomplishments/Planned Programs (\$ in Millions)										FY 2016	FY 2017	FY 2018
<ul style="list-style-type: none"> - Demonstrate a large-area direct laser impulse test capability at the National Ignition Facility for strategic system survivability certification. - Complete study of satellite solar power array response phenomenologies in pulsed x-ray environments. - Support Missile Defense Agency cold x-ray survivability experiments at the National Ignition Facility. - Continue to develop the 16/14nm Radiation Hardened by Design (RHBD) Library. - Continue development of Complementary e-Beam Lithography (CeBL) technologies to reduce the cost of low volume DoD radiation hardened micro and nano-electronics. - Continue development of RHBD Single Event Effects (SEE) mitigation techniques for <32nm digital CMOS and Analog Mixed Signal Devices. - Complete development of the Satellite System Natural & Nuclear Environment Protection Standard. - Complete exploration of technology-agnostic radiation hardening for Boolean logic and multipliers using the principles of information theory and transition results to the 14nm RHBD program. 												
Accomplishments/Planned Programs Subtotals										30.896	34.051	34.103
C. Other Program Funding Summary (\$ in Millions)												
Line Item	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost	
• 26/0603160BR: Counter Weapons of Mass Destruction Advanced Technology Development	6.621	6.561	6.658	-	6.658	6.729	6.854	6.992	7.132	Continuing	Continuing	
Remarks												
D. Acquisition Strategy												
Competitive selection of most appropriate performers to fulfill science and technology development needs. Performer base includes best-of-breed researchers across the DoD and other government agency laboratories, academia, industry, and international partner organizations.												
E. Performance Metrics												
Percentage of CWMD technologies selected for transition to advanced technology development (6.3) and advanced component development and prototypes (6.4).												

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Threat Reduction Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 2					R-1 Program Element (Number/Name) PE 0602718BR / *Counter Weapons of Mass Destruction Applied Research				Project (Number/Name) RL / Nuclear & Radiological Effects			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
RL: Nuclear & Radiological Effects	130.489	28.333	28.668	29.228	-	29.228	29.640	30.324	30.999	31.695	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Nuclear and Radiological Effects project develops modeling tools to: support military operational planning, weapons effects predictions, and strategic system design decisions; consolidate validated modeling tools into the Joint Information Environment for integrated functionality; predict system responses to nuclear and radiological weapons producing electromagnetic, thermal, blast, shock, and radiation environments; provide detailed adversary nuclear infrastructure characterization to enhance counterforce operations and hazard effects; and, develop foreign nuclear weapon outputs.

The increase from FY 2016 to FY 2017 is due to increased investment in targeting support. The increase from FY 2017 to FY 2018 is due to increased investment in full effects modeling.

B. Accomplishments/Planned Programs (\$ in Millions)

Title: RL: Nuclear & Radiological Effects	FY 2016	FY 2017	FY 2018
Description: Project RL develops nuclear and radiological assessment modeling tools to support military operational planning, weapons effects predictions, and strategic system design decisions.	28.333	28.668	29.228
FY 2016 Accomplishments: <ul style="list-style-type: none"> - Delivered air blast, fallout, fire, and Source Region Electromagnetic Pulse models to United States Strategic Command (and other nuclear targeting and consequences of execution users) for improved nuclear targeting using nuclear effects that have not been considered in the past. - Developed System Generated Electromagnetic Pulse simulation codes by adapting physics in the Maxwell's Equations Equivalent Circuit code and the Improved Concurrent Electromagnetic Particle-In-Cell high performance computing code. - Continued to develop a selected historical nuclear weapon outputs and effects standard database for validating Nuclear Weapons Effects codes. - Continued implementation of first principle modeling tools for nuclear fire initiation and spread in urban and suburban environments. - Via the Nuclear Weapons Effects Network, continued modeling economic and social consequences of nuclear detonation effects and collateral building damage due to nuclear-induced air blast, assessed nuclear dust/debris effects on airborne systems, and modeled nuclear fire initiation, allowing these considerations to be part of targeting analyses. - Improved high altitude nuclear effects functionality for use in analyzing satellite and missile defense responses to a nuclear environment. 			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Threat Reduction Agency		Date: May 2017	
Appropriation/Budget Activity 0400 / 2	R-1 Program Element (Number/Name) PE 0602718BR / <i>*Counter Weapons of Mass Destruction Applied Research</i>	Project (Number/Name) RL / <i>Nuclear & Radiological Effects</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
<ul style="list-style-type: none"> - Improved foreign nuclear weapon outputs, environment models, and Effects Manual 1 (EM-1) chapters. <p>FY 2017 Plans:</p> <ul style="list-style-type: none"> - Deliver initial nuclear induced fire initiation and spread modeling capability. - Develop nuclear weapons effects tools and analyses for effective targeting, including methods to evaluate the consequences of execution of a given course of action. - Develop enhanced High Altitude Radiation Phenomenology functionality for use on modern computer systems. - Develop initial weapon output spectrum extension required by missile defense systems to ensure critical systems can accomplish their designated missions when exposed to a nuclear weapons environment. - Develop a consistent, state-of-the-art combined effects methodology to ensure critical systems can accomplish their designated missions when exposed to a nuclear weapons environment. - Continue to develop an authoritative source of foreign and historical nuclear weapon outputs to aid in the development of uniform nuclear survivability standards, hardening technologies, and the experimental test capabilities. - Maintain a virtual interagency and international coalition combining capabilities of existing government and industry organizations into cohesive "networks" of people, knowledge, and infrastructure to synchronize research and development across the nuclear weapon effects community of interest. <p>FY 2018 Plans:</p> <ul style="list-style-type: none"> - Continue to develop nuclear weapons effects tools and analyses for effective targeting, including methods to evaluate the consequences of execution of a given course of action. - Continue to develop enhanced High Altitude Radiation Phenomenology functionality for use on modern computer systems. - Continue to develop initial weapon output spectrum extension required by missile defense systems to ensure critical systems can accomplish their designated missions when exposed to a nuclear weapons environment. - Continue to develop combined effects methodologies to ensure critical systems can accomplish their designated missions when exposed to a nuclear weapons environment. - Continue to develop an authoritative source of foreign and historical nuclear weapon outputs to aid in the development of uniform nuclear survivability standards, hardening technologies, and experimental test capabilities. 			
Accomplishments/Planned Programs Subtotals		28.333	28.668
		29.228	

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Threat Reduction Agency							Date: May 2017	
Appropriation/Budget Activity 0400 / 2				R-1 Program Element (Number/Name) PE 0602718BR / *Counter Weapons of Mass Destruction Applied Research			Project (Number/Name) RL / Nuclear & Radiological Effects	

C. Other Program Funding Summary (\$ in Millions)

Line Item	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
• 26/0603000BR: Counter Weapons of Mass Destruction Advanced Technology Development	0.000	3.528	3.500	-	3.500	3.456	3.457	3.455	3.455	Continuing	Continuing

Remarks

*Prior year funds related to this this project in program element number 0605000BR.

D. Acquisition Strategy

Competitive selection of most appropriate performers to fulfill science and technology development needs. Performer base includes best-of-breed researchers across DoD and other government agency laboratories, academia, industry, and international partner organizations.

E. Performance Metrics

Percentage of Counter WMD technologies selected for transition to advanced technology development (6.3) and advanced component development and prototypes (6.4).

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Threat Reduction Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 2					R-1 Program Element (Number/Name) PE 0602718BR / *Counter Weapons of Mass Destruction Applied Research				Project (Number/Name) RM / WMD Counterforce Technologies			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
RM: WMD Counterforce Technologies	79.780	12.873	12.097	14.552	-	14.552	12.612	12.852	13.129	13.395	Continuing	Continuing
A. Mission Description and Budget Item Justification												
The WMD Counterforce Technologies Project develops Countering Weapons of Mass Destruction (CWMD) weapon effects modeling algorithms, full and sub-scale test series required to investigate CWMD weapon effects and sensor performance, and visualization and situational awareness tools to support the next generation DTRA Technical Reachback cell. These activities are critical enablers for the development of advanced CWMD planning tools. Advanced Energetics develops energetic materials and weapon design technology providing advanced defeat capabilities for engaging hard and deeply buried targets that are well beyond current high explosive blast/frag warhead technology.												
The decrease from FY 2016 to FY 2017 is due to the net effect of decreased investment in advanced materials/energetics and increased investment in weapons effects and planning tools. The increase from FY 2017 to FY 2018 is due to increased investment in advanced materials/energetics and weapons effects and planning tools.												
B. Accomplishments/Planned Programs (\$ in Millions)									FY 2016	FY 2017	FY 2018	
Title: RM: WMD Counterforce Technologies									12.873	12.097	14.552	
Description: Project RM provides novel and enhanced weapons energetic materials and structures, full-scale testing of counter WMD weapon effects, weapon effects modeling, weapon delivery optimization, and technical reachback services.												
FY 2016 Accomplishments:												
- Developed and demonstrated reactive material for enhanced breaching capabilities for Special Operations Forces (SOF). Incorporation of this material into shotgun shells for SOF breaching operations increases operational effectiveness and reduces tactical risk to the warfighter.												
- Performed signature analysis of pilot-scale Chemical Warfare Agent emissions to define chemical search system requirements. This research addresses modeling capability deficits for characterization of pilot-scale emissions and transport, and exploits temporal and spatial signature exploitation opportunities to support prototype development of chemical search tools.												
- Completed calibration of the Computational High-Fidelity Agent Release Model using new test data, improving the current capability to assess CWMD strikes and providing insight into sources of modeling uncertainty being addressed by the Agent Defeat Modeling and Simulation Baseline project.												
- Tested and demonstrated Hybrid Enhanced Blast Explosives and reactive cases for simulated biological agent defeat.												
- Developed and demonstrated small-scale Hybrid Enhanced Blast Explosives.												
- Developed fast running engineering models for dispersion of chemical/biological agents via the Agent Release Model and Complex Hazardous Air Release Model.												
- Conducted component level, small-scale testing for chemical/biological source term modeling.												

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Threat Reduction Agency			Date: May 2017		
Appropriation/Budget Activity 0400 / 2		R-1 Program Element (Number/Name) PE 0602718BR / <i>*Counter Weapons of Mass Destruction Applied Research</i>		Project (Number/Name) RM / WMD Counterforce Technologies	
B. Accomplishments/Planned Programs (\$ in Millions)			FY 2016	FY 2017	FY 2018
<ul style="list-style-type: none"> - Modeled response of mega columns to near-contact charges. - Modeled and tested reactive case technologies for Joint Multi-Effects Warhead System and various warheads. - Conducted field tests to support optimization and improved effectiveness of explosive formulations for chemical, biological, radiological, and nuclear agent defeat. - Conducted lab and field tests of two new explosive formulations tailored (temperature, pressure, and outgases) for WMD defeat operations. - Improved modeling capability for weapon post-detonation reaction using reactive case technologies. - Improved modeling capability for agent defeat using novel weapon energetic payloads. - Enhanced computational fluid and structure codes for chemical/biological source term modeling. - Completed technology gap analysis for chemical/biological source term modeling. <p>FY 2017 Plans:</p> <ul style="list-style-type: none"> - Demonstrate upgraded Hybrid Enhanced Blast Explosives for improved agent defeat capability. - Complete medium-scale testing of a new combined effects weapon case that provides enhanced blast and reactive fragments. - Complete scaled testing of two new explosive formulations tailored (temperature, pressure, and outgases) for WMD defeat operations. - Complete calculations and tests to develop agent defeat weapon effects models, to include phenomena and events such as dynamic pressure/fragment, agent release, thermal effects and defeat, particle shattering, agent dispersion, combustion modeling, and agent fate. - Complete calculations and tests to develop hardened structure weapon effects models, to include phenomena and events such as dynamic pressure, blast propagation through failing walls, blast and fragmentation on structural elements, multi-hit penetration in high-strength concrete, bunker collapse, blast and debris environment from embedded detonation, and penetration mechanics in ultra-high performance concrete. - Complete high performance computing (HPC) requirements collection, HPC modernization program frontier proposal submission, and HPC resource allocation for improved WMD defeat modeling. <p>FY 2018 Plans:</p> <ul style="list-style-type: none"> - Continue to demonstrate upgraded small scale Hybrid Enhanced Blast Explosives for improved agent defeat capability. - Deliver agent defeat weapon effects models to include post blast agent release and dispersion from multiple agent release mechanisms, agent mass transport, break-up and phase change, and agent fate for Modeling and Simulation (M&S) planning tool enhancements. - Complete tests to deliver data for updating chemical agent source term models within the Integrated Munitions Effects Assessment (IMEA) and for calibration and validation of Second-order Closure Integrated Puff (SCIPUFF). 					

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Threat Reduction Agency										Date: May 2017	
Appropriation/Budget Activity 0400 / 2				R-1 Program Element (Number/Name) PE 0602718BR / <i>*Counter Weapons of Mass Destruction Applied Research</i>				Project (Number/Name) RM / WMD Counterforce Technologies			

B. Accomplishments/Planned Programs (\$ in Millions)			FY 2016	FY 2017	FY 2018
- Complete calculations and mid / large-scale tests, and deliver weapons effects models to include blast and debris environment from embedded detonation, blast dynamic pressure, fragmentation, and blast through blast doors.					
Accomplishments/Planned Programs Subtotals			12.873	12.097	14.552

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
• 26/0603160BR: <i>Counter Weapons of Mass Destruction Advanced Technology Development</i>	19.374	23.138	24.663	-	24.663	25.447	25.892	26.473	27.006	Continuing	Continuing
Remarks											
D. Acquisition Strategy											
Competitive selection of most appropriate performers to fulfill science and technology development needs. Performer base includes best-of-breed researchers across DoD and other government agency laboratories, academia, industry, and international partner organizations.											
E. Performance Metrics											
Percentage of CWMD technologies selected for transition to advanced technology development (6.3) and advanced component development and prototypes (6.4).											

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Threat Reduction Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 2					R-1 Program Element (Number/Name) PE 0602718BR / *Counter Weapons of Mass Destruction Applied Research				Project (Number/Name) ***RR / Countering WMD Test and Evaluation			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
***RR: Countering WMD Test and Evaluation	62.395	10.718	13.666	13.652	-	13.652	12.464	12.945	13.288	13.586	Continuing	Continuing

Note

**Project RR title changes from Combating WMD Test and Evaluation to Countering WMD Test and Evaluation beginning in FY 2017.

A. Mission Description and Budget Item Justification

The Countering WMD Test and Evaluation project provides a unique national test bed capability for simulated Weapons of Mass Destruction (WMD) facility characterization, weapon-target interaction, and WMD facility defeat testing. The test bed facility provides structured and systematic end-to-end test event planning, preparation, management, execution, and data analysis. The test bed offers test instrumentation (data acquisition systems and optics), scientific analysis and predictions, test article construction, test article/test bed remediation, tunnel mining, architectural and engineering design, systems engineering and integration, and test data management. The facility leverages fifty years of expertise in investigating weapons effects and target response across the spectrum of hostile environments that could be created by proliferant nations or terrorist organizations with access to advanced conventional weapons or WMD. Subject matter experts design full and sub-scale testing strategies focusing on weapon-target interaction with fixed soft and hardened facilities to include above ground facilities, cut-and-cover facilities, and deep underground tunnels. This capability does not exist anywhere else within the Department of Defense (DoD) and supports the counterproliferation pillar of the National Strategy to Counter WMD.

The increase from FY 2016 to FY 2017 is due to increased investment in environmental compliance, the WMD national test bed, and test and technology support to revitalize DTRA's CWMD test and evaluation capability.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018
Title: RR: Countering WMD Test and Evaluation	10.718	13.666	13.652
Description: Project RR provides a unique national test bed capability for the study of weapon-target interaction, simulated WMD facility characterization, and WMD facility defeat testing to evaluate the implications of WMD and other special weapon use against U.S. military and civilian assets.			
FY 2016 Accomplishments: <ul style="list-style-type: none"> - Conducted CWMD testing and demonstration at Nevada National Security Site to defeat credible and threat-based scenarios with transition into several related projects/planned events. - Tested chemical, biological, radiological, nuclear, and high explosive (CBRNE) sensors, WMD countermeasures, remote geological sensing, and battle management systems designed for surveillance and tracking targets used for WMD activities. - Performed tests in support of Treaty Verification Technology program and Source Physics Experiment to support Comprehensive Test Ban Treaty initiatives. 			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Threat Reduction Agency			Date: May 2017		
Appropriation/Budget Activity 0400 / 2		R-1 Program Element (Number/Name) PE 0602718BR / <i>*Counter Weapons of Mass Destruction Applied Research</i>		Project (Number/Name) ***RR / <i>Countering WMD Test and Evaluation</i>	
B. Accomplishments/Planned Programs (\$ in Millions)			FY 2016	FY 2017	FY 2018
<ul style="list-style-type: none"> - Initiated testing at Nevada National Security Site in support of the nonproliferation portion of the National Center for Nuclear Security portfolio. - Continued support of WMD sensor testing and developed new test capabilities at the Technical Evaluation Assessment and Monitor Site to detect and prevent nuclear grade material from entering the United States, U.S. territories, and Allied Nations through air, rail, and shipping ports. - Continued to maintain current inventory of infrastructure and instrumentation, extending the life-cycle of these items as long as possible, to ensure test beds meet customers' advanced technology testing needs. - Continued to document, prioritize, and support test infrastructure requirements. - Conducted environmental remediation and compliance activities at the Nevada National Security Site, White Sands Missile Range, and Kirtland AFB in accordance with Environmental Protection Agency, safety, and environmental guidelines. Secured major demolition and restoration efforts of major test articles, ensuring they are safely closed and sealed at acceptable standards. - Conducted collection campaigns with interagency participation specific to relevant CWMD data collection requirements. <p>FY 2017 Plans:</p> <ul style="list-style-type: none"> - Develop and test CBRNE sensors, WMD countermeasures, remote geological sensing, and battle management systems designed for surveillance and tracking of WMD targets. - Continue to develop technical and testing capabilities in support of the Transatlantic Collaborative Biological Resiliency Demonstration, a DoD effort to shape interagency approaches to counter a wide area biological event. - Continue testing at the Nevada National Security Site in support of the nonproliferation portion of the National Center for Nuclear Security portfolio. - Continue WMD sensor testing at the Technical Evaluation Assessment and Monitoring site to develop capabilities for detection of nuclear grade material. - Conduct Special Project CWMD testing and demonstrations at the Nevada National Security Site to defeat credible and threat-based scenarios with transition into several related projects/planned events. - Continue environmental remediation and compliance activities at New Mexico and Nevada test sites to meet federal and state environmental guidelines. Remediate major test articles within acceptable standards. - Conduct collection campaigns with interagency participation specific to warfighter CWMD data requirements. - Design diagnostics and instrumentation in support of the Department of Energy and National Laboratories Treaty Verification Technology program and Source Physics Experiment to support Comprehensive Test Ban Treaty initiatives. - Provide required test planning, design, execution, and reporting to ensure the successful execution of the DTRA Agent Defeat Warfighter Capability Strategic Initiative. - Reconstitute and sustain the current inventory of research, development, test and evaluation infrastructure and instrumentation. <p>FY 2018 Plans:</p>					

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Threat Reduction Agency		Date: May 2017	
Appropriation/Budget Activity 0400 / 2	R-1 Program Element (Number/Name) PE 0602718BR / <i>*Counter Weapons of Mass Destruction Applied Research</i>	Project (Number/Name) ***RR / <i>Countering WMD Test and Evaluation</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
<ul style="list-style-type: none"> - Continue to support Combatant Commands with development and testing of Chemical, Biological, Radiological, Nuclear, and high-Explosive (CBRNE) sensors, weapons of mass destruction (WMD) countermeasures, remote geological sensing, and battle management systems designed for surveillance and tracking of WMD targets. - Support Combatant Command exercises and planning events at the Nevada Test Bed in order to develop existing missile defeat technologies, tools, and capabilities. - Continue pursuit of state-of-the-art chemical and biological testing capabilities with participation in the Integrated Early Warning program, the inter-agency Layered Sensing Initiative, the Integrated Sensor Architecture, and the Army Technical Support and Operational Analysis (TSOA) in order to satisfy identified warfighting gaps. - Extend testing at the Nevada National Security Site in support of the nonproliferation portion of the National Center for Nuclear Security portfolio. - Continue to develop nuclear material detection capabilities through testing of candidate technologies at the Technical Evaluation Assessment and Monitoring Site. - Continue to test and demonstrate credible and threat-based WMD attack scenarios at the Nevada National Security Site for DTRA and partner agency projects supporting development of warfighter-identified missile defeat capability requirements. - Continue to conduct diagnostics, instrumentation, and explosives handling research in support of Department of Energy and National Laboratories Source Physics Experiments, supporting Treaty Verification Technology and Comprehensive Test Ban Treaty initiatives. - Initiate reconstitution of instrumentation and diagnostics sensors infrastructure capabilities in support of Counter-WMD technology development projects. - Continue planning the design and execution of tests characterizing a chemical/biological plume generated by an explosive event in support of the Defense Threat Reduction Agency (DTRA) Agent Defeat Modeling and Simulation Baseline (ADMB) initiative. - Continue to design and build testbeds in small-, mid-, and large-scale environments capable of capturing data needed to improve and validate high-fidelity modeling and simulation tools used to predict weapons effects on WMD storage facilities. - Initiate decoupling test program using conventional explosives to develop modern seismic-acoustic data sets at varying levels of coupling, for the purpose of deriving signatures that are similar to recent nuclear test detonations for treaty verification purposes. - Reconstitute the Photogrammetry Laboratory equipment inventory (static & dynamic) for pre- and post-test characterization of geology deriving seismic-acoustic signatures, and providing imagery for warfighter planning and targeting analyses. 			
Accomplishments/Planned Programs Subtotals		10.718	13.666
		13.652	

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Threat Reduction Agency										Date: May 2017	
Appropriation/Budget Activity 0400 / 2				R-1 Program Element (Number/Name) PE 0602718BR / <i>*Counter Weapons of Mass Destruction Applied Research</i>				Project (Number/Name) ***RR / <i>Countering WMD Test and Evaluation</i>			
C. Other Program Funding Summary (\$ in Millions)											
			<u>FY 2018</u>	<u>FY 2018</u>	<u>FY 2018</u>					<u>Cost To</u>	
<u>Line Item</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>Base</u>	<u>OCO</u>	<u>Total</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>Complete</u>	<u>Total Cost</u>
• 26/0603160BR: <i>Counter Weapons of Mass Destruction Advanced Technology Development</i>	2.000	0.000	12.500	-	12.500	12.500	12.500	12.500	12.500	Continuing	Continuing
Remarks											
D. Acquisition Strategy											
Competitive selection of most appropriate performers to fulfill science and technology development needs. Performer base includes best-of-breed researchers across DoD and other government agency laboratories, academia, industry, and international partner organizations.											
E. Performance Metrics											
Percentage of CWMD technologies selected for transition to advanced technology development (6.3) and advanced component development and prototypes (6.4).											

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Threat Reduction Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 2					R-1 Program Element (Number/Name) PE 0602718BR / *Counter Weapons of Mass Destruction Applied Research				Project (Number/Name) ****RU / Basic Research for Countering WMD			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
****RU: Basic Research for Countering WMD	21.310	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	21.310

Note

***Project RU title changes from Fundamental Research for Combating WMD to Basic Research for Countering WMD beginning in FY 2017.

A. Mission Description and Budget Item Justification

The Basic Research for Countering Weapons of Mass Destruction (CWMD) project conducts technology reviews of the Defense Threat Reduction Agency's (DTRA's) Basic Research Program to identify promising emerging science with potential to be matured into CWMD technologies. The advancement of technology and science into applied technology development efforts focuses upon increasing the stability and utility of mid- to long-term, moderate risk but high payoff science, and emerging technologies for transition to other DTRA applied technology programs. This effort serves as the bridge between the bench scientist and the applied technologist.

Activities in this project are complete.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018
Title: RU: Basic Research for Countering WMD	0.000	-	-
Description: This project provides (1) strategic studies to support the Department of Defense (DoD), (2) decision support tools and analysis to support CWMD research and development investments, and (3) early applied research for technology development.			
FY 2016 Accomplishments: N/A			
Accomplishments/Planned Programs Subtotals	0.000	-	-

C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018 Base</u>	<u>FY 2018 OCO</u>	<u>FY 2018 Total</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• 1/0601000BR: DTRA Basic Research	38.288	35.436	37.201	-	37.201	37.340	37.563	38.609	-	Continuing	Continuing

Remarks

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Threat Reduction Agency		Date: May 2017
Appropriation/Budget Activity 0400 / 2	R-1 Program Element (Number/Name) PE 0602718BR / <i>*Counter Weapons of Mass Destruction Applied Research</i>	Project (Number/Name) ****RU / <i>Basic Research for Countering WMD</i>
<p><u>D. Acquisition Strategy</u></p> <p>Assess government, academic, and industrial performers and make selections based upon a "best fit for task" criteria. Common government awardees include DoD Service Laboratories, and Department of Energy National Laboratories.</p> <p><u>E. Performance Metrics</u></p> <p>Project performance is measured via a combination of statistics including the number of publications generated, number of students trained in sciences and engineering supporting DoD's educational goals, number of participating research organizations, and the percentage of participating universities on the U.S. News & World Report "Best Colleges" list. Additional performance indicators include the publication of an annual basic research technical and external programmatic review report. Each study/project will commence within three months of customers' requests and results delivered within three months of completion.</p>		

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Defense Threat Reduction Agency	Date: May 2017
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Appropriation/Budget Activity	R-1 Program Element (Number/Name)											
0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 3: Advanced Technology Development (ATD)</i>	PE 0603160BR / <i>*Counter Weapons of Mass Destruction Advanced Technology Development</i>											
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	1,398.986	298.123	266.444	268.607	-	268.607	273.973	277.360	283.382	288.959	Continuing	Continuing
RA: <i>Information Sciences and Applications</i>	21.532	11.494	11.422	10.229	-	10.229	11.983	12.183	12.468	12.733	Continuing	Continuing
*RD: <i>Detection Technologies</i>	0.000	26.415	17.775	17.556	-	17.556	18.530	20.697	21.250	21.681	Continuing	Continuing
RE: <i>Counter-Terrorism Technologies</i>	551.315	107.265	102.976	103.869	-	103.869	105.915	108.099	110.632	112.871	Continuing	Continuing
*RF: <i>Forensics Technologies</i>	356.817	40.373	38.540	40.286	-	40.286	42.580	40.925	42.144	43.124	Continuing	Continuing
RG: <i>Defeat Technologies</i>	95.067	21.002	20.710	22.161	-	22.161	22.557	23.031	23.145	23.619	Continuing	Continuing
RI: <i>Nuclear Survivability</i>	37.908	6.621	6.561	6.658	-	6.658	6.729	6.854	6.992	7.132	Continuing	Continuing
RL: <i>Nuclear & Radiological Effects</i>	0.000	0.000	3.528	3.500	-	3.500	3.456	3.457	3.455	3.455	Continuing	Continuing
RM: <i>WMD Counterforce Technologies</i>	131.135	19.374	23.138	24.663	-	24.663	25.447	25.892	26.473	27.006	Continuing	Continuing
**RR: <i>Countering WMD Test and Evaluation</i>	14.052	2.000	0.000	12.500	-	12.500	12.500	12.500	12.500	12.500	Continuing	Continuing
RT: <i>Target Assessment Technologies</i>	191.160	63.579	41.794	27.185	-	27.185	24.276	23.722	24.323	24.838	Continuing	Continuing

Note

*Program Element 0603160BR name changes from Counterproliferation Initiatives - Proliferation, Prevention and Defeat to Counter Weapons of Mass Destruction Advanced Technology Development beginning in FY 2018.

**Project RF-Detection and Forensics Technologies subdivides into Projects RD-Detection Technologies and RF-Forensics Technologies in FY 2016.

***Project RR title changes from Combating WMD Test and Evaluation to Countering WMD Test and Evaluation beginning in FY 2017.

A. Mission Description and Budget Item Justification

The Defense Threat Reduction Agency (DTRA) Counter Weapons of Mass Destruction (WMD) Advanced Technology Development program element funds the development and testing of subsystems and components for integration into prototype systems with the potential to transition into mature, state-of-the-art WMD surveillance, detection, defeat, prevention, nonproliferation, counterproliferation, consequence management, and treaty verification capabilities.

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Defense Threat Reduction Agency	Date: May 2017
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Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 3: Advanced Technology Development (ATD)</i>	R-1 Program Element (Number/Name) PE 0603160BR I <i>*Counter Weapons of Mass Destruction Advanced Technology Development</i>
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The Counterproliferation Initiatives - Proliferation, Prevention, and Defeat portfolio is aligned with strategic planning objectives as well as with Science and Technology (S&T) investment direction which is established annually by DTRA. The objectives directly support policy and planning guidance from the Office of the President, the Department of Defense (DoD), and the broader WMD threat reduction community.

The portfolio advances the Countering WMD (CWMD) mission by selecting advanced technology development initiatives that meet the following criteria: (1) Efforts are clearly defined and directly linked to mission-specific capability requirements of DTRA, the Military Departments, Combatant Commanders, other DoD and federal agencies, and international partners; (2) preliminary assessments of subsystems and components offer the highest potential for technological feasibility, operability and producibility upon transition out of S&T research; (3) activities demonstrate cost effectiveness or cost reduction potential of technologies during field testing or simulation at scale.

B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	290.310	266.444	259.490	-	259.490
Current President's Budget	298.123	266.444	268.607	-	268.607
Total Adjustments	7.813	0.000	9.117	-	9.117
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	14.600	-			
• SBIR/STTR Transfer	-6.787	-			
• Realignment	-	-	9.117	-	9.117

Change Summary Explanation

The increase in FY 2018 from the previous President's Budget submission is due to the net effect of a shift in investment priorities to fund the Special Test Bed capability requirements for missile defeat in this program element, a realignment of funds from O&M to RDT&E for the Hard Target Research and Analysis Center (HTRAC) to fund new R&D subject matter expertise to identify, characterize, increased investment in consequence of execution, and incremental Service Requirement Review Board reductions, as part of the Department of Defense reform agenda, for consolidation and understand and exploit vulnerabilities in adversary WMD programs, activities, and capabilities. reduction of service contracts.

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Threat Reduction Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 3					R-1 Program Element (Number/Name) PE 0603160BR / *Counter Weapons of Mass Destruction Advanced Technology Development				Project (Number/Name) RA / Information Sciences and Applications			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
RA: Information Sciences and Applications	21.532	11.494	11.422	10.229	-	10.229	11.983	12.183	12.468	12.733	Continuing	Continuing
A. Mission Description and Budget Item Justification												
The Information Sciences and Applications project provides technical expertise and reach-back support to the United States and its allies across the Countering Weapons of Mass Destruction (CWMD) mission space. The project performs continuous modeling of ad hoc computational analyses on the consequences of Weapons of Mass Destruction (WMD) in consultation with military and civilian planners, warfighters, and first responders and leverages research performed by the Project on Advanced Systems and Concepts for CWMD at the Naval Postgraduate School. The project also supports international CWMD cooperation by developing technologies and concepts suitable for foreign release.												
The decrease from FY 2017 to FY 2018 is due to decreased investment in hazard and effects characterization and technical reachback support.												
B. Accomplishments/Planned Programs (\$ in Millions)									FY 2016	FY 2017	FY 2018	
Title: RA: Information Sciences and Applications									11.494	11.422	10.229	
Description: Project RA develops modeling and simulation capabilities and provides technical reachback support to maintain and increase decision advantage for the United States and its allies through improved situational understanding across the complete CWMD mission space.												
FY 2016 Accomplishments:												
- Continued development of global synthetic population and activity database for modeling secondary and tertiary effects using agent-based, socially coupled simulations to enable rapid modeling of infectious disease propagation and impacts of population behaviors and movement after a WMD event.												
- Continued to develop detailed models of specified nuclear facilities to analyze vulnerabilities and estimate hazards.												
- Completed over 500 WMD collateral effects products in support of Central Command Area of Responsibility targeting/planning; completed 930 Requests for Information (RFIs) from across Combatant Commands, services and Interagency; supported the Federal Emergency Management Agency as the Interagency Modeling Atmospheric Analysis Center (IMAAC) Operations Hub; the IMAAC participated and completed analyses for 6 activations and supported 25 exercises. Collateral effects products, RFIs and IMAAC analyses provided immediate and direct support to CWMD operational planning, incident response, and training across the DoD and Interagency.												
FY 2017 Plans:												

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Threat Reduction Agency		Date: May 2017
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603160BR / *Counter Weapons of Mass Destruction Advanced Technology Development	Project (Number/Name) RA / Information Sciences and Applications

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018
<ul style="list-style-type: none"> - Continue to develop the global synthetic population and activity database for modeling infectious disease propagation and impacts of population behaviors and movement after a WMD event. - Continue to develop detailed models of specified nuclear facilities to analyze vulnerabilities and estimate hazards. - Enhance 64-bit version of CWMD modeling and simulation planning tools for analysis of large data sets. <p>FY 2018 Plans:</p> <ul style="list-style-type: none"> - Continue to develop the global synthetic population and activity database for modeling infectious disease propagation and impacts of population behaviors and movement after a WMD event in support of Combatant Command force health protection and consequence management planning. - Continue to develop detailed models of specified nuclear facilities to analyze vulnerabilities and estimate hazards in support of target and consequence management planning. - Continue to develop processes, capabilities, and expertise in Chemical, Biological, Radiological, Nuclear, and High-yield Explosives (CBRNE) in order to provide tailored support to DoD with 24/7 Technical Reachback. 			
Accomplishments/Planned Programs Subtotals	11.494	11.422	10.229

C. Other Program Funding Summary (\$ in Millions)

Line Item	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
• 20/0602718BR: Counter Weapons of Mass Destruction Applied Research	29.133	29.127	30.270	-	30.270	32.325	28.286	29.083	30.077	Continuing	Continuing
• 154/0605502BR: Small Business Innovation Research	10.473	-	-	-	-	-	-	-	-	Continuing	Continuing

Remarks

D. Acquisition Strategy

Assessment and selection of best performer for developmental requirements to meet specific military capability needs. Performer base includes best-of-breed researchers across DoD and other government agency laboratories, academia, industry, and international partner organizations.

E. Performance Metrics

Percentage of completed demonstration programs transitioning each year. (This is Priority Goal 4.1.2, as cited in U.S. Department of Defense Agency Strategic Plan for Fiscal Years 2015-2018, in support of Strategic Objective 4.1, "Preserve investments to maintain our decisive technological superiority.")

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Threat Reduction Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 3					R-1 Program Element (Number/Name) PE 0603160BR / *Counter Weapons of Mass Destruction Advanced Technology Development				Project (Number/Name) *RD / Detection Technologies			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
*RD: Detection Technologies	0.000	26.415	17.775	17.556	-	17.556	18.530	20.697	21.250	21.681	Continuing	Continuing

Note

*Project RF-Detection and Forensics Technologies subdivides into Projects RD-Detection Technologies and RF-Forensics Technologies in FY 2016.

A. Mission Description and Budget Item Justification

The Detection Technologies project continues research formerly conducted under project RF. This project develops, integrates, and transitions advanced concepts, technologies, and subsystems enabling enhanced nuclear and radiological location, identification, and tracking capabilities. Leveraging gains made in applied research efforts, this project produces advancements in range, process time, sensitivity, and accuracy. In addition, this project continues the development of novel concepts and technologies enabling the identification and exploitation of non-radiation based signatures associated with nuclear threats (e.g., transportation of nuclear materials, patterns of activity, or unique materials).

The decrease from FY 2016 to FY 2017 is due to decreased investment in radiation detection and nuclear threat detection intelligence, surveillance and reconnaissance technologies.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018
Title: RD: Detection Technologies	26.415	17.775	17.556
Description: Project RD develops, integrates and transitions radiation detection technologies, as well as systems, tools, techniques, and procedures that take advantage of non-radiation based signatures, in order to advance warfighter capabilities to rapidly detect, localize, characterize, and interdict nuclear and radiological threats.			
FY 2016 Accomplishments: <ul style="list-style-type: none"> - Demonstrated, tested, and fielded systems to remotely monitor small and wide areas which may produce or contain nuclear threats. - Designed and fabricated prototype passive detection systems for determining the location and signature of nuclear material and tested and characterized developmental prototype passive detection systems. - Transitioned near-term technologies to generate prototypes and design packages that will assist operational users. - Developed prototype of a new high resolution detector with reduced weight and improved form factors that can be concealed in container consistent with the operational environment. - Conducted advanced/operational testing and evaluation of radiation detection systems to assess their performance. - Tested and evaluated the integration of high resolution detectors with lower resolution detectors to determine the potential to meet threshold radiological/nuclear (R/N) detection requirements. 			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Threat Reduction Agency		Date: May 2017	
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603160BR / <i>*Counter Weapons of Mass Destruction Advanced Technology Development</i>	Project (Number/Name) <i>*RD / Detection Technologies</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
<ul style="list-style-type: none"> - Integrated nuclear threat analysis algorithms into existing systems to test and evaluate effectiveness in reducing processing time. - Integrated advances in materials science into lightweight, high-resolution radiation spectrometers for use in field operations. - Integrated new cellular technology into the Radiological/Nuclear (R/N) search network to ensure rapid flow of data from detectors. - Improved performance of new detector materials; imaging and spectroscopy systems; and signals analysis methods through rigorous laboratory and field testing. - Analyzed nuclear threat signatures to improve or integrate collection into sensor systems. <p>FY 2017 Plans:</p> <ul style="list-style-type: none"> - Continue to develop and integrate nuclear and radiological signature collections into new sensor systems. - Continue to integrate nuclear threat analysis algorithms into existing systems in order to evaluate accuracy and effectiveness in reducing process time. - Continue to demonstrate, test, and transition systems that remotely monitor nuclear and radiological threat signatures in small and wide areas. - Continue to develop high-fidelity radiation test objects supporting advanced assessment capabilities in order to improve radiation detection prototypes. - Continue to develop, test, and evaluate a hand-held radiation monitor replacement providing radioisotope identification capability and real-time information feed. - Develop and deploy devices enabling low cost operational testing and evaluation of radiation signature detectors against mock special nuclear material sources of interest. - Develop and integrate interoperable systems enabling a true common operational picture among nuclear and radiological search teams, across platforms, and within shared or distributed areas. - Test and evaluate new radiation detection technologies in order to validate capabilities, improve prototypes, and provide required performance data to support follow-on development. - Test and evaluate an operational high resolution gamma-ray imager suited for multiple mission sets to support integration with next generation nuclear imaging systems. - Simulate and evaluate loose nuke scenarios in order to validate nuclear threat mitigation plans developed by Department of Defense and civilian users. <p>FY 2018 Plans:</p> <ul style="list-style-type: none"> - Transition sensor capabilities to replace Nuclear Biological Chemical Reconnaissance Vehicle (NBCRV) and Stryker obsolete radiological/nuclear equipment. 			
			FY 2018

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Threat Reduction Agency		Date: May 2017
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603160BR / <i>*Counter Weapons of Mass Destruction Advanced Technology Development</i>	Project (Number/Name) <i>*RD / Detection Technologies</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2016	FY 2017	FY 2018
<ul style="list-style-type: none"> - Continue to develop, test, and evaluate a handheld radiation monitor replacement that provides radioisotope identification capability and real-time information feed. - Continue to develop and deploy devices to enable low-cost operational testing and evaluation of radiation and nuclear threat signature detectors against simulated special nuclear material sources of interest, high-fidelity radiation test objects, and realistic threat mockups. - Continue to integrate interoperable systems enabling a true common operating picture among nuclear and radiological search teams, across platforms, and within shared or distributed areas. - Continue to test and evaluate new radiation and nuclear threat detection technologies in an operationally relevant environment to validate capabilities, improve prototypes, and provide required performance data. - Complete testing and evaluation of an operational high resolution gamma-ray imager suited for multiple mission sets to support integration with next generation nuclear imaging systems. - Design, fabricate, test, and characterize prototype passive roadside detection systems to determine the location and signature of nuclear material. - Transition near-term technologies, such as helium-3 alternatives and automated particle identification, to generate prototypes and design packages that will meet operational needs. - Conduct advanced, operational testing and evaluation of radiation and nuclear threat detection systems to assess their performance. - Integrate back-end unit capabilities such as internal electronics and communications capabilities, nuclear and radiological signature collections, and non-radiation nuclear threat signature collections into new sensor systems. - Continue to integrate radiation and nuclear threat analysis algorithms into existing systems to evaluate accuracy and effectiveness in reducing process time and form factors. - Continue to demonstrate, test, and transition systems that remotely monitor nuclear and radiological threat signatures in local and wide area searches. 			
Accomplishments/Planned Programs Subtotals	26.415	17.775	17.556

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
• 20/0602718BR: <i>Counter Weapons of Mass Destruction Applied Research</i>	15.083	15.936	14.769	-	14.769	17.005	18.451	17.677	18.035	Continuing	Continuing

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Threat Reduction Agency			Date: May 2017
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603160BR / <i>*Counter Weapons of Mass Destruction Advanced Technology Development</i>	Project (Number/Name) <i>*RD / Detection Technologies</i>	

C. Other Program Funding Summary (\$ in Millions)

Line Item	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Remarks											

D. Acquisition Strategy

Assessment and selection of best performer for developmental requirements to meet specific military capability needs. Performer base includes best-of-breed researchers across DoD and other government agency laboratories, academia, industry, and international partner organizations.

E. Performance Metrics

Percentage of completed demonstration programs transitioning each year. (This is Priority Goal 4.1.2, as cited in U.S. Department of Defense Agency Strategic Plan for Fiscal Years 2015-2018, in support of Strategic Objective 4.1, "Preserve investments to maintain our decisive technological superiority.")

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Threat Reduction Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 3					R-1 Program Element (Number/Name) PE 0603160BR / *Counter Weapons of Mass Destruction Advanced Technology Development				Project (Number/Name) RE / Counter-Terrorism Technologies			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
RE: Counter-Terrorism Technologies	551.315	107.265	102.976	103.869	-	103.869	105.915	108.099	110.632	112.871	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Counter-Terrorism Technologies project develops and transitions a full spectrum of new technologies to counter emergent weapons of mass destruction (WMD) threats. This project supports the U.S. Special Operations Command (USSOCOM) in two research areas: (1) Countering WMD-Terrorism (CWMD-T) Counterproliferation Research and Development is a collaborative effort to develop advanced, warfighter-unique technologies to defeat terrorist WMD development/acquisition pathways, to include defeat of the devices themselves, while minimizing risks to U.S. forces; (2) USSOCOM CWMD-T Support develops concepts and technologies to integrate and synchronize operations and activities that prevent terrorists and rogue nation states from developing, acquiring, proliferating, or using WMD. This effort supports Commander USSOCOM responsibilities under the Chairman, Joint Chiefs of Staff Unified Command Plan.

The decrease from FY 2016 to FY 2017 is due to reduced investment in next generation CWMD technologies to balance other priorities.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018
Title: RE: Counter-Terrorism Technologies	107.265	102.976	103.869
Description: Project RE supports Joint U.S. Military Forces, specifically USSOCOM, in the research areas of warfighter-unique, mission-specific WMD defeat, denial, counterproliferation, and interdiction technologies.			
FY 2016 Accomplishments:			
<ul style="list-style-type: none"> - Transitioned Multi-path COTS/GOTS Software Defined Radio. Over-the-horizon prototype permits deep install receiver upstream of production and capability to monitor, manage, and execute OCONUS mission from CONUS. - Transitioned Very Low Frequency (VLF) receiver prototype. VLF prototype permits capability to monitor, manage, and execute low-visibility WMD missions. - Transitioned a Special Applications Module for MODI providing special enhanced countermeasures. - Deployed WMDpedia link onto the Dynamic Picture of the Operating Environment (DPOE) portal. This tool provides SME-level information on Chemical, Biological, Radiological, Nuclear (CBRN) threats for analysts and planners. - Deployed a Common Operating Picture/Common Intelligence Picture enabling users to create, share, and consume information. - Released DPOE V2.6, providing enhancements for searching, mapping, and collaboration. - Demonstrated sensor collection capability (validation and collection) from an operational facility in a configuration that can be integrated across DoD, the Intelligence Community (IC), and 17 other government organizations. 			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Threat Reduction Agency		Date: May 2017		
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603160BR / <i>*Counter Weapons of Mass Destruction Advanced Technology Development</i>	Project (Number/Name) RE / <i>Counter-Terrorism Technologies</i>		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017	FY 2018
<ul style="list-style-type: none"> - Demonstrated the DARPA Deep Exploration and Filtering of Text (DEFT) Automated World Actor Knowledge Extractor (AWAKE) capability to show how information from multiple formats could be combined to create a capability for analysts to research a topic by analysis and synthesis rather than by reading the document. - Transitioned next generation imaging technologies to enhance Explosive Ordnance Disposal (EOD) forces advanced diagnostic capabilities. - Developed tools used to impede Improvised Explosive Device (IED) triggers and conducted render safe diagnostics validation tests on emergent threat articles. - Developed precision shaped charges using a proven manufacturing process through the use or modification of an existing shaped charge design. - Initiated the development of rational choice and game theory algorithms and integrated into advanced Bayesian models in support of probabilistic forecasting. - Continued development of new counterproliferation technologies for Joint U.S. Military Forces to counter WMD, enabling warfighters to improve their ability to detect, disable, interdict, neutralize, and destroy chemical, biological, and nuclear production, storage, and weaponization facilities. - Continued multi-year efforts to develop innovative CWMD technologies and tools designed to locate, identify, characterize, assess, and attack WMD production and storage facilities with engineered capabilities to minimize loss of life and collateral damage. - Continued work on multi-year efforts to develop high fidelity test articles and enhanced electronic test objects for EOD Device Defeat. <p>FY 2017 Plans:</p> <ul style="list-style-type: none"> - Integrate enhancements in Natural Language Processing and Machine Reading capabilities into Joint Worldwide Intelligence Communications System (JWICS) knowledge management and planning tools. - Integrate, test, and deploy socio-cultural and behavioral factor data into the Intent Model to enhance threat prediction capabilities. - Develop applications enabling seamless information sharing between the USSOCOM CWMD Support Program (SCSP) and other intelligence agency databases. - Develop customizable dashboards displaying user-driven data displays and functionality on the SCSP JWICS portal. - Continue to support Combatant Command exercises and planning events in order to enhance existing SCSP tools and databases, and to identify and validate new requirements. - Continue to monitor and collaborate with other agencies, such as the Defense Advanced Research Projects Agency and the Intelligence Advanced Research Projects Agency, on advanced analytics technologies. <p>FY 2018 Plans:</p>				

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Threat Reduction Agency		Date: May 2017
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603160BR / <i>*Counter Weapons of Mass Destruction Advanced Technology Development</i>	Project (Number/Name) RE / <i>Counter-Terrorism Technologies</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2016	FY 2017	FY 2018
<ul style="list-style-type: none"> - Continue to develop offensive counter proliferation, counter-WMD technologies. - Continue to develop threat specific test articles and analyses for Tiered Threat Modeling Archive. - Continue to develop technologies that defeat unintended radio emissions. - Continue to develop lighter, smaller, more effective breaching capabilities. - Continue to develop next generation flexible x-ray technology applications. - Continue to develop WMD facility breaching technology applications. - Continue to develop Nuclear, Biological, and Chemical (NBC) defense technologies. - Continue to develop WMD render safe technologies. - Continue to develop technologies to maneuver in a WMD environment. - Continue to develop WMD pathway (process & facility) defeat technologies. - Perform prototype testing of machine learning tools for integration with the USSOCOM CWMD Support Program's (SCSP) Next Generation Joint Worldwide Intelligence Communications System (JWICS) Portal. - Integrate High Performance Computing (HPC) into the JWICS operating environment to provide more robust data analytics and improve accuracy of emerging WMD threat forecasts. - Develop and test technologies for evaluating large quantities of data and intelligence information to improve smart discovery, data inferencing, and system-generated cueing and alerting capabilities. - Develop Graphic Analytics and Knowledge-Base Reasoning HPC applications. - Initiate development of models to enhance Discover & Search components of the Anticipatory WMD Analyst Reasoning Environment (AWARE) tool. - Continue to develop DPOE Knowledge Graphic and Predictive Analytics for Unknown Unknowns. - Develop Course of Action models for anticipatory adversarial actions. 			
Accomplishments/Planned Programs Subtotals	107.265	102.976	103.869

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
• 20/0602718BR: <i>Counter Weapons of Mass Destruction Applied Research</i>	0.795	-	-	-	-	-	-	-	-	-	Continuing Continuing
Remarks											

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Threat Reduction Agency		Date: May 2017
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603160BR / <i>*Counter Weapons of Mass Destruction Advanced Technology Development</i>	Project (Number/Name) RE / <i>Counter-Terrorism Technologies</i>

D. Acquisition Strategy

Assessment and selection of best performer for developmental requirements to meet specific military capability needs. Performer base includes best-of-breed researchers across DoD and other government agency laboratories, academia, industry, and international partner organizations.

E. Performance Metrics

Percentage of completed demonstration programs transitioning each year. (This is Priority Goal 4.1.2, as cited in U.S. Department of Defense Agency Strategic Plan for Fiscal Years 2015-2018, in support of Strategic Objective 4.1, "Preserve investments to maintain our decisive technological superiority.")

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Threat Reduction Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 3					R-1 Program Element (Number/Name) PE 0603160BR / *Counter Weapons of Mass Destruction Advanced Technology Development				Project (Number/Name) *RF / Forensics Technologies			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
*RF: Forensics Technologies	356.817	40.373	38.540	40.286	-	40.286	42.580	40.925	42.144	43.124	Continuing	Continuing

Note

*Project RF-Detection and Forensics Technologies subdivides into Projects RD-Detection Technologies and RF-Forensics Technologies in FY 2016.

A. Mission Description and Budget Item Justification

The Forensics Technologies project develops, integrates, tests, and demonstrates post-detonation nuclear forensics systems providing accurate, rapid, and reliable means to collect, analyze, and evaluate prompt data and debris from a nuclear or radiological event in support of exploitation and attribution efforts. These forensic capabilities enable the Defense Threat Reduction Agency (DTRA) and its trusted partners to detect, locate, identify, track, and interdict nuclear and radiological threats, including weapons and material, and enablers to their acquisition and development. In accordance with DoD Directive S-2060.04, DTRA serves as the U.S. Government lead for post-detonation National Technical Nuclear Forensics (NTNF) research and development (R&D). As the central NTNF R&D coordinator, DTRA works in consultation with interagency partners to develop and improve ground-based capabilities supporting exploitation and attribution missions. NTNF R&D supports advanced research in the following areas: (1) Prompt nuclear effects exploitation for attribution; (2) nuclear device characterization for forensics; (3) nuclear forensic materials exploitation for attribution.

The decrease from FY 2016 to FY 2017 is due to decreased investment in monitoring and verification technology, device characterization for forensics, and materials exploitation for attribution. The increase from FY 2017 to FY 2018 is due to the relative impact of reduction in FY 2017.

B. Accomplishments/Planned Programs (\$ in Millions)

Title: RF: Forensics Technologies	FY 2016	FY 2017	FY 2018
	40.373	38.540	40.286
Description: Project RF supports nuclear forensics by developing: (1) technologies, systems and procedures for post detonation nuclear forensics; (2) on/off-site analysis to meet forensic, verification, monitoring and confidence-building requirements; (3) technologies to detect, locate, identify, track, and interdict nuclear and radiological threats, including enablers to their acquisition and development.			
FY 2016 Accomplishments: - Completed final set of DISCREET OCULUS installations in the Washington DC metropolitan area, enabling the capture of prompt diagnostic data signatures in the event of a nuclear or radiological detonation. Two of three city/region area installation efforts are complete, with a third ongoing in NYC/Newark in preparation for transition to the USAF U.S. Prompt Diagnostics System in FY 2018.			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Threat Reduction Agency		Date: May 2017
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B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018
<ul style="list-style-type: none"> - Tested and demonstrated performance of DISCREET OCULUS speed-of-light sensors and ability to determine reaction time history using the Sandia National Laboratories High-Energy Radiation Megavolt Electron Source (HERMES) III accelerator facility as a simulated nuclear detonation source. - Transitioned advanced gamma spectroscopic capabilities to the operational user providing reliable forensic analytical results on several fission/activation products directly, with no radiochemical separations, significantly reducing the time and cost required to measure these nuclides. - Completed a major joint experimental campaign with the National Nuclear Security Administration (NNSA) at the National Criticality Experiments Research Center (NCERC) within the Device Assembly Facility (DAF) at NNSS providing vital nuclear material diagnostic information to the nuclear forensics community. - Developed a modular prototype using advanced materials and techniques to collect and detect gaseous radionuclide signatures of evasive nuclear testing. - Developed and delivered tools to DoD operational units for estimation of probable delay times before escape of radio isotopic gases from underground nuclear tests. - Developed methodology for quantitative determination of systematic uncertainty in detection and discrimination of nuclear testing signatures. - Developed prototype cosmic-ray muon imaging solution for standoff detection of nuclear warheads in storage or deployed on strategic launch and delivery systems. Enhanced detection capabilities could lead to adoption of this technology for verification of future Strategic Arms Reduction Treaties. - Developed infrastructure and capability for iterative testing, refinement, and integration of national monitoring capabilities. - Continued to develop, test, demonstrate, and field upgraded prototypes for prompt diagnostics, debris collection, and sample analysis; modeling to support nuclear device reconstruction; and forensics data to decrease timeline, lower uncertainties, and increase confidence in technical nuclear forensics conclusions. - Continued to develop tools based on near-source small-scale strong-motion science to assist detection and characterization of low yield and evasive nuclear testing. - Conducted laboratory experiments with lasers to assess shock/seismic signatures from underground nuclear tests. - Evaluated advanced methods to better integrate the collection, detection, and analysis of low-yield or evasive nuclear weapons testing signatures. - Continued to develop long-term operational solutions to detect, collect, and analyze gas and radionuclide signatures of nuclear testing. - Validated alternate signatures of nuclear weapons testing and developed measurement techniques. - Enhanced the on-site inspection system and virtual training tool with additional operational scenarios for nuclear materials production monitoring in support of the Fissile Material Cutoff Treaty and the Army nuclear disablement/elimination mission. 			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Threat Reduction Agency			Date: May 2017		
Appropriation/Budget Activity 0400 / 3		R-1 Program Element (Number/Name) PE 0603160BR / *Counter Weapons of Mass Destruction Advanced Technology Development		Project (Number/Name) *RF / Forensics Technologies	
B. Accomplishments/Planned Programs (\$ in Millions)			FY 2016	FY 2017	FY 2018
<p>- Provided technical support for certification of compliance of foreign digital electro-optical sensors with Open Skies Treaty limits.</p> <p>FY 2017 Plans:</p> <ul style="list-style-type: none"> - Complete initial operational assessment of advanced prompt diagnostics for ground-based sensor prototype systems. - Complete plans and carry out associated acquisition activities for the transition of advanced prompt diagnostics sensor prototype systems to the U.S. Prompt Diagnostics System. - Demonstrate advanced technologies for the collection of alternative nuclear detonation signatures, such as electromagnetic pulse and transient ionospheric disturbances, to detect and locate clandestine nuclear testing. - Demonstrate advanced technologies for cosmic ray, muon-excited remote counting of nuclear warheads in delivery vehicles and in storage, supporting treaty monitoring, and verification. - Develop, test, and demonstrate a portable ground-based sensor prototype for post-detonation prompt diagnostics under DISCREET OCULUS. - Develop, test, and demonstrate enhanced prototype technologies for prompt diagnostics, debris collection, data analysis, debris diagnostics, and technical capability modeling to support nuclear device reconstruction and attribution, as well as to decrease timeline, lower uncertainty, and increase confidence in technical nuclear forensics conclusions supporting attribution. - Develop, test, and demonstrate enhanced prototype technologies to support validation and verification processes and capabilities in order to decrease timeline, lower uncertainty, and increase confidence in technical nuclear forensics conclusions supporting attribution. - Develop, evaluate, and demonstrate surrogate debris materials used in validation and verification technologies and in field and fixed laboratory analytic processes. - Develop advanced radionuclide gas collection technologies in support of counterproliferation and compliance verification for the Non-Proliferation Treaty and the Comprehensive Test Ban Treaty. - Develop advanced technologies to detect and monitor for low-yield nuclear tests, including novel techniques for collecting and observing material emissions and source region seismic signatures. - Continue to develop new prompt diagnostic technologies to improve sensor portability, with emphasis on size, weight, and power consumption reduction, and on expanded operational capability. - Prepare and conduct an interagency technology demonstration of end-to-end nuclear forensics capabilities. - Prepare an international technical demonstration of post-detonation nuclear forensics research and development capabilities. - Coordinate with partner nations to improve global U.S. nuclear forensics and attribution capabilities, under appropriate international agreements. - Integrate nuclear threat analysis algorithms into existing systems to test and evaluate their effectiveness in reducing processing time. - Demonstrate, test, and field systems to remotely monitor small and wide areas which may produce or contain nuclear threats. 					

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Threat Reduction Agency		Date: May 2017		
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603160BR / <i>*Counter Weapons of Mass Destruction Advanced Technology Development</i>	Project (Number/Name) <i>*RF / Forensics Technologies</i>		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017	FY 2018
<ul style="list-style-type: none"> - Design and fabricate prototype passive detection systems for determining the location and signature of nuclear material and test and characterize developmental prototype passive detection systems. - Transition near-term technologies to generate prototypes and design packages that will assist operational users. - Conduct advanced/operational testing and evaluation of radiation detection systems to assess their performance. - Develop and build a new high-resolution detector with reduced weight and improved form factors that can be concealed in container consistent with the operational environment. - Integrate new cellular technology into the Radiological/Nuclear (R/N) search network to ensure rapid flow of data from detectors. - Test and evaluate the integration of high-resolution detectors with lower resolution detectors to determine the potential to meet threshold R/N detection requirements. <p>FY 2018 Plans:</p> <ul style="list-style-type: none"> - Continue to develop, test, and demonstrate enhanced prototype technologies for prompt diagnostics, debris collection, analysis and diagnostics, and device and modeling to support nuclear device reconstruction and attribution, as well as to decrease timeline, lower uncertainty, and increase confidence in technical nuclear forensics conclusions supporting attribution. - Complete preparations and conduct an interagency technology demonstration and evaluation of end-to-end post-detonation nuclear forensics capabilities. - Evaluate surrogate debris materials as part of a demonstration and evaluation of field/fixed laboratory analysis and debris diagnostics processes. - Develop, evaluate, and demonstrate surrogate debris materials to validate and verify newly developed capabilities, and to realistically exercise field and fixed laboratory analytic and diagnostic processes. - Continue to develop, test, and demonstrate prototype ground-based prompt diagnostic technologies that improve sensor portability, with emphasis on size, weight, and power consumption reduction, and expand operational capability. - Initiate transition of advanced prompt diagnostics sensor prototype systems to the U.S. Prompt Diagnostics System. - Expand identification and documentation of improvised nuclear device (IND) signatures through modeling, simulation, and experiments, and develop tools and capabilities to support the attribution of IND detonations. - Evaluate capability to rapidly rule-in/rule-out known foreign devices using prompt and radiochemical signatures in a simulated realistic technology demonstration. - Continue to coordinate with partner nations to enhance and improve global U.S. nuclear forensics and attribution capabilities, under appropriate international agreements. - Initiate simulation of and assess source and propagation data for site-specific signatures from evasive and low-yield underground nuclear explosions. - Continue to develop algorithms and tools for collection and high-fidelity modeling and analysis of local seismic signatures of evasive and low-yield nuclear tests. 				

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Threat Reduction Agency		Date: May 2017
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603160BR / <i>*Counter Weapons of Mass Destruction Advanced Technology Development</i>	Project (Number/Name) <i>*RF / Forensics Technologies</i>

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018
<ul style="list-style-type: none"> - Collect and analyze physical response data from natural and man-made events that provide signals similar to those from low-yield, evasive underground nuclear explosions. Compare these data with results produced by computer simulation of the events. - Continue to develop advanced, modular radionuclide gas collection technologies in support of counterproliferation goals and compliance verification for the Non-Proliferation Treaty and the Comprehensive Test Ban Treaty. - Continue to develop advanced technologies to detect and monitor low-yield nuclear tests, including novel techniques for collecting and observing material and electromagnetic emissions and source-region seismic signatures. 			
Accomplishments/Planned Programs Subtotals	40.373	38.540	40.286

C. Other Program Funding Summary (\$ in Millions)

Line Item	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
• 20/0602718BR: <i>Counter Weapons of Mass Destruction Applied Research</i>	10.525	10.008	10.274	-	10.274	10.345	10.560	10.771	10.991	Continuing	Continuing
• 123/0605000BR: <i>Counter Weapons of Mass Destruction Systems Development</i>	7.156	4.568	6.727	-	6.727	6.710	5.367	5.899	6.172	Continuing	Continuing

Remarks

D. Acquisition Strategy

Assessment and selection of best performer for developmental requirements to meet specific military capability needs. Performer base includes best-of-breed researchers across DoD and other government agency laboratories, academia, industry, and international partner organizations.

E. Performance Metrics

Percentage of completed demonstration programs transitioning each year. (This is Priority Goal 4.1.2, as cited in U.S. Department of Defense Agency Strategic Plan for Fiscal Years 2015-2018, in support of Strategic Objective 4.1, "Preserve investments to maintain our decisive technological superiority.")

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Threat Reduction Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 3					R-1 Program Element (Number/Name) PE 0603160BR / *Counter Weapons of Mass Destruction Advanced Technology Development				Project (Number/Name) RG / Defeat Technologies			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
RG: Defeat Technologies	95.067	21.002	20.710	22.161	-	22.161	22.557	23.031	23.145	23.619	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Defeat Technologies project develops, integrates, demonstrates, and transitions innovative kinetic and non-kinetic weapon capabilities to expand traditional and asymmetric options available to Combatant Commanders to deny, disrupt, and defeat Weapons of Mass Destruction (WMD) while minimizing collateral effects. Technology development focuses on the physical or functional defeat of (1) chemical, biological, nuclear, and radiological threat materials, (2) an adversary's ability to deliver the same, as well as (3) the physical and non-physical support networks enabling both. This program achieves these goals through the systematic identification and maturation of technologies capable of defeating WMD agents or agent-based processes, then integrating them into weapons, delivery systems, or rapid WMD elimination capabilities. This effort includes developing specific WMD agent/agent-based process simulants, test infrastructure, and sampling capability required for effective development, testing, and evaluation of next generation capabilities to ensure optimum weapon solutions are achieved. Requirements are delineated in Agency Priority Lists for lethal and non-lethal Countering WMD (CWMD) capability. Based on specified requirements, weapons and capabilities are transitioned to a Service program of record for system acquisition.

The decrease from FY 2016 to FY 2017 is due to decreased investment in next generation CWMD technologies to balance other priorities. The increase from FY 2017 to FY 2018 is due to the relative impact of reductions in FY 2017.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018
Title: RG: Defeat Technologies	21.002	20.710	22.161
Description: Project RG develops advanced technologies and weapon concepts and validates their applicability to CWMD.			
FY 2016 Accomplishments:			
- Completed design refinements to and initiated demonstration of Heated and Mobile Munitions Employing Rockets (HAMMER) weapon system and subsystems and integration through analysis and testing up to and including full scale static testing to achieve Technology Readiness Level (TRL) 4/5. HAMMER provides a concept demonstration for penetrating weapons which mitigate collateral contamination effects through: low overpressure, minimal target structure damage, and no aerosolization.			
- Conducted Modular Autonomous CWMD System Increment A (MACS-A) Risk Reduction Test 2, which demonstrated increased supervised autonomous technologies addressing multiple payload configurations to enhance combating WMD and included navigation in an underground facility in extreme obscuration with limited communications. MACS-A addresses the ability to enable plug-and-play technologies as a force multiplier.			
- Transitioned initial MACS-A concept to U.S. Army for further development.			
- Demonstrated a highly resilient weapon design that survived two separate shock environments at different velocities, enabling detailed prototype work on other sub-systems with a known shock environment to meet TRL 6 specifications prior to			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Threat Reduction Agency		Date: May 2017		
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603160BR / <i>*Counter Weapons of Mass Destruction Advanced Technology Development</i>	Project (Number/Name) RG / <i>Defeat Technologies</i>		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017	FY 2018
<p>transition. Additionally, the body of knowledge resulting from the construction of high fidelity targets (softer than cement) to meet specifications of analogous high fidelity soil-codes, penetration tools, and build properties will serve many communities of interest investigating earth penetrating weapons and ground sensor designs.</p> <ul style="list-style-type: none"> - Continued development of access denial or denial-of-use technologies for CWMD applications. - Continued functional defeat system development, testing, and demonstration. <p>FY 2017 Plans:</p> <ul style="list-style-type: none"> - Conduct static tests of full-scale HAMMER weapon system and initiate preparation for full-scale dynamic tests. - Conduct static demonstration of initial capability of access denial and denial-of-use technologies against WMD representative targets. - Initiate Agent Defeat Penetrator weapon system design effort. - Initiate access denial weapon concept design effort. - Continue to develop and integrate classified component and system designs. Prepare to conduct initial demonstrations. - Continue to develop and test functional defeat system. - Continue to develop and test diagnostic capability to meet emerging needs for agent defeat. <p>FY 2018 Plans:</p> <ul style="list-style-type: none"> - Conduct dynamic sled tests of full-scale HAMMER weapon system and prepare for technology transition starting in FY 2019. - Conduct full scale demonstration of access denial and denial-of-use technologies against WMD representative targets. - Accomplish static testing of a full-scale Agent Defeat Penetrator weapon system against a representative WMD target. - Continue development and testing of a new access denial weapon concept. - Continue to develop technologies in support of agent defeat and associated facilities. - Continue to develop and test diagnostic capability to meet emerging needs for agent defeat. - Conduct MACS follow-on incremental component/system demonstration. - Conduct functional defeat system demonstration. - Develop and integrate MACS Family of Systems Enabling Technologies in preparation for a system demonstration. 				
Accomplishments/Planned Programs Subtotals		21.002	20.710	22.161

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Threat Reduction Agency			Date: May 2017
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603160BR / <i>*Counter Weapons of Mass Destruction Advanced Technology Development</i>	Project (Number/Name) RG / <i>Defeat Technologies</i>	

C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u> <u>Base</u>	<u>FY 2018</u> <u>OCO</u>	<u>FY 2018</u> <u>Total</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• 20/0602718BR: <i>Counter Weapons of Mass Destruction Applied Research</i>	10.946	11.304	11.060	-	11.060	11.290	11.530	11.770	12.017	Continuing	Continuing

Remarks

D. Acquisition Strategy

Assessment and selection of best performer for developmental requirements to meet specific military capability needs. Performer base includes best-of-breed researchers across DoD and other government agency laboratories, academia, industry, and international partner organizations.

E. Performance Metrics

Percentage of completed demonstration programs transitioning each year. (This is Priority Goal 4.1.2, as cited in U.S. Department of Defense Agency Strategic Plan for Fiscal Years 2015-2018, in support of Strategic Objective 4.1, "Preserve investments to maintain our decisive technological superiority.")

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Threat Reduction Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 3					R-1 Program Element (Number/Name) PE 0603160BR / *Counter Weapons of Mass Destruction Advanced Technology Development				Project (Number/Name) RI / Nuclear Survivability			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
RI: Nuclear Survivability	37.908	6.621	6.561	6.658	-	6.658	6.729	6.854	6.992	7.132	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Nuclear Survivability project develops, integrates, demonstrates, and transitions innovative technologies for the protection of mission-essential personnel, critical military and national defense capabilities, and associated control and support systems during a nuclear event. Research under this project supports the mission critical systems identified under Department of Defense (DoD) Instruction 3150.09, Chemical, Biological, Radiological, and Nuclear (CBRN) Survivability Policy. The Defense threat Reduction Agency (DTRA) is the DoD-designated center of excellence for electromagnetic pulse survivability assessments. The System Vulnerability and Assessment effort develops nuclear assessment capabilities to support operational planning, weapon effects predictions, and strategic system design. This activity also provides the DoD's nuclear design and protection standards for new and existing systems, e.g., command and control facilities and aircraft. Key systems include the Nuclear Command and Control system, the net-centric thin-line, and both military and civilian satellites and associated support systems. The Radiation hardened nano-electronics effort develops and integrates radiation-hardened, high-performance prototype nano-electronics to meet DoD space and strategic system requirements. The Human Survivability supports the Nuclear Test Personnel Review Program (NTPR), confirming the participation of Atomic Veterans in nuclear testing and radiological events and providing radiation dose assessments. The NTPR is administered by the Department of Veterans Affairs and the Department of Justice for radiogenic disease compensation programs.

The decrease from FY 2016 to FY 2017 is due to decreased investment in Nuclear Surety.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018
Title: RI: Nuclear Survivability	6.621	6.561	6.658
Description: Project RI develops, integrates, and transitions novel technologies that radically enhance the survivability and resilience of DoD nuclear forces and their associated control and support systems in the event of an attack or other hostile action.			
FY 2016 Accomplishments:			
- Executed Mighty Guardian XVIII force-on-force test to evaluate nuclear security policy at the Navy's Strategic Weapons Facility Pacific, Naval Base Kitsap, WA.			
- Published Hazard Prediction Analysis Capability Health Effects from Nuclear and Radiological Environments Version 1.0 Technical Reference Manual.			
- Continued the development of the next generation of Defense Integration and Management of Nuclear Data Services (DIAMONDS) network and infrastructure design.			
- Modernized DIAMONDS software code with design reviews and meetings with users for future needs/requirements.			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Threat Reduction Agency		Date: May 2017
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603160BR / <i>*Counter Weapons of Mass Destruction Advanced Technology Development</i>	Project (Number/Name) RI / <i>Nuclear Survivability</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2016	FY 2017	FY 2018
- Fielded and continued to evaluate test-bed system at select user sites.			
<i>FY 2017 Plans:</i> - Produce technical reports to address DoD concerns for radiogenic disease related to potential ionizing radiation exposure. - Fabricate Pathfinder & Product Demonstration Vehicle to support technology transfer from (6.2) Applied Research to the United States Air Force/Space & Missile Center and National Reconnaissance Office, for maturation in their Productization & Qualification program in 6.4 Advanced Component Development and Prototypes.			
<i>FY 2018 Plans:</i> - Continue producing technical reports addressing DoD radiogenic disease concerns; which address Congressional interest in historical veteran radiation exposure and present day radiological exposures of the DoD-affiliated population. - Complete development of the Satellite System Natural & Nuclear Environment Protection Standard. - Initiate development of a Satellite System Natural & Nuclear Environment Protection Handbook. - Complete update of the NATO Allied Engineering Publication AEP-04 Nuclear Survivability Criteria for Armed Forces Material and Installations.			
Accomplishments/Planned Programs Subtotals	6.621	6.561	6.658

C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u> <u>Base</u>	<u>FY 2018</u> <u>OCO</u>	<u>FY 2018</u> <u>Total</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• 20/0602718BR: <i>Counter Weapons of Mass Destruction Applied Research</i>	30.896	34.051	34.103	-	34.103	34.736	35.438	36.161	36.896	Continuing	Continuing

Remarks

D. Acquisition Strategy

Assessment and selection of best performer for developmental requirements to meet specific military capability needs. Performer base includes best-of-breed researchers across DoD and other government agency laboratories, academia, industry, and international partner organizations.

E. Performance Metrics

Percentage of completed demonstration programs transitioning each year. (This is Priority Goal 4.1.2, as cited in U.S. Department of Defense Agency Strategic Plan for Fiscal Years 2015-2018, in support of Strategic Objective 4.1, "Preserve investments to maintain our decisive technological superiority.")

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Threat Reduction Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 3					R-1 Program Element (Number/Name) PE 0603160BR / *Counter Weapons of Mass Destruction Advanced Technology Development				Project (Number/Name) RL / Nuclear & Radiological Effects			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
RL: Nuclear & Radiological Effects	0.000	0.000	3.528	3.500	-	3.500	3.456	3.457	3.455	3.455	Continuing	Continuing
A. Mission Description and Budget Item Justification												
The Nuclear and Radiological Effects project develops, integrates, and transitions nuclear and radiological assessment modeling tools for use in military planning processes. The assessment modeling tools provide critical analytics for Consequence of Execution (COE) considerations during nuclear targeting and post-detonation nuclear response, supporting interagency strategic and tactical decision making. These COE considerations can include the full range of political, military, economic, social, infrastructure, and information (PMESII) factors and their interaction, extending analytical capabilities beyond common damage assessment practices and into second and third order effects. These activities/efforts support Combatant Commands and other Department of Defense (DoD) organizations by providing accurate and reliable consequence assessment and response information.												
The increase from FY 2016 to FY 2017 is due to the transition of nuclear effects modeling applied research efforts to advanced technology development.												
B. Accomplishments/Planned Programs (\$ in Millions)										FY 2016	FY 2017	FY 2018
Title: RL: Nuclear and Radiological Effects										0.000	3.528	3.500
Description: Project RL develops nuclear and radiological assessment modeling tools to support military operational planning, weapons effects predictions, and strategic system design decisions.												
FY 2016 Accomplishments: N/A												
FY 2017 Plans: - Develop nuclear weapon effects tools specifically designed for transition to military targeting systems. - Develop nuclear weapon effects tools specifically designed to support nuclear survivability and standards formulation.												
FY 2018 Plans: - Continue to add militarily significant nuclear weapon effects to tools specifically designed for transition to military targeting systems. - Continue to add militarily significant nuclear weapon effects to tools specifically designed to support nuclear survivability and standards formulation.												
Accomplishments/Planned Programs Subtotals										0.000	3.528	3.500

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Threat Reduction Agency **Date:** May 2017

Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603160BR / <i>*Counter Weapons of Mass Destruction Advanced Technology Development</i>	Project (Number/Name) RL / <i>Nuclear & Radiological Effects</i>
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C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u> <u>Base</u>	<u>FY 2018</u> <u>OCO</u>	<u>FY 2018</u> <u>Total</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• 20/0602718BR: <i>Counter Weapons of Mass Destruction Applied Research</i>	28.333	28.668	29.228	-	29.228	29.640	30.324	30.999	31.695	Continuing	Continuing
• *123/0605000BR: <i>Counter Weapons of Mass Destruction Systems Development</i>	-	-	-	-	-	-	-	-	-	0.000	64.199

Remarks

Prior year funds related to this this project in program element number 0605000BR.

D. Acquisition Strategy

N/A

E. Performance Metrics

Percentage of completed demonstration programs transitioning each year. (This is Priority Goal 4.1.2, as cited in U.S. Department of Defense Agency Strategic Plan for Fiscal Years 2015-2018, in support of Strategic Objective 4.1, "Preserve investments to maintain our decisive technological superiority.")

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Threat Reduction Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 3					R-1 Program Element (Number/Name) PE 0603160BR / *Counter Weapons of Mass Destruction Advanced Technology Development				Project (Number/Name) RM / WMD Counterforce Technologies			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
RM: WMD Counterforce Technologies	131.135	19.374	23.138	24.663	-	24.663	25.447	25.892	26.473	27.006	Continuing	Continuing
A. Mission Description and Budget Item Justification												
The Weapons of Mass Destruction (WMD) Counterforce Technologies project develops, integrates, demonstrates, and transitions emerging technologies enabling efforts to find, characterize, assess, and plan for the defeat of WMD threats. There are two core research efforts in this project. The WMD battlespace awareness effort provides warfighters with capabilities to find, characterize, and assess WMD threats. This effort develops and integrates sensing technologies with multi-mission Unmanned Aerial System payloads. The Countering WMD (CWMD) weapons effects effort develops modernized, fast-running, validated CWMD planning tools and integrates modeling and simulation software to optimize the execution of WMD and associated hard target defeat operations.												
The increase from FY 2016 to FY 2017 is due to increased investment in WMD reconnaissance technology and weapons effects and planning tools. The increase from FY 2017 to FY 2018 is due to increased investment in weapons effects and planning tools technology development.												
B. Accomplishments/Planned Programs (\$ in Millions)										FY 2016	FY 2017	FY 2018
Title: RM: WMD Counterforce Technologies										19.374	23.138	24.663
Description: Project RM provides: (1) full-scale testing of CWMD weapons effects, weapon effects modeling, and weapon delivery system optimization; and (2) WMD sensor, surveillance, and data processing technologies.												
FY 2016 Accomplishments:												
- Validated correlation between Biological Intelligence, Surveillance, and Reconnaissance (Bio-ISR) Mobile Ground Sensor (MGS) training aid and high priority biological warfare agent; this successful test was critical for continued development of counter-biological warfare search capabilities meeting customer requirements.												
- Developed first generation Bio-ISR Loop Mediated Isothermal Amplification (LAMP) Bio Identifier; the LAMP system will provide end-users with a field presumptive identification capability for biological warfare threat agents.												
- Developed and transitioned Granite Toupee CWMD system (GT) Phase I to meet emergent customer requirements; GT reduces operator CWMD target engagement dwell times and increases operator safety during neutralization of WMD materials.												
- Transitioned initial biological search technologies (Biological-Intelligence, Surveillance and Reconnaissance (Bio-ISR) Spiral 1) to DoD and Interagency end-users. Initiated planning for Bio-ISR Spiral 2 demonstration of improved biological search technologies.												
- Transitioned models for blast propagation through failing blast doors, sufficient to predict both the response of the blast door and the hazard to people and equipment. A stand-alone fast running model (FRM) was delivered to U.S. Forces Korea and the Republic of Korea (ROK) Agency for Defense Development.												

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Threat Reduction Agency			Date: May 2017		
Appropriation/Budget Activity 0400 / 3		R-1 Program Element (Number/Name) PE 0603160BR / <i>*Counter Weapons of Mass Destruction Advanced Technology Development</i>		Project (Number/Name) RM / WMD Counterforce Technologies	
B. Accomplishments/Planned Programs (\$ in Millions)			FY 2016	FY 2017	FY 2018
<ul style="list-style-type: none"> - Completed Integrated Munitions Effectiveness Assessment (IMEA) 11.1, supporting target characterization (e.g., 4D processes, adobe structures, barrier walls, scalable equipment), ground operations (e.g., Concept Development and Experimentation (CDE), fragment, and crater debris effects and visualization), and air delivered weapon planning (e.g., GPS jamming, slab strength reduction for follow-on weapons, and hard target void sensing fuse updates), along with DTRA informal accreditation to allow the use of IMEA 11.1 for Targeting Weaponeeing Assistance Cell Reachback support. - Supported Army Program Manager for Unmanned Systems in performing analysis of WMD Aerial Collection System transition activities, fielding, and procurement. - Delivered prototype 64-bit version of CWMD modeling and simulation planning tools for analysis of large data sets. - Delivered Targeting/Weaponeeing academics and targeting recommendation packages for Combatant Commands. - Delivered agent defeat modeling capabilities (Human Injury, Dynamic Pressure, and Structural Response) for DTRA's Reachback mission. - Demonstrated unmanned platform capable of high-altitude/long-range glide, vertical takeoff, and landing transition, and egress for covert emplacement of Chemical, Biological, Radiological, and Nuclear (CBRN) payloads/sensors. - Demonstrated nano-material based sensor/reporting system for detection of biological and chemical threats. - Designed, developed, integrated, and tested computer vision and autonomous navigation on unmanned systems to enable precise CBRN payload emplacement. - Initiated the development of a low-visibility sensor/detection device for chemical search missions. - Continued to develop technology for enhanced area search, localization, and point detection/identification tools for biological threats of interest (Spiral 2). - Continued to develop improved agent defeat modeling capabilities for WMD target attack planning. - Provided U.S. Central Command, Air Forces Central Command, and the Combined Joint Task Force Operation Inherent Resolve with over 300 Target Recommendation Packages. <p>FY 2017 Plans:</p> <ul style="list-style-type: none"> - Demonstrate proof of concept for next-generation chemical warfare agent detector. - Demonstrate enhanced WMD sample collection system for low-visibility search operations. - Demonstrate Biological Intelligence Surveillance and Reconnaissance (Bio-ISR) Spiral 2 enhanced area search sensors/ capabilities for counter-bio search missions. - Integrate, test and demonstrate CBRN defeat technologies in a remotely-operated unmanned payload. - Test and validate the Vertical Take-off and Landing Autonomous Precision Emplacement System delivering chemical, biological, radiological and nuclear defeat payloads. - Transition enhanced structural response and WMD agent dispersion/neutralization models, using new software architecture for improved WMD vulnerability assessment and force protection planning capabilities. 					

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Threat Reduction Agency			Date: May 2017
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603160BR / *Counter Weapons of Mass Destruction Advanced Technology Development	Project (Number/Name) RM / WMD Counterforce Technologies	

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2016	FY 2017	FY 2018
<ul style="list-style-type: none"> - Transition final prototype of advanced area search sensor to counter biological warfare threats. - Complete phase one of three new software architecture developments, allowing WMD defeat modeling and simulation planning tools (i.e., IMEA) to enhance integration with partner agency tools. - Publish targeting/weaponeering academics and targeting recommendation packages for Combatant Commands. <p>FY 2018 Plans:</p> <ul style="list-style-type: none"> - Demonstrate sample extraction prototype capability for rapid sampling of hazardous chemicals from solid storage. - Continue to demonstrate enhanced WMD sample collection and analysis systems for low-visibility search operations. - Demonstrate mission planning and analytical tools for chem-search operations, including sensor emplacement and source attribution. - Design, test and integrate Granite Toupee Phase II agitation and injection system upgrades to increase target prosecution efficiency and effectiveness. - Conduct Hydra Spear End-User Evaluation to gain operator perspective and catalog recommended prototype system upgrades for final system production. - Conduct Hydra Shield Operational Evaluation to determine system effectiveness and operational utility against WMD targets in representative environments. - Begin phase two of three new software architecture developments, allowing WMD defeat modeling and simulation planning tools (i.e., IMEA, VAPO) to more quickly and efficiently enhance integration with planning tools used by partner agencies and international allies. - Conduct proof of concept demonstrations for enhanced area search sensors and capabilities for biological weapon search missions. 			
Accomplishments/Planned Programs Subtotals	19.374	23.138	24.663

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
• 20/0602718BR: Counter Weapons of Mass Destruction Applied Research	12.873	12.097	14.552	-	14.552	12.612	12.852	13.129	13.395	Continuing	Continuing

Remarks

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Threat Reduction Agency		Date: May 2017
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603160BR / *Counter Weapons of Mass Destruction Advanced Technology Development	Project (Number/Name) RM / WMD Counterforce Technologies

D. Acquisition Strategy

Assessment and selection of best performer for developmental requirements to meet specific military capability needs. Performer base includes best-of-breed researchers across DoD and other government agency laboratories, academia, industry, and international partner organizations.

E. Performance Metrics

Percentage of completed demonstration programs transitioning each year. (This is Priority Goal 4.1.2, as cited in U.S. Department of Defense Agency Strategic Plan for Fiscal Years 2015-2018, in support of Strategic Objective 4.1, "Preserve investments to maintain our decisive technological superiority.")

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Threat Reduction Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 3					R-1 Program Element (Number/Name) PE 0603160BR / *Counter Weapons of Mass Destruction Advanced Technology Development				Project (Number/Name) **RR / Countering WMD Test and Evaluation			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
**RR: Countering WMD Test and Evaluation	14.052	2.000	0.000	12.500	-	12.500	12.500	12.500	12.500	12.500	Continuing	Continuing

Note

**Project RR title changes from Combating WMD Test and Evaluation to Countering WMD Test and Evaluation beginning in FY 2017.

A. Mission Description and Budget Item Justification

Project RR provides a unique national test bed capability for simulated weapons of mass destruction (WMD) facility characterization, weapon-target interaction, and WMD facility defeat testing to respond to operational needs by developing and maintaining test beds used by the Department of Defense (DoD), the Military Services, the Combatant Commanders and other Federal Agencies to evaluate the implications of WMD, conventional, and other special weapon use against U.S. military or civilian systems and targets.

The decrease from FY 2016 to FY 2017 is due to a relative impact of increased investment in FY 2016 for crane operations and build-out of the test bed structures at the Nevada National Security Site for sensor development and testing. The increase from FY 2017 to FY 2018 is due to increased investment in the Special Test Bed for missile defense.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018
Title: RR: Countering WMD Test and Evaluation	2.000	0.000	12.500
Description: Project RR provides a unique national test bed capability for simulated WMD facility characterization, weapon-target interaction, and WMD facility defeat testing.			
FY 2016 Accomplishments: - Initiated crane operations 7 and 8 and the build-out of test bed structures at the Nevada National Security Site for sensor development and testing.			
FY 2017 Plans: N/A			
FY 2018 Plans: - Support Combatant Command exercises and planning events at the Nevada Test Bed in order to develop missile defeat technologies, tools, and capabilities. - Develop interagency capabilities and special tests in support of national priority programs and mission requirements.			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Threat Reduction Agency								Date: May 2017			
Appropriation/Budget Activity 0400 / 3				R-1 Program Element (Number/Name) PE 0603160BR / *Counter Weapons of Mass Destruction Advanced Technology Development				Project (Number/Name) **RR / Countering WMD Test and Evaluation			

B. Accomplishments/Planned Programs (\$ in Millions)			FY 2016	FY 2017	FY 2018
- Augment scheduling, test planning, maintenance and analysis capabilities for missile defeat technology tests and demonstrations.					
Accomplishments/Planned Programs Subtotals			2.000	0.000	12.500

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
• 20/0602718BR: Counter Weapons of Mass Destruction Applied Research	10.718	13.666	13.652	-	13.652	12.464	12.945	13.288	13.586	Continuing	Continuing
Remarks											
D. Acquisition Strategy											
Assessment and selection of best performer for developmental requirements to meet specific military capability needs. Performer base includes best-of-breed researchers across DoD and other government agency laboratories, academia, industry, and international partner organizations.											
E. Performance Metrics											
Percentage of completed demonstration programs transitioning each year. (This is Priority Goal 4.1.2, as cited in U.S. Department of Defense Agency Strategic Plan for Fiscal Years 2015-2018, in support of Strategic Objective 4.1, "Preserve investments to maintain our decisive technological superiority.")											

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Threat Reduction Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 3					R-1 Program Element (Number/Name) PE 0603160BR / *Counter Weapons of Mass Destruction Advanced Technology Development				Project (Number/Name) RT / Target Assessment Technologies			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
RT: Target Assessment Technologies	191.160	63.579	41.794	27.185	-	27.185	24.276	23.722	24.323	24.838	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Target Assessment Technologies project develops, integrates, tests, demonstrates, and transitions processes and technologies providing advanced capabilities in the areas of Weapons of Mass Destruction (WMD) target assessment and functional defeat. The functional defeat process includes finding and identifying a facility, characterizing its function and physical layout, determining current or future vulnerabilities to available defeat mechanisms, planning and executing an attack, assessing damage, and denying reconstitution efforts. Applying these processes to time-dependent constraints related to WMD target characterization and threat analysis presents a further technical challenge. This project develops analytical tools and processes required to (1) find and characterize WMD targets and associated hard and deeply buried targets and to (2) assess in real time the results of physical and functional defeat operations (such as a direct attack). These novel, dynamic capabilities enable Combatant Commands and the intelligence community (IC) to hold at risk high value targets possessed by adversaries.

The decrease from FY 2016 to FY 2017 is due to the projected completion of the development and integration of high-priority find, characterize, and assess sensor technologies and supporting algorithms and software. The decrease from FY 2017 to FY 2018 is due to decreased investment reflecting the transition of the previously mentioned high-priority sensor technology and supporting algorithms to the combatant commands.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018
Title: RT: Target Assessment Technologies	63.579	41.794	27.185
Description: Project RT provides Combatant Commands and the IC with technologies and processes to find and characterize WMD targets and hard and deeply buried targets and then assess the results of attacks against those targets.			
FY 2016 Accomplishments:			
<ul style="list-style-type: none"> - Completion of two developmental demonstrations/exercises (Crane Ops 5 and Crane Ops 6) to gather sensor data, develop signatures, and conduct sensor phenomenology analysis in support of further program development. - Designed, built, and delivered realistic test article to enhance fidelity of sensor demonstrations and testing. - Developed new and enhanced (range/sensitivity) detection capabilities and enhanced delivery capabilities of the deployable sensor project. - Developed and demonstrated Nuclear WMD Defeat Model for support of IC CWMD analysis and functional defeat targeting. - Developed and demonstrated Chemical-Biological Weapons Emerging Threats Model capability for support of IC CWMD analysis and course of action selection. - Conducted validation and verification of thermal process modeling capability for support of IC functional vulnerability analysis of hard or deeply buried WMD related targets. 			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Threat Reduction Agency		Date: May 2017	
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603160BR / <i>*Counter Weapons of Mass Destruction Advanced Technology Development</i>	Project (Number/Name) RT / <i>Target Assessment Technologies</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
<p>- Demonstrated initial soil composition and layering penetration prediction model for support of target characterization and mission planning.</p> <p>FY 2017 Plans:</p> <ul style="list-style-type: none"> - Demonstrate range and sensitivity detection capabilities and enhanced delivery system for a deployable remote ground sensor. - Conduct integration testing and algorithm validation of a deployable prototype ground sensor. - Integrate deployable ground sensor data outputs into Dynamic Characterization Modeling Tools to support time-dependent target analysis. - Develop processes and approaches for characterization of "Pattern of Life" based upon multiple modalities of data input. - Develop analytical processes for planning Functional Defeat of UGFs based on "Pattern of Life" analysis and near-real-time information updates. - Continue to develop WMD complex process models into target facility characterizations. - Continue to develop geo-technical soil and rock models for use in target characterization and sensor deployment planning. <p>FY 2018 Plans:</p> <ul style="list-style-type: none"> - Complete prototype development, final documentation, and technical report in preparation for transition of a deployable remote ground sensor project. - Develop detailed feasibility study and program plan for WMD and Hard Target automated characterization capability. - Continue to develop comprehensive soil model library for support of geotechnical site characterization of WMD target sites. - Refine and enhance WMD complex modeling capabilities for integration with automated target characterization. - Integrate functional defeat and "pattern of life" models into automated target characterization capability. - Deliver enhanced counter-WMD and UGF schoolhouse training exercises to IC and Combatant Commands. 			
Accomplishments/Planned Programs Subtotals		63.579	41.794
C. Other Program Funding Summary (\$ in Millions) N/A			
Remarks			
D. Acquisition Strategy Assessment and selection of best performer for developmental requirements to meet specific military capability needs. Performer base includes best-of-breed researchers across DoD and other government agency laboratories, academia, industry, and international partner organizations.			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Threat Reduction Agency		Date: May 2017
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603160BR / <i>*Counter Weapons of Mass Destruction Advanced Technology Development</i>	Project (Number/Name) RT / <i>Target Assessment Technologies</i>
E. Performance Metrics Percentage of completed demonstration programs transitioning each year. (This is Priority Goal 4.1.2, as cited in U.S. Department of Defense Agency Strategic Plan for Fiscal Years 2015-2018, in support of Strategic Objective 4.1, "Preserve investments to maintain our decisive technological superiority.")		

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Defense Threat Reduction Agency	Date: May 2017
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Appropriation/Budget Activity					R-1 Program Element (Number/Name)							
0400: Research, Development, Test & Evaluation, Defense-Wide / BA 5: System Development & Demonstration (SDD)					PE 0605000BR / *Counter Weapons of Mass Destruction Systems Development							
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	77.733	7.156	4.568	6.241	-	6.241	6.216	4.864	5.388	5.652	Continuing	Continuing
**RF: Forensics Technologies	13.534	7.156	4.568	6.241	-	6.241	6.216	4.864	5.388	5.652	Continuing	Continuing
RL: Nuclear & Radiological Effects	64.199	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	64.199

Note

*Program Element 0605000BR name changes from WMD Defeat Capabilities to Counter Weapons of Mass Destruction Systems Development beginning in FY 2018.
 **Project RF-Detection and Forensics Technologies subdivides into Projects RD-Detection Technologies and RF-Forensics Technologies in FY 2016. This impacts these projects in PE 0602718BR and PE 0603160BR. See C. Other Program Funding Summary below.

A. Mission Description and Budget Item Justification

The Counter Weapons of Mass Destruction (WMD) Systems Development program element supports the development and demonstration of verification and monitoring technologies and systems for the Countering Weapons of Mass Destruction (CWMD) mission. This funding specifically supports International Monitoring System technology requirements under the Nuclear Arms Control Technology (NACT) program. Through FY 2014, funding also supported the development of collaborative CWMD analysis capabilities between the Department of Defense and key interagency and international partners through a globally accessible net-centric framework in the form of the Integrated Weapons of Mass Destruction Toolset.

B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	7.156	4.568	9.092	-	9.092
Current President's Budget	7.156	4.568	6.241	-	6.241
Total Adjustments	0.000	0.000	-2.851	-	-2.851
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Realignments	-	-	-2.851	-	-2.851

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Defense Threat Reduction Agency		Date: May 2017
Appropriation/Budget Activity 0400: Research, Development, Test & Evaluation, Defense-Wide / BA 5: System Development & Demonstration (SDD)	R-1 Program Element (Number/Name) PE 0605000BR / *Counter Weapons of Mass Destruction Systems Development	
<p><u>Change Summary Explanation</u></p> <p>The decrease in FY 2018 from the previous President's Budget submission is due to realignment of RDT&E to O&M in support of station operations for NACT and a realignment of funds from DTRA to the Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics (OUSD (AT&L)) for support services necessary to meet oversight responsibilities.</p>		

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Threat Reduction Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 5					R-1 Program Element (Number/Name) PE 0605000BR / *Counter Weapons of Mass Destruction Systems Development				Project (Number/Name) **RF / Forensics Technologies			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
**RF: Forensics Technologies	13.534	7.156	4.568	6.241	-	6.241	6.216	4.864	5.388	5.652	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
Note												
*Project RF-Detection and Forensics Technologies subdivides into projects RD-Detection Technologies and RF-Forensics Technologies beginning in FY 2016.												
A. Mission Description and Budget Item Justification												
This project supports the development of verification and monitoring capabilities for the Defense Threat Reduction Agency (DTRA) to counter proliferation and weapons of mass destruction (WMD). DTRA's Nuclear Arms Control Technologies (NACT) program performs Research, Development, Test, and Evaluation (RDT&E) to improve the sustainability, reliability, and effectiveness of capabilities related to its operational mission to install, operate, maintain, and sustain the waveform and radionuclide nuclear detonation detection stations comprising the U.S. portion of the International Monitoring System (IMS). This delivers data to the U.S. monitoring and verification community and enables U.S. compliance with the Comprehensive Nuclear Test Ban Treaty (CTBT) in support of U.S. and Department of Defense (DoD) nonproliferation objectives.												
The project addresses WMD monitoring, implementation of, and compliance with arms control agreement requirements validated by the Office of the Under Secretary of Defense, Acquisition, Technology, and Logistics. This project conforms to the administration's research and development priorities related to WMD arms control and disablement. Technical assessments are made against CTBT implementation requirements and U.S. objectives to provide the basis for sound project development, evaluate existing programs, provide data required to inform compliance assessments, and support U.S. monitoring policy, decision-makers, and negotiation teams.												
The primary RDT&E program emphasis is on improvements that enable the installation of treaty-specific stations, which reduce costs and increase the reliability in diverse and often harsh environments; improve efficiency, performance, reliability, and sustainability of existing stations and treaty-specified verification capabilities; and improve capabilities to detect, characterize, and enable discrimination of, nuclear weapons tests. The NACT program directly supports U.S. and allied warfighter and national technical monitoring requirements and provides vital data used by the treaty monitoring community, warfighter planners, DoD, other U.S. Government agencies, and international agencies.												
The decrease from FY 2016 to FY 2017 is due to re-phasing of program activities to FY 2018 and FY 2019. The increase from FY 2017 to FY 2018 is due to the net effect of re-phasing of program activities from FY 2017, a realignment of RDT&E to O&M in support of station operations for NACT, and a realignment of funds from DTRA to the Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics (OUSD (AT&L)) for support services necessary to meet Congressional oversight responsibilities.												
B. Accomplishments/Planned Programs (\$ in Millions)									FY 2016	FY 2017	FY 2018	
Title: RF - Forensics Technologies									7.156	4.568	6.241	

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Threat Reduction Agency		Date: May 2017	
Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0605000BR / <i>*Counter Weapons of Mass Destruction Systems Development</i>	Project (Number/Name) <i>**RF / Forensics Technologies</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
<p>Description: Project RF supports the NACT Program, conducting RDT&E to meet IMS technology requirements in support of CTBT implementation, compliance, monitoring, inspection, and other emerging nuclear arms control activities.</p> <p>FY 2016 Accomplishments:</p> <ul style="list-style-type: none"> - Completed installation of additional infrasound elements, seismic elements, and wind noise reduction systems at the Facility for Acceptance, Calibration, and Testing at Sandia Labs (SNL). These systems support the testing and verification/validation of nuclear-explosion monitoring equipment before integration into the U.S. IMS. - Developed and implemented concepts to improve the reliability of the radionuclide stations and improve radionuclide and infrasound signal to noise ratios that will enhance strategic deterrence by lowering the U.S International Monitoring System nuclear-explosion detection thresholds and data availability for forensics analyses. - Continued support of Office of the Secretary of Defense (OSD) Threat Reduction and Arms Control Treaty management objectives, providing regular IMS assessments, quarterly program management reviews, and supporting all OSD engagements with the Comprehensive Test Ban Treaty Organization Provisional Technical Secretariat. - Continued development and implementation of IMS sensor and station calibration software and in-situ calibration concepts, to standardize calibration capability using novel algorithms and automated software. - Developed and implemented U.S. IMS specific life-cycle management software to enable cost effective and efficient spare part replacement and long-range recapitalization. - Sponsored and participated in CTBT technology development exchanges in order to discover emerging technologies that have the potential to optimize performance and cost effectiveness of the IMS. <p>FY 2017 Plans:</p> <ul style="list-style-type: none"> - Optimize IMS technology and operations to comply with CTBT language and evolving operational manual requirements and to increase cost efficiency. - Validate alternative filter media against Provisional Technical Secretariat certification standards for U.S. IMS particulate radionuclide sensor to enhance aerosol collection efficiency for the Radionuclide Aerosol Sampler/Analyzer system. - Conduct Analysis of Alternatives for Hydroacoustic monitoring. - Annually, provide analysis of up to 800 additional International Atomic Energy Agency verification samples in support of the OSD, Nuclear, Chemical and Biological Threat Reduction Advisory Committee. - Complete evaluation of U.S. IMS operational options determined from life-cycle modeling and simulation to determine most cost-effective operational models. - Evaluate alternative backup power options for arctic to improve reliability and performance in remote locations as defined by CTBT Operations Manuals. - Participate in CTBT Organization Provisional Technical Secretariat sponsored technology development exchanges. 			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Threat Reduction Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 5				R-1 Program Element (Number/Name) PE 0605000BR / *Counter Weapons of Mass Destruction Systems Development				Project (Number/Name) **RF / Forensics Technologies				
B. Accomplishments/Planned Programs (\$ in Millions)										FY 2016	FY 2017	FY 2018
<div>- Finalize testing for Provisional Technical Secretariat qualification of alternative infrasound waveform sensor that improves efficiency, reliability, or cost effectiveness at equal or greater data quality objectives.</div> <div>- Run models and simulations to improve understanding of CTBT IMS network viability/limitations.</div> <div>FY 2018 Plans:</div> <div>- Continue the optimization of IMS technology and operations to comply with CTBT language and evolving operational manual requirements in order to increase efficiencies, sustainability and cost effectiveness.</div> <div>- Conduct testing of waveform station components and systems at the Facility for Acceptance, Calibration, and Testing Site as a demonstration in a relevant environment.</div> <div>- Continue development of improved state of health monitoring software for use on radionuclide stations to provide a predictive indication of pending failures and required maintenance.</div> <div>- Establish a Radionuclide Test-bed capability for rapid resolution system faults.</div> <div>- Continue to participate in CTBT Organization Provisional Technical Secretariat sponsored technology development exchanges to provide synergy for R&D activities.</div> <div>- Continue to conduct field testing on High Reliability Power Sources for arctic operational environments.</div> <div>- Conduct Entry-into-Force Readiness, Rapid Response risk assessment, and Operational Tabletop Exercises in order to quantify risks and the costs of mitigation.</div> <div>- Advance the state of health monitoring capability for waveform and radionuclide stations to increase reliability, sustainability, and cost effectiveness.</div> <div>- Evaluate self-calibrating infrasound sensors for use at IMS stations.</div> <div>- Evaluate the implementation of a standard configuration for the Central Recording Facility for use at IMS stations.</div> <div>- Continue the sustainment of the Radionuclide Lab (RL16) at Pacific Northwest National Laboratory in support of the CTBT.</div>												
Accomplishments/Planned Programs Subtotals										7.156	4.568	6.241
C. Other Program Funding Summary (\$ in Millions)												
Line Item	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost	
• 20/0602718BR: Counter Weapons of Mass Destruction Applied Research	10.525	10.008	10.274	-	10.274	10.345	10.500	10.771	10.991	Continuing	Continuing	
• 26/0603160BR: Counter Weapons of Mass Destruction Advanced Technology Development	40.373	38.540	40.286	-	40.286	42.580	40.925	42.144	43.124	Continuing	Continuing	

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Threat Reduction Agency			Date: May 2017
Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0605000BR / *Counter Weapons of Mass Destruction Systems Development	Project (Number/Name) **RF / Forensics Technologies	

C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u> <u>Base</u>	<u>FY 2018</u> <u>OCO</u>	<u>FY 2018</u> <u>Total</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
Remarks											

D. Acquisition Strategy

Assess government, academic, and industrial performers and make selections based upon a "best fit for task" criteria. Common government awardees include DoD Service Laboratories and the Department of Energy National Laboratories.

E. Performance Metrics

The goal of the NACT RDT&E program is to enable full compliance of all emerging data quality requirements and other requirements as documented in CTBT treaty language, CTBT-issued Radionuclide and Waveform Operations Manuals, other CTBT Organization communications, and DoD Treaty Implementation Manager directives. RDT&E is conducted in support of NACT's operational mission to operate, maintain, and sustain the Provisional Technical Secretariat certified waveform and radionuclide CTBT monitoring stations and radionuclide laboratory in accordance with CTBT requirements. CTBT IMS data availability/timeliness performance specifications are currently 98% data availability for IMS waveform and 95% for IMS radionuclide systems. Data quality metrics continue to evolve as the entire CTBT IMS capability is exercised and tested.

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Threat Reduction Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 5					R-1 Program Element (Number/Name) PE 0605000BR / *Counter Weapons of Mass Destruction Systems Development				Project (Number/Name) RL / Nuclear & Radiological Effects			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
RL: Nuclear & Radiological Effects	64.199	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	64.199
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Efforts in this project were completed in FY 2014. Under Project RL, the Net-Centric Architecture program integrated legacy capabilities and facilitated data sharing through a net-centric framework. It provided near-real time collaborative analysis capabilities between the Department of Defense (DoD) and key interagency and international partners through a globally accessible net-centric framework known as the Integrated Weapons of Mass Destruction Toolset. This toolset migrated the Defense Threat Reduction Agency's (DTRA's) chemical, biological, radiological, and nuclear (CBRN) modeling and simulation codes to provide an integrated suite of Countering Weapons of Mass Destruction (CWMD) decision support capabilities. The framework was the only operational chemical, biological, radiological, nuclear, and high-yield explosives (CBRNE) framework in the world that provided capabilities through web applications, net-centric web services, and stand-alone mobile deployments which are validated and accredited for operational use by international, national, state, and local authorities.

The decrease in FY 2015 is due to the completion of Integrated Weapons of Mass Destruction Toolset investments.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018
Title: RL: Nuclear & Radiological Effects	0.000	-	-
Description: Project RL develops and provides a real-time globally accessible net-centric framework which migrates the DTRA CBRNE modeling and simulation codes to provide an integrated suite of CWMD decision support capabilities.			
FY 2016 Accomplishments: NA			
Accomplishments/Planned Programs Subtotals	0.000	-	-

C. Other Program Funding Summary (\$ in Millions)

Line Item	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
• 20/0602718BR: Counter Weapons of Mass Destruction Applied Research	28.333	28.668	29.228	-	29.228	29.640	30.324	30.999	31.695	Continuing	Continuing

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Threat Reduction Agency										Date: May 2017	
Appropriation/Budget Activity 0400 / 5				R-1 Program Element (Number/Name) PE 0605000BR / <i>*Counter Weapons of Mass Destruction Systems Development</i>				Project (Number/Name) RL / <i>Nuclear & Radiological Effects</i>			
C. Other Program Funding Summary (\$ in Millions)											
			<u>FY 2018</u>	<u>FY 2018</u>	<u>FY 2018</u>					<u>Cost To</u>	
<u>Line Item</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>Base</u>	<u>OCO</u>	<u>Total</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>Complete</u>	<u>Total Cost</u>
• 26/0603160BR: <i>Counter Weapons of Mass Destruction Advanced Technology Development</i>	0.000	3.528	3.500	-	3.500	3.456	3.457	3.455	3.455	Continuing	Continuing
Remarks											
D. Acquisition Strategy											
The program for Integrated Weapons of Mass Destruction Toolset was executed through a competed cost plus fixed-fee contract. This contract was a 3-year effort for software development, test, and integration.											
E. Performance Metrics											
Demonstrate and provide over 80% of the customer-required CBRN modeling and simulation capabilities over networks, e.g., DoD Global Information Grid. Integrate mission-required legacy DTRA CBRNE codes into a net-centric architecture through a process-controlled verification, validation, and accreditation standards-based method necessary to promote the National Strategy for Countering Biological Threats.											

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Defense Threat Reduction Agency	Date: May 2017
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Appropriation/Budget Activity 0400: Research, Development, Test & Evaluation, Defense-Wide / BA 6: RDT&E Management Support					R-1 Program Element (Number/Name) PE 0605502BR / Small Business Innovation Research							
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	38.612	10.473	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
RA: Information Sciences and Applications	38.612	10.473	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

Note

Funding for this program element is not allocated until the year of execution. Program Element 0605502BR "Small Business Innovative Research" is used in reporting year-end actual expenses only.

A. Mission Description and Budget Item Justification

The Small Business Innovative Research (SBIR) and the Small Business Technology Transfer (STTR) programs provide the means for stimulating technological innovation in the private sector, strengthens the role of small business in meeting the Department of Defense (DoD) research and development needs; fosters and encourages participation of minority and disadvantaged businesses in technological innovation; and increases the commercial application of the DoD supported research and development results. These efforts are responsive to Public Law 106-554.

<u>B. Program Change Summary (\$ in Millions)</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018 Base</u>	<u>FY 2018 OCO</u>	<u>FY 2018 Total</u>
Previous President's Budget	0.000	0.000	0.000	-	0.000
Current President's Budget	10.473	0.000	0.000	-	0.000
Total Adjustments	10.473	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	10.473	-			

Change Summary Explanation

Funding for the SBIR Program is consolidated in this Program Element during the year of execution.

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Threat Reduction Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 6					R-1 Program Element (Number/Name) PE 0605502BR / Small Business Innovation Research				Project (Number/Name) RA / Information Sciences and Applications			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
RA: Information Sciences and Applications	38.612	10.473	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

*Funding is not allocated until the year of execution. Program Element 0605502BR "Small Business Innovative Research (SBIR)" is used in reporting year-end actual expenses only.

A. Mission Description and Budget Item Justification

This project provides the means for stimulating technological innovation in the private sector, strengthens the role of small business in meeting the Department of Defense (DoD) research and development needs; fosters and encourages participation of minority and disadvantaged businesses in technological innovation; and increases the commercial application of the DoD supported research and development results. These efforts are responsive to Public Law 106-554.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018
Title: RA: Information Sciences and Applications	10.473	-	-
Description: This project provides the means for stimulating technological innovation in the private sector, strengthens the role of small business in meeting the DoD research and development needs; fosters and encourages participation of minority and disadvantaged businesses in technological innovation; and increases the commercial application of the DoD supported research and development results. These efforts are responsive to Public Law 106-554.			
FY 2016 Accomplishments: - Manufactured, tested, and modeled bulk metal glass high speed projectiles ballistic performance for potential WMD target defeat applications.			
Phase I contract awards from qualified proposals: SBIR 14.3 solicitation: 8 awards SBIR 15.2 solicitation: 22 awards STTR 16.A solicitation: 8 awards			
Phase II contract awards from qualified proposals: SBIR 13.3 solicitation: 2 awards			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Defense Threat Reduction Agency										Date: May 2017		
Appropriation/Budget Activity 0400 / 6				R-1 Program Element (Number/Name) PE 0605502BR / <i>Small Business Innovation Research</i>				Project (Number/Name) RA / <i>Information Sciences and Applications</i>				
B. Accomplishments/Planned Programs (\$ in Millions)												
SBIR 12.1 solicitation: 1 award										FY 2016	FY 2017	FY 2018
Accomplishments/Planned Programs Subtotals										10.473	-	-
C. Other Program Funding Summary (\$ in Millions)												
Line Item	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost	
• 20/0602718BR: <i>Counter Weapons of Mass Destruction Applied Research</i>	29.133	29.127	30.270	-	30.270	32.325	28.286	29.083	30.077	Continuing	Continuing	
• 26/0603160BR: <i>Counter Weapons of Mass Destruction Advanced Technology Development</i>	11.494	11.422	10.229	-	10.229	11.983	12.183	12.468	12.733	Continuing	Continuing	
Remarks												
D. Acquisition Strategy												
N/A												
E. Performance Metrics												
N/A												

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**Department of Defense
Fiscal Year (FY) 2018 Budget Estimates**

May 2017



The Joint Staff

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Research, Development, Test & Evaluation, Defense-Wide

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Department of Defense
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

17 May 2017

Appropriation	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO
Research, Development, Test & Eval, DW	77,021	68,586	73,886				
Total Research, Development, Test & Evaluation	77,021	68,586	73,886				

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Department of Defense
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

17 May 2017

Appropriation	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Research, Development, Test & Eval, DW	68,586	73,886		73,886	116,141		116,141
Total Research, Development, Test & Evaluation	68,586	73,886		73,886	116,141		116,141

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Department of Defense
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

17 May 2017

	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO
<u>Summary Recap of Budget Activities</u>							
Advanced Component Development And Prototypes	21,700	23,642	23,642				
Management Support	50,526	41,080	46,380				
Operational System Development	4,795	3,864	3,864				
Total Research, Development, Test & Evaluation	77,021	68,586	73,886				
<u>Summary Recap of FYDP Programs</u>							
General Purpose Forces	7,825	10,502	10,502				
Intelligence and Communications	10,404	857	857				
Research and Development	55,839	56,401	61,701				
Training Medical and Other							
Administration and Associated Activities	2,953	826	826				
Total Research, Development, Test & Evaluation	77,021	68,586	73,886				

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Department of Defense
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

17 May 2017

	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Summary Recap of Budget Activities							
Advanced Component Development And Prototypes	23,642	23,642		23,642	23,638		23,638
Management Support	41,080	46,380		46,380	89,466		89,466
Operational System Development	3,864	3,864		3,864	3,037		3,037
Total Research, Development, Test & Evaluation	68,586	73,886		73,886	116,141		116,141
Summary Recap of FYDP Programs							
General Purpose Forces	10,502	10,502		10,502	10,749		10,749
Intelligence and Communications	857	857		857	673		673
Research and Development	56,401	61,701		61,701	60,219		60,219
Training Medical and Other					44,500		44,500
Administration and Associated Activities	826	826		826			
Total Research, Development, Test & Evaluation	68,586	73,886		73,886	116,141		116,141

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 (Dollars in Thousands)

17 May 2017

	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO
<u>Summary Recap of Budget Activities</u>							
Advanced Component Development And Prototypes	21,700	23,642	23,642				
Management Support	50,526	41,080	46,380				
Operational System Development	4,795	3,864	3,864				
Total Research, Development, Test & Evaluation	77,021	68,586	73,886				
<u>Summary Recap of FYDP Programs</u>							
General Purpose Forces	7,825	10,502	10,502				
Intelligence and Communications	10,404	857	857				
Research and Development	55,839	56,401	61,701				
Training Medical and Other							
Administration and Associated Activities	2,953	826	826				
Total Research, Development, Test & Evaluation	77,021	68,586	73,886				

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 FY 2018 President's Budget Request
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 Total Obligational Authority
 (Dollars in Thousands)

17 May 2017

	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total
<u>Summary Recap of Budget Activities</u>							
Advanced Component Development And Prototypes	23,642	23,642		23,642	23,638		23,638
Management Support	41,080	46,380		46,380	89,466		89,466
Operational System Development	3,864	3,864		3,864	3,037		3,037
Total Research, Development, Test & Evaluation	68,586	73,886		73,886	116,141		116,141
<u>Summary Recap of FYDP Programs</u>							
General Purpose Forces	10,502	10,502		10,502	10,749		10,749
Intelligence and Communications	857	857		857	673		673
Research and Development	56,401	61,701		61,701	60,219		60,219
Training Medical and Other					44,500		44,500
Administration and Associated Activities	826	826		826			
Total Research, Development, Test & Evaluation	68,586	73,886		73,886	116,141		116,141

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 (Dollars in Thousands)

17 May 2017

Appropriation	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO
The Joint Staff	77,021	68,586	73,886				
Total Research, Development, Test & Evaluation	77,021	68,586	73,886				

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Appropriation	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total
The Joint Staff	68,586	73,886		73,886	116,141		116,141
Total Research, Development, Test & Evaluation	68,586	73,886		73,886	116,141		116,141

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FY 2018 President's Budget Request
Exhibit R-1 FY 2018 President's Budget Request
Total Obligational Authority
(Dollars in Thousands)

17 May 2017

Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO	S e c
104	0604826J	Joint C5 Capability Development, Integration and interoperability Assessments	04	21,700	23,642	23,642					U
		Advanced Component Development And Prototypes		21,700	23,642	23,642					
145	0605126J	Joint Integrated Air and Missile Defense Organization (JIAMDO)	06	34,139	32,759	38,059					U
171	0204571J	Joint Staff Analytical Support	06	5,983	7,464	7,464					U
174	0303166J	Support to Information Operations (IO) Capabilities	06	10,404	857	857					U
183	0804767J	COCOM Exercise Engagement and Training Transformation (CE2T2) - MHA	06								U
		Management Support		50,526	41,080	46,380					
195	0208043J	Planning and Decision Aid System (PDAS)	07	1,842	3,038	3,038					U
247	0902298J	Management HQ - OJCS	07	2,953	826	826					U
		Operational System Development		4,795	3,864	3,864					
Total Research, Development, Test & Eval, DW				77,021	68,586	73,886					

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FY 2018 President's Budget Request
Exhibit R-1 FY 2018 President's Budget Request
Total Obligational Authority
(Dollars in Thousands)

17 May 2017

Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total	S e c
104	0604826J	Joint C5 Capability Development, Integration and interoperability Assessments	04	23,642	23,642		23,642	23,638		23,638	U
		Advanced Component Development And Prototypes		23,642	23,642		23,642	23,638		23,638	
145	0605126J	Joint Integrated Air and Missile Defense Organization (JIAMDO)	06	32,759	38,059		38,059	36,581		36,581	U
171	0204571J	Joint Staff Analytical Support	06	7,464	7,464		7,464	7,712		7,712	U
174	0303166J	Support to Information Operations (IO) Capabilities	06	857	857		857	673		673	U
183	0804767J	COCOM Exercise Engagement and Training Transformation (CE2T2) - MHA	06					44,500		44,500	U
		Management Support		41,080	46,380		46,380	89,466		89,466	
195	0208043J	Planning and Decision Aid System (PDAS)	07	3,038	3,038		3,038	3,037		3,037	U
247	0902298J	Management HQ - OJCS	07	826	826		826				U
		Operational System Development		3,864	3,864		3,864	3,037		3,037	
Total Research, Development, Test & Eval, DW				68,586	73,886		73,886	116,141		116,141	

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 (Dollars in Thousands)

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Appropriation: 0400D Research, Development, Test & Eval, DW

Line	Program Element No Number	Item	Act	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO	S e c
104	0604826J	Joint C5 Capability Development, Integration and interoperability Assessments	04	21,700	23,642	23,642					U
		Advanced Component Development And Prototypes		21,700	23,642	23,642					
145	0605126J	Joint Integrated Air and Missile Defense Organization (JIAMDO)	06	34,139	32,759	38,059					U
171	0204571J	Joint Staff Analytical Support	06	5,983	7,464	7,464					U
174	0303166J	Support to Information Operations (IO) Capabilities	06	10,404	857	857					U
183	0804767J	COCOM Exercise Engagement and Training Transformation (CE2T2) - MHA	06								U
		Management Support		50,526	41,080	46,380					
195	0208043J	Planning and Decision Aid System (PDAS)	07	1,842	3,038	3,038					U
247	0902298J	Management HQ - OJCS	07	2,953	826	826					U
		Operational System Development		4,795	3,864	3,864					
		Total The Joint Staff		77,021	68,586	73,886					

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The Joint Staff
 FY 2018 President's Budget Request
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 Total Obligational Authority
 (Dollars in Thousands)

17 May 2017

Appropriation: 0400D Research, Development, Test & Eval, DW

Line	Program Element No Number	Item	Act	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total	S e c
104	0604826J	Joint C5 Capability Development, Integration and interoperability Assessments	04	23,642	23,642		23,642	23,638		23,638	U
		Advanced Component Development And Prototypes		23,642	23,642		23,642	23,638		23,638	
145	0605126J	Joint Integrated Air and Missile Defense Organization (JIAMDO)	06	32,759	38,059		38,059	36,581		36,581	U
171	0204571J	Joint Staff Analytical Support	06	7,464	7,464		7,464	7,712		7,712	U
174	0303166J	Support to Information Operations (IO) Capabilities	06	857	857		857	673		673	U
183	0804767J	COCOM Exercise Engagement and Training Transformation (CE2T2) - MHA	06					44,500		44,500	U
		Management Support		41,080	46,380		46,380	89,466		89,466	
195	0208043J	Planning and Decision Aid System (PDAS)	07	3,038	3,038		3,038	3,037		3,037	U
247	0902298J	Management HQ - OJCS	07	826	826		826				U
		Operational System Development		3,864	3,864		3,864	3,037		3,037	
Total	The Joint Staff			68,586	73,886		73,886	116,141		116,141	

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171	06	0204571J	Joint Staff Analytical Support.....	Volume 5 - 689
174	06	0303166J	Support to Information Operations Capability (IO) Capabilities.....	Volume 5 - 699
183	06	0804767J	COCOM Exercise Engagement and Training Transformation (CE2T2) - MHA.....	Volume 5 - 703

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Joint C5 Capability Development, Integration, and Interoperability Assessments	0604826J	104	04.....	Volume 5 - 651
Joint Integrated Air & Missile Defense Organization (JIAMDO)	0605126J	145	06.....	Volume 5 - 671
Joint Staff Analytical Support	0204571J	171	06.....	Volume 5 - 689
Management HQ - OJCS	0902298J	247	07.....	Volume 5 - 721
Planning and Decision Aid System (PDAS)	0208043J	195	07.....	Volume 5 - 719
Support to Information Operations Capability (IO) Capabilities	0303166J	174	06.....	Volume 5 - 699

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 The Joint Staff	Date: May 2017
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Appropriation/Budget Activity	R-1 Program Element (Number/Name)											
0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 4: Advanced Component Development & Prototypes (ACD&P)</i>	PE 0604826J <i>I Joint C5 Capability Development, Integration, and Interoperability Assessments</i>											
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	0.000	21.700	23.642	23.638	-	23.638	23.148	20.809	20.809	20.809	Continuing	Continuing
001: <i>C5 Assessments and Analyses</i>	0.000	10.196	12.898	12.898	-	12.898	12.361	10.022	10.022	10.022	Continuing	Continuing
002: <i>C5 Capability Development</i>	0.000	7.079	6.594	6.590	-	6.590	6.637	6.637	6.637	6.637	Continuing	Continuing
003: <i>Joint Fires C2 Interoperability</i>	0.000	4.425	4.150	4.150	-	4.150	4.150	4.150	4.150	4.150	Continuing	Continuing

A. Mission Description and Budget Item Justification

Lead command, control, communications, computers, and cyber (C5) assessments, analyses, capability development, and Joint Fires Command and Control (C2) interoperability efforts required to achieve an effective, integrated, and interoperable Joint Force. Efforts include C5 requirements determination, C5 architectures development and integration, C5 data standardization, Joint Fires C2 interoperability, and C5 integration and interoperability assessments. This was a new PE for FY 2016 and consolidates legacy U. S. Joint Forces Command (JFCOM) PEs that transitioned to the Joint Staff in FY 2013 after JFCOM disestablishment. The following PEs are no longer used: 0604828J - Joint Fires Integration and Interoperability Team (JFI), 0604787J - Joint Systems Integration Command (JSI), and 0607828J - Joint Integration and Interoperability (JII).

B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	21.700	23.642	23.638	-	23.638
Current President's Budget	21.700	23.642	23.638	-	23.638
Total Adjustments	0.000	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Prior Year Carryover	0.000	-	-	-	-

Change Summary Explanation

Decrease in funding for FY 2019 thru FY 2022 is a result of mandated 25% Management Headquarters Activities (MHA) reductions prescribed by the 2016 NDAA.

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Exhibit R-2A, RDT&E Project Justification: FY 2018 The Joint Staff										Date: May 2017		
Appropriation/Budget Activity 0400 / 4					R-1 Program Element (Number/Name) PE 0604826J / Joint C5 Capability Development, Integration, and Interoperability Assessments				Project (Number/Name) 001 / C5 Assessments and Analyses			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
001: C5 Assessments and Analyses	0.000	10.196	12.898	12.898	-	12.898	12.361	10.022	10.022	10.022	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Conduct analysis and assessment activities to inform and enhance Joint warfighter capabilities in support of U.S. National Security requirements. Provide timely, facts-based findings and recommendations for action through the formal DoD decision-making processes used to validate operational requirements and apply funding to field effective, interoperable capabilities. Conduct interoperability assessments and analyses that evaluate capability and interoperability of fielded and emerging command, control, communications, computers, and cyber (C5), and systems in response to operational issues and shortfalls. Conduct integration and integration assessment efforts focused on emerging capabilities in wireless devices and security, tactical command and control and networking, satellite communications, advanced secure digital datalinks, and coalition data exchanges.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018
Title: C5 Assessments and Analyses	10.196	12.898	12.898
Description: Conduct analysis and assessment activities to inform and enhance Joint warfighter capabilities in support of U.S. National Security requirements. Provide timely, facts-based findings and recommendations for action through the formal DoD decision-making processes used to validate operational requirements and apply funding to field effective, interoperable capabilities. Conduct interoperability assessments and analyses that evaluate capability and interoperability of fielded and emerging command, control, communications, computers, and cyber (C5), and systems in response to operational issues and shortfalls. Conduct integration and integration assessment efforts focused on emerging capabilities in wireless devices and security, tactical command and control and networking, satellite communications, advanced secure digital datalinks, and coalition data exchanges.			
FY 2016 Accomplishments: Conducted eight (8) integration initiatives of new capabilities; twenty-five (25) interoperability assessments of joint and coalition systems; thirty-four (34) Coalition Interoperability Assurance and Validation (CIAV) events that provided eighty-five (85) recommendations and one hundred-ten (110) findings or observations; eight (8) exercises and events conducted in the field; and provided C2 Systems and Persistent C4 Environment support by leveraging training events for capability development efforts. FY 2016 assessment, analysis and integration initiatives were focused on: Joint C2 Capability Development, Mission Partner Environment (MPE)/NATO/Multinational Engagement, Joint Fires Combat Identification, Counter Unmanned Aerial Systems, Data and Services Standards, and Cyber Capability Development. The most important projects included:			

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Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604826J / <i>Joint C5 Capability Development, Integration, and Interoperability Assessments</i>	Project (Number/Name) 001 / <i>C5 Assessments and Analyses</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
<p>(1) Friendly Force Tracking (FFT) Ground to Air (G2A) Situational Assessment – Conducted an operational assessment of US and Coalition partner ground to air situational awareness systems. Validated that the systems received correct information data, processed a high volume of data, and the data management/processing capability correctly sorted track data to reduce risk of fratricide.</p> <p>(2) Joint Operational Long Term Evolution Deployable (JOLTED) Tactical Cellular System (TACTICS) Joint Capability Technology Demonstration (JCTD) Technical Manager – JOLTED TACTICS is an Internet Protocol (IP) based system designed to provide secure cellular communications to tactical users at much higher data rates than other tactical networks. This system leverages innovations in Fourth Generation (4G) LTE Cellular technologies and mobile Ka band spread spectrum satellite communications to deliver megabits of data to mobile and dismounted teams armed with mobile devices such as smartphones or netbooks. As the JCTD Technical Manager C4AD conducted the operational assessments to prove the system's validity. The successful JCTD resulted in transition agreements to field the system being executed with PM WIN-T, NAVAIR, and PdM Nett Warrior as program managers.</p> <p>(3) Air Operation Center (AOC) and Joint Operations Center (JOC) C2 Information Systems (C2IS) Capability Integrations (six (6) events) – Provided a persistent operational cyber environment to USPACOM where Blue Teams and Red Teams interacted with operational command and control systems and networks.</p> <p>(4) Automated NATO Database Interface Interoperability Assessments – Assessed the automated exchange of targeting data between the US Joint Targeting Toolbox (JTT) and the NATO Joint Targeting System (JTS) which enables faster joint and coalition targeting by automating the transfer of targeting data, reducing manpower requirements, and data entry errors.</p> <p>(5) C17 Hatch Mount Satellite Antenna (HMSA) Operational Assessment – The C-17 HMSA provided enhanced bandwidth to support on-board mission commander's requirement for communications capable of enroute mission planning during forcible entry operations. The successful operational assessment resulted in operational commanders recommending that the system be fielded, but there has not yet been a fielding decision.</p> <p>(6) Commercial Solutions for Classified (CSFC)/Secure Wireless Local Area Network (SWLAN) Integration Assessments - Assisted the National Security Agency in the development, assessment, and fixed site deployment of a Suite B software encryption solution. This capability supports communicating over classified wireless networks without encryption hardware.</p>			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 The Joint Staff			Date: May 2017		
Appropriation/Budget Activity 0400 / 4		R-1 Program Element (Number/Name) PE 0604826J / <i>Joint C5 Capability Development, Integration, and Interoperability Assessments</i>		Project (Number/Name) 001 / <i>C5 Assessments and Analyses</i>	
B. Accomplishments/Planned Programs (\$ in Millions)			FY 2016	FY 2017	FY 2018
(7) Coalition Warrior Interoperability Exercise 2016 (CWIX16) – Supported the technical validation of eleven (11) Federated Mission Networking (FMN) specifications, participating countries use of them, and the interoperability of these networked services in a federated environment. Conducted an assessment of FMN Spiral Specifications as an extension of CIAV and related them to US Mission Partner Environment (MPE) networking.					
(8) Executive Command and Control-Generation Next (EC2 GenNext) Data at Rest Technical Solution – Provided Senior Leadership with an e-reader solution that uses a Windows Surface Pro tablet running an NSA approved data at rest security solution. The capability provides Executive/Senior Leaders with access to classified material on a device that is NSA approved secure and unclassified when powered down.					
(9) Distributed Assured and Dynamic Configuration (DADC) Support – Assessed DADC’s capability to detect/repair equipment misconfigurations and C2 system’s version incompatibilities to optimize network performance in USPACOM.					
(10) USPACOM Targeting and ISR Interoperability Assessment – Conducted an initial PACOM HQ and Service/Coalition assessment of joint targeting and command/decision systems.					
(11) Black Dart – Led data collection and analysis on the integration of counter-UAS (C-UAS) operational architectures, operational concepts, and tactics, techniques, and procedures (TTPs) during BLACK DART event. Evaluated current and proposed operational concepts for C-UAS operations, providing recommendations based on qualitative/quantitative findings to stakeholders. Supported organizations include JS, all Services, Combatant Commands, DHS, and select U.S. and foreign acquisition programs (both fielded & emerging technologies).					
(12) Squad-X – Provided quantitative/qualitative data collection and analysis to baseline current U.S. small unit mission command technologies in support of DARPA’s Squad-X project. This baseline objectively describes the accuracy, completeness, and timeliness of current capabilities, as well as their interoperability with current/future Mission Partner Environments. Technologies injected in follow-on phases of the project will be measured against this baseline, supporting future development and procurement decisions based on measurable improvements in effectiveness and interoperability.					
(13) CAS JT&E – Leading DOT&E effort for Digitally-Aided Close Air Support (DACAS) Tactics, Techniques, and Procedures (TTPs) Standardization development. The nomination, endorsed by all Services and USSOCOM, resulted in implementation of the DACAS TTP Standardization Joint Test with Joint Deployable Analysis Team (JDAT) tasked to direct and support these efforts.					

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
<p>(14) Bold Quest Technical Demonstration – Designed, built, accredited, and managed the Bold Quest exercise networks for US and coalition partners. Enabled actions include establishment of transport nodes, institution of quality of service policies, cross domain services, sustainment of network core services, data collection from remote and field nodes, Voice over IP services, joining procedures, and all required documentation.</p> <p>(15) BOLD Quest Exercise Analysis – Conducted evaluations of demonstrated Joint/Coalition capabilities, resulting in detailed analysis of interoperability gaps and integration shortfalls relating to the following: Joint Fires Capabilities, Coalition Intelligence, Surveillance, and Reconnaissance (CISR), Digitally Aided Close Air Support (DACAS), and Joint Close Air Support (JCAS). Results inform U.S. Joint, all Services, and Coalition (to include NATO) partner decisions to field interoperable and integrated capabilities.</p> <p>FY 2017 Plans: Conduct interoperability assessments and analysis in both field and persistent environments that evaluate capability and interoperability of fielded and emerging command, control, communications, computers, and cyber (C5), systems in response to operational issues and shortfalls. FY 2017 focus areas include: Command and Control, Counter UAS, Joint Fires, Mission Partner Environment, and operations in Cyberspace Capability Development. This includes the impact of technology advances in wireless devices, modem technology, RF communications, and small secure digital capabilities on warfighter command and control capabilities to match emerging requirements with near-term technology solutions.</p> <p>Projects include: (1) Bold Quest 2017 Technical Demonstration – Design, build, accreditation, assessment, and management of the exercise networks for US and coalition partners. (2) Counter-UAS (C-UAS) – Data collection and analysis during BLACK DART or similar events. (3) Small Unit Joint C2 Capabilities – Quantitative/qualitative data collection and analysis of DARPA's Squad-X project. (4) Joint Expeditionary Integration C5ISR Integration Kit Assessments – Integrate and assess emerging technologies, respond to issues reported from operating forces, and support the transition of SOF "best practices" to conventional forces and acquisition programs. (5) 4G LTE Security as a Commercial Solutions for Classified (CSfC) Security Layer 4G LTE CSfC Pilot – In partnership with the NSA, integrate and demonstrate the viability of using the native security of LTE as a security layer for the transmission of classified information. (6) Automated NATO Database Interface (ANDI) Interoperability Assessment – Continue to assess the automated exchange of targeting data between the US Joint Targeting Toolbox (JTT) and the NATO Joint Targeting System (JTS) which reduces manpower requirements and data entry errors by automating the transfer of targeting data.</p>			
			FY 2018

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Exhibit R-2A, RDT&E Project Justification: FY 2018 The Joint Staff			Date: May 2017		
Appropriation/Budget Activity 0400 / 4		R-1 Program Element (Number/Name) PE 0604826J / <i>Joint C5 Capability Development, Integration, and Interoperability Assessments</i>		Project (Number/Name) 001 / <i>C5 Assessments and Analyses</i>	
B. Accomplishments/Planned Programs (\$ in Millions)			FY 2016	FY 2017	FY 2018
<p>(7) HAMMERHEAD JCTD (P) and Mounted Long-Term Evolution (LTE) Node Technical Integration Assessment (MOLTEN Dragon) – Conduct a technical assessment of multi-purpose airborne pods supporting tactical and SATCOM communications, tactical datalinks, and intelligence sensors.</p> <p>(8) Classified Reconfigurable Operational Wireless Network (CROWN) Capability Integration – Develop and assess a deployable secure “Campus” wireless architecture based on layered software encryption in partnership with the National Security Agency (NSA).</p> <p>(9) Proximity Lock Technology (PLT) Integration Assessment – Assess a proximity and heart beat dependent data-at-rest automatic locking capability for classified tactical mobile devices, partnership with NSA.</p> <p>(10) Virtual Enterprise Mobile Security (VEMS) Integrated Solutions – Assess the usability/functionality of the Hypori Virtual Mobile Infrastructure (VMI) as a way to enable classified tactical communications on unclassified end-user devices, partnership with NSA.</p> <p>(11) Coalition Interoperability Assurance and Validation (CIAV) – Resolute Support Mission – Afghanistan (RSMA) Assessments – Support ongoing overseas operations through continued interoperability assessments of coalition systems supporting coalition mission threads.</p> <p>FY 2018 Plans: Conduct interoperability assessments and analysis in both field and persistent environments that evaluate capability and interoperability of fielded and emerging command, control, communications, computers, and cyber (C5) systems in response to operational issues and shortfalls. A comprehensive Joint Task Force (JTF) environment will support the integration and operational assessment process and support cyber training, capability development and assessments, separately and in coordination with the Department of Defense Cyber Range Environment (DECREE). This is achieved by maintaining a persistent C5 laboratory environment that allows for a rapidly reconfigurable joint, coalition, and inter-agency interoperability assessments, including participation in the Coalition Interoperability and Assurance Validation (CIAV) which supports on-going war efforts. In a live setting, a deployable capability allows the collection and analysis of decision quality data for command and control operations from the operational to lowest tactical echelons of command. This objective, joint analysis supports capability development, acquisition, and systems employment decisions based on quantifiable performance in replicated operational environments. FY 2018 focus areas include: Capability development in Command and Control, Mission Partner Environment (Federated and Virtual), Joint Fires Support, and operations in Cyberspace, plus Joint Test and Evaluation of Digitally Aided Close Air Support (DACAS). C5 Assessments and Analyses activities are conducted through both: persistent, reconfigurable C5 laboratories that connect joint and coalition system of systems operational environments to other virtual, constructive, and live environments across national and multi-national operational, research, and test networks leveraging operational venues/exercises; and, a deployable assessment capability (including contested joint environments) that allows range instrumentation and the collection and analysis of quantitative data in replicated operational environments.</p>					

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Exhibit R-2A, RDT&E Project Justification: FY 2018 The Joint Staff			Date: May 2017		
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B. Accomplishments/Planned Programs (\$ in Millions)			FY 2016	FY 2017	FY 2018
Projects include: (1) Coalition Interoperability Assurance Validation (CIAV) Assessments – Conduct interoperability assessments of coalition systems supporting coalition mission threads. CIAV assessments validate complete and timely exchange of critical information and improve overall interoperability allowing Coalition forces to fight more effectively and efficiently. (2) Advanced Tactical Wireless Integration Capability (ATWIC) – Perform technical integration and assessments of advanced communication systems hardware, software, and security solutions to identify capabilities that address warfighter requirements. (3) Joint Fires Support Joint Mission Thread (JFS JMT) Interoperability Assessment – Assess Joint and Coalition fire support command and control systems digital (machine-to-machine) interoperability and provide findings and observations. (4) Advanced Wide Area Network Security (AWANS) Capability Integration – Demonstrate an integrated wide area network security solution using NSA approved Commercial Solution for Classified virtual private networks between two or more sites. (5) Cyber Guard (CG)/Cyber Flag (CF) 2018 Assessment and Technical Support – Provide C2 systems, a common operational picture, and conduct assessment of cyber effects on these systems integrated into the Navy Defensive Cyber Operation DoD Information Network (DoDIN) Simulation, Training, and Exercise Platform (STEP) environment. (6) Bold Quest 2018 Technical Demonstration – Design, build, accreditation, assessment and management of the exercise networks for U.S. and coalition partners. (7) Counter-UAS (C-UAS) – Data collection and analysis during BLACK DART or similar FY18 events. (8) C2 Systems Support to DoD Enterprise Cyber Range Environment – Provide a persistent and distributed cyber environment for cyber mission forces development.					
Accomplishments/Planned Programs Subtotals			10.196	12.898	12.898
C. Other Program Funding Summary (\$ in Millions)					
N/A					
Remarks					
D. Acquisition Strategy					
Biannual review of C4/Cyber resources includes an examination of the current and future Budget/Spend Plan, Lines of Effort and Acquisition Strategy. The award of a Multi Award Contract (MAC) seeks efficiencies in the performance of requirements for C4/Cyber and Information services, and promotes contractor teaming to provide critical technical and management support. The MAC approach also seeks to reduce the costs of current contract support through the elimination of multiple fees for service contracts, and through the competitive award of contract services.					

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Exhibit R-2A, RDT&E Project Justification: FY 2018 The Joint Staff		Date: May 2017
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E. Performance Metrics <p>(1) Conduct a minimum of fifteen (15) interoperability assessments designed to identify Joint and Coalition interoperability issues and recommend fixes/solutions to Program Managers, Combatant Commands, all Services, and Agencies.</p> <p>(2) Conduct a minimum of one (1) broad-spectrum Counter-UAS (C-UAS) analysis event; providing data collection, analysis, and recommendations that directly address identified C-UAS capability gaps and interoperability shortfalls for partners including: Joint, all Services, Intergovernmental, and Coalition stakeholders.</p> <p>(3) Provide C2 Systems and Persistent command, control, communications, and computers (C4) Environment supporting at least two (2) Combatant Command Exercises to satisfy Combatant Command training objectives, including the cyber threat to mission systems.</p> <p>(4) Support up to four (4) Squad-X experiment events, providing objective analysis on performance and interoperability that directly informs the acquisition of improved C2 capabilities for U.S. small units.</p> <p>(5) Support a minimum of thirty (30) Coalition Interoperability Assurance and Validation (CIAV) events and provide a minimum of one hundred (100) observations/findings to resolve end-to-end mission based interoperability issues, validate Tactics, Techniques, and Procedures, and support NATO Future Mission Networking (FMN) and U.S. Mission Partner Environment (MPE) implementation plans.</p> <p>(6) Provide analyses for at least six (6) field assessments/demonstrations in the areas of Joint Fires Capabilities, C2, CISR, DACAS, and FMN/MPE. Analyses results will inform continued development of evaluated capabilities, including acquisition/fielding decisions and system TTPs.</p> <p>(7) Provide C2 Systems and Persistent C4 Environment supporting at least four (4) individual/team training events per year to meet Cyber training and certification objectives.</p> <p>(8) Provide C2 Systems and Persistent C4 Environment to support at least four (4) Cyber Assessments promoting Cyber capability development.</p> <p>(9) Integrate at least two (2) new capabilities per year supporting Combatant Command, Service, Agency, and Commercial Solutions for Classified and Mobile Computing program requirements.</p>		

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Exhibit R-3, RDT&E Project Cost Analysis: FY 2018 The Joint Staff												Date: May 2017		
Appropriation/Budget Activity 0400 / 4						R-1 Program Element (Number/Name) PE 0604826J / Joint C5 Capability Development, Integration, and Interoperability Assessments				Project (Number/Name) 001 / C5 Assessments and Analyses				

Test and Evaluation (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Contract Management and Engineering Technical Services	C/CPFF	Various : Norfolk, Suffolk, Eglin	-	10.196	Mar 2016	12.898	Oct 2016	12.898	Oct 2017	-		12.898	-	-	-
Subtotal			-	10.196		12.898		12.898		-		12.898	-	-	-

	Prior Years	FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	10.196		12.898		12.898		-		12.898	-	-	-

Remarks

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Exhibit R-4, RDT&E Schedule Profile: FY 2018 The Joint Staff			Date: May 2017
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	FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Joint C5I																												
C5 Assessments and Analyses																												

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Exhibit R-4A, RDT&E Schedule Details: FY 2018 The Joint Staff			Date: May 2017
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Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Joint C5I</i>				
C5 Assessments and Analyses	1	2018	4	2018

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Exhibit R-2A, RDT&E Project Justification: FY 2018 The Joint Staff										Date: May 2017		
Appropriation/Budget Activity 0400 / 4					R-1 Program Element (Number/Name) PE 0604826J / Joint C5 Capability Development, Integration, and Interoperability Assessments				Project (Number/Name) 002 / C5 Capability Development			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
002: C5 Capability Development	0.000	7.079	6.594	6.590	-	6.590	6.637	6.637	6.637	6.637	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
A. Mission Description and Budget Item Justification												
Lead C2 capability development and integration in order to achieve an interdependent joint force. This will be accomplished through four focus areas: Capability Development, C4 Architectures, Data and Services, and Interoperability and Integration.												
B. Accomplishments/Planned Programs (\$ in Millions)									FY 2016	FY 2017	FY 2018	
Title: C5 Capability Development									7.079	6.594	6.590	
Description: Lead C2 capability development and integration in order to achieve an interdependent joint force. This will be accomplished through four focus areas: Capability Development, C4 Architectures, Data and Services, and Interoperability and Integration.												
FY 2016 Accomplishments: Led C2 capability development and integration to achieve an interdependent joint force. This was accomplished through four focus areas: (1) Capability Development – Joint Staff lead and Requirements Working Group lead for DoD CIO & OSD/AT&L – directed Business Case Analysis (BCA) for a proposed \$99M recapitalization of the Global Command and Control System – Joint (GCCS-J) – a cyber enhanced Enterprise Common Operational Picture to facilitate globally integrated operations. Led Combatant Command (CCMD) command and control (C2) Integrated Priority List Capability Gap Analysis review and Operational Priorities analysis for FY18-22 identifying key warfighter requirements resulting in JROC approval. Executed CJCSI 3265.01 – directed requirements and validation duties for Joint C2 Governance and Management. Results included: additional DoD-compliant web browsers for Navy – Marine Corps Internet (NMCI); COP overlays for Google Earth users; consolidated management of Deployable Joint C2 kits; JROC validation of Air Operations Center Weapons System (AOC WS) modernization efforts; Combatant Command and Service collaboration on structural changes to targeting databases; formalized requirements management for Situational Awareness Services in the Joint C2 portfolio; and a warfighter assessment of the Defense Collaboration Services (DCS). (2) C4 Architectures - Expanded the scope of Joint Information Environment (JIE) and DoD CIO architecture content on the Warfighting Mission Area (WMA) Architecture Portal by 30% and increased the user base by 30% from 5200 to 7000+ users.												

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B. Accomplishments/Planned Programs (\$ in Millions)								
<p>Staffed, analyzed and validated 51 JIE Architectures ranging from solutions architectures, Engineering Design Specifications and reference architectures in collaboration with CCMDs. Developed selected architectures and design specifications in support of JIE capability objectives. Assisted in the development of the JIE Security Classification Guide to provide classification guidance for DoDIN architecture and engineering practices. Produced six mission thread architectures, enabling the definition and evaluation of System of System architecture attributes, covering Cyberspace Operations, Joint Suppression of Enemy Air Defense (2 threads), Homeland Security Border Security Operations, Humanitarian Assistance/Disaster Relief, and Intelligence Enabling. Conducted three analytical studies related to Joint Suppression of Enemy Air Defense. Supported NATO in the creation of guidelines and methodology for development of mission threads.</p> <p>(3) Data and Services - Developed an updated Federal Government vetted and approved National Information Exchange Model Military Operations Domain that was successfully demonstrated and used by DOD, Department of Homeland Security and NATO member nations for increased Command and Control interoperability. Established and began execution of a DOD campaign plan to align and provide warfighter interoperability across five different existing command and control tactical and messaging data standards now in operational use by DOD and mission partners. Developed and submitted for formal DOD vetting and approval, a command and control cyber symbology Military Standard to provide standardized C2 Common Operational Picture representations in a transregional threat environment across Combatant Commands.</p> <p>(4) Interoperability and Integration - Led the development and implementation of improved Combatant Command (CCMD) unity of effort and speed of command with mission partners known as Mission Partner Environment (MPE) by developing requirements and standards for Unclassified Information Sharing Services (UISS), development of the annual MPE Action Plan, and integration of MPE into Senior Leader and Joint Professional Military Education (JPME) programs, Joint Doctrine and Joint Training. Shaped NATO's Federated Mission Networking (FMN) implementation to maintain alignment with MPE, through participating as the Flag/General Officer/SES level U.S. representative to the FMN Management Group and providing U.S. representatives to the FMN working groups that coordinate FMN capability development, Coalition Interoperability Assurance and Validation (CIAV), Joining, Membership and Exit Instructions (JMEI) development, cyber security, training, and other interoperability activities across 27 NATO and 6 non-NATO nations which are implementing FMN.</p> <p>FY 2017 Plans:</p> <p>(1) Capability Development – Continue to serve as direct liaison between operational users and materiel developers throughout the capability lifecycle, to include prioritization of requirement and development efforts. Manage the Net-Enabled Requirements Identification Database (NRID) and the Decision Support Tool (DST) to provide accessibility and visibility into C2 capability needs and potential solutions. Develop and seek JROC approval of FY 2019/2020 Joint C2 Operational Requirements based upon top-down Integrated Priorities List and bottom-up warfighter requirements. Host three Joint C2 Integration Workshops to</p>		<table> <tr> <th>FY 2016</th><th>FY 2017</th><th>FY 2018</th></tr> <tr> <td></td><td></td><td></td></tr> </table>	FY 2016	FY 2017	FY 2018			
FY 2016	FY 2017	FY 2018						

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Appropriation/Budget Activity 0400 / 4		R-1 Program Element (Number/Name) PE 0604826J / <i>Joint C5 Capability Development, Integration, and Interoperability Assessments</i>		Project (Number/Name) 002 / <i>C5 Capability Development</i>	
B. Accomplishments/Planned Programs (\$ in Millions)			FY 2016	FY 2017	FY 2018
<p>synchronize Joint C2 materiel development efforts. Coordinate with the warfighter community, to include multinational and other mission partners, to identify common requirements and priorities, as well as materiel and non-materiel solutions to address similar/ common needs and capability gaps. Produce/coordinate an Information System-Capability Development Document (IS-CDD) for an Enterprise Common Operational Picture capability for JROC approval. Further, produce Capability Definition Packages and subordinate Capability Packages for Targeting and Geospatial Intelligence, Maritime Tactical C2, Unified Action Plan COP, Operational Design and Joint Planning Process, Joint Friendly Force Tracking, and Enterprise Force Structure. Coordinate assessment of newly developed Command and Control of the Operational Environment capabilities. Facilitate collaboration between GCCS-J and AOC WS program offices to ensure synchronized release of capabilities with effective data exchanges. Facilitate warfighter prioritization of GCCS-J Global COP requirements for incremental capability development and release.</p> <p>(2) C4 Architectures - Improve WMA Architecture Portal usability and develop a basic set of architecture analysis and visualization tools and services. Continue to improve the quality of and expand the amount of the C4/Cyber portfolio architecture information available on the WMA Architecture Portal. Establish and populate Joint Staff Protection and Force Application Functional Capability Board (FCB) portfolio architecture content on the WMA Architecture Portal to facilitate architecture information sharing, integration, analysis, and re-use. Validate JIE architectures, functional requirements documents and engineering design specifications to increase compliance with JIE architecture standards and metrics across DOD. Assist in the analysis of FYDP 2019 - 2023 Capability Gap Assessment (CGA), specifically the FCB IPL Review and the CGA gaps. Revise the Joint C2 Reference Architecture in conjunction with DISA Services Development Directorate. Align Joint Mission Thread guidance/governance/production priorities to Chairman's priorities. Provide analytical support to the Chairman's Joint Military Net Assessment and the Chairman's Net Assessment. Support coalition partner efforts to define and develop mission threads.</p> <p>(3) Data and Services - Develop, promote and integrate data and services requirements, standards, technical specifications, and policy to support improved warfighter interoperability and information sharing with joint, mission partners and other U.S. Government departments and agencies. Collaborate with Allied Command Transformation (NATO) to develop the NATO Core Data Framework as a means to achieve coalition interoperability. Align and standardize emerging Tactical Data Link and Messaging standards with enterprise information sharing. Develop and promulgate a major release of the National Information Exchange Data Model, Military Operations domain. Refine and mature enterprise IT service lifecycle management processes and procedures with the DoD CIO and Services.</p> <p>(4) Interoperability and Integration – Support emergent cyber priorities throughout all Department focus areas by performing analysis and assessments and support the development of the Persistent Training Environment (PTE) to emulate the C4/ cyberspace domain. Support C4/cyber system developers with operational/developmental Cyber Security testing and assessment, including integration of data collection and analysis instrumentation. Continue to lead the implementation of improved Combatant</p>					

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Exhibit R-2A, RDT&E Project Justification: FY 2018 The Joint Staff			Date: May 2017		
Appropriation/Budget Activity 0400 / 4		R-1 Program Element (Number/Name) PE 0604826J / Joint C5 Capability Development, Integration, and Interoperability Assessments		Project (Number/Name) 002 / C5 Capability Development	
B. Accomplishments/Planned Programs (\$ in Millions)			FY 2016	FY 2017	FY 2018
<p>Command (CCMD) unity of effort and speed of command with mission partners through enhanced information sharing with partner nations by leading the continuing implementation of the JROC approved Future Mission Network 90 Day Study recommendations (known as Mission Partner Environment (MPE)). Facilitate use of force development events as operational environment opportunities to further explore and validate the potential for MPE concepts (e.g. virtualization of CENTRIX networks in exercises STEADFAST COBALT and JUDICIOUS RESPONSE). Support the deployment of a federated enduring MPE capability within the CCMDs. Lead the development and maturation of DoD MPE Joining Instructions providing the joint force a baseline technical document for establishing federated mission networks.</p> <p>FY 2018 Plans:</p> <p>1) Capability Development – Continue to sustain and utilize the Net-Enabled Requirements Identification Database (NRID) and the Decision Support Tool (DST) to provide accessibility and visibility into C2 capability needs and potential solutions for C2 stakeholders and materiel developers. Develop/coordinate the annual Joint C2 Operational Priorities for JROC approval, and host four Joint C2 Integration Workshops. Align capability requirements and JCIDS documentation to enable material solution development, and ensure warfighter equities are represented through Joint C2 Governance and Management forums and formal processes. Develop Capability Definition Packages and Capability Packages to support on-going Enterprise COP, Command and Control Information Exchange (C2IE), and Joint Planning Services capabilities, and develop warfighter assessment criteria for same. Update CJCSI/M 3265.01, “Joint C2 Governance and Management,” to strengthen requirements management for enterprise-level, globally integrated operations. Ensure requirements development efforts include architecture, data, cross-functional, cyber, and Joint Information Environment capability areas and equities. Implement plans and schedules to assess Enterprise COP incrementally developed capabilities.</p> <p>(2) C4 Architectures – Update the WMA Architecture Development Standards to meet emerging JCIDS process improvements. Provide foundational components of the WMA Enterprise Architecture by populating the WMA Architecture Portal with all relevant and available FCB portfolio Areas/Communities of Interest architecture content. Improve the WMA Architecture Portal for the Combatant Command, services and DoD agencies by broadening access, integration, reusability and information sharing of architecture artifacts and data sets through federation and standardized data exchanges National Information Exchange Model (NIEM). Provide architecture development and analysis efforts as required to support the Chairman's directed focus areas and Lines of Operations.</p> <p>(3) Data and Services – Continue to develop, promote, and integrate data and services requirements, standards, technical specifications, and policy to support improved warfighter interoperability and information sharing with joint, mission partners and other U.S. Government departments and agencies. Socialize and perform proof of concept activities of the NATO Core Data Framework, to achieve coalition interoperability and demonstrate operational effectiveness. Continue to align and standardize</p>					

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Exhibit R-2A, RDT&E Project Justification: FY 2018 The Joint Staff		Date: May 2017	
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604826J / <i>Joint C5 Capability Development, Integration, and Interoperability Assessments</i>	Project (Number/Name) 002 / <i>C5 Capability Development</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
<p>emerging Tactical Data Link and Messaging standards with enterprise information sharing. Support the implementation of NIEM as the common interoperability information exchange standard for new IT services. In coordination with the DoD CIO, implement IT enterprise service lifecycle management processes, procedures, and capabilities.</p> <p>(4) Interoperability and Integration – Support cyber priorities throughout all Department focus areas by performing analysis, assessments and supporting materiel developers. Review and monitor the continued development of the MPE-Information System (MPE-IS) to ensure it meets the operational requirements of the CCMDs and Services. Continue to shape FMN implementation to ensure it remains aligned with MPE, including related capability development (e.g. Spiral 2.0 specifications and risk mitigation activities that leverage CIAV and the BOLD QUEST capability demonstration) and FMN Framework JMEIs that are complementary to DoD MPE Joining Instructions. Support development and maturation of DECRE C2IS to support US and Coalition cyber force readiness, cyber defense of coalition networks, integration, interoperability, and survivability of Mission Partner Environment.</p>			
Accomplishments/Planned Programs Subtotals		7.079	6.594
C. Other Program Funding Summary (\$ in Millions)			
N/A			
Remarks			
D. Acquisition Strategy			
<p>Biannual review of C4/Cyber resources includes an examination of the current and future Budget/Spend Plan, Lines of Effort, and Acquisition Strategy.</p> <p>The award of a Multi Award Contract (MAC) seeks efficiencies in the performance of requirements for C4/Cyber and Information services, and promotes contractor teaming to provide critical technical and management support. The MAC approach also seeks to reduce the costs of current contract support through the elimination of multiple fees for service contracts, and through the competitive award of contract services.</p>			
E. Performance Metrics			
<p>1) Secure JROC approval of the FY 2019 Joint C2 operational priorities defining C2 capability needs/gaps providing senior level oversight and direction to Joint C2 capability development.</p> <p>(2) Secure DoD approval for seven (7) JCIDS requirements documents to support materiel development of Joint C2, Adaptive Planning/Execution, Global-Theater Security Cooperation, Readiness, and Cross Functional information technology capabilities enabling timely delivery of materiel solutions to meet warfighter capability needs/gaps.</p>			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 The Joint Staff		Date: May 2017
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604826J / <i>Joint C5 Capability Development, Integration, and Interoperability Assessments</i>	Project (Number/Name) 002 / <i>C5 Capability Development</i>
<p>(3) Ensure Joint C2 requirements development supports the DoD-directed Better Buying Power 100% by continuing the rapid development and fielding of virtualized C2 system capabilities to CCMDs and Services, i.e., GCCS-J Global (COP & I3), Agile Client – an x86 (PC-based) infrastructure, Enterprise Widget Storefront for web access of Joint C2 data and applications, Joint Planning and Execution Services to replace legacy systems.</p> <p>(4) Provide two (2) planned releases of Global-Theater Security Cooperation Management Information System (G-TSCMIS) capability on both NIPRnet & SIPRnet for CCMDs/Services allowing G-TSCMIS use in a disconnected, intermittent, or limited bandwidth (DIL) environment, as well as providing an initial cross domain data exchange capability between security levels.</p> <p>(5) Validate the architectures and engineering design specifications for twenty-seven (27) JIE and MPE projects.</p> <p>(6) Conduct three (3) National Information Exchange Model Military Operations Domain Configuration Control Board sessions to improve and increase information sharing via promulgation of one Domain content update.</p> <p>(7) Lead a minimum of six (6) Enterprise Service and Data Panels (ESDP) with the goal to improve and increase the interoperability and reusability of DOD Enterprise Services and Authoritative Data Sources.</p> <p>(8) Include mission partnering concepts in four (4) Combatant Command and Service exercises.</p> <p>(9) Establish at least two (2) new or enhanced information/sharing and collaboration areas NLT 30 Jun 18.</p> <p>(10) Establish and refine processes and procedures to ensure FMN implementation is included in two (2) NATO exercises.</p>		

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Exhibit R-2A, RDT&E Project Justification: FY 2018 The Joint Staff										Date: May 2017		
Appropriation/Budget Activity 0400 / 4					R-1 Program Element (Number/Name) PE 0604826J / Joint C5 Capability Development, Integration, and Interoperability Assessments				Project (Number/Name) 003 / Joint Fires C2 Interoperability			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
003: Joint Fires C2 Interoperability	0.000	4.425	4.150	4.150	-	4.150	4.150	4.150	4.150	4.150	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
A. Mission Description and Budget Item Justification												
Lead interoperability efforts across DoD and partner nations at the operational and tactical level for mission partner operations, fire support, Combat Identification (CID), and Friendly Force Tracking (FFT) capabilities. Conduct Joint Fire Support (JFS)/Joint Close Air Support (JCAS) and CID-FFT action plans to fulfill CJCSI-directed, General Officer/Flag Officer (GOFO) level responsibilities. Conduct JFS Executive Steering Committee (ESC) standardization team accreditation visits to U.S. and partner nation schoolhouses to ensure Memorandum of Agreement (MOA) signatories are accomplishing schoolhouse training in compliance with the Memorandas.												
B. Accomplishments/Planned Programs (\$ in Millions)										FY 2016	FY 2017	FY 2018
Title: Joint Fires C2 Interoperability										4.425	4.150	4.150
Description: Execute Joint Staff-sponsored Bold Quest systems-of-systems interoperability assessment, including integration of Cyber capabilities with command and control of Conventional and Special Operations Force missions from a multinational perspective at the tactical level. These efforts directly support 2014 Quadrennial Defense Review and 2016 National Military Strategy goals to increase interoperability with allies and partners.												
FY 2016 Accomplishments: Conducted Joint Staff sponsored Bold Quest Coalition Capability Demonstration and Assessment involving fourteen (14) nations, all U.S. Services and U.S. Special Operations Command successfully expanding utility of Mission Partner Environment concepts; the integration of ground-to-air situational awareness capabilities; integrated air & missile defense threads; and digitally enhanced call-for-fire and close air support operations through live, virtual, construction dismounted operations at Ft Stewart, GA and Savannah, GA.												
Led accreditation visits to ten (10) Joint Terminal Attack Controller (JTAC); 1 Forward Air Controller (Airborne); and 7 Joint Fires Observer (JFO) Schoolhouses. Accreditation of U.S. and partner nation schoolhouses ensured trained and qualified personnel meet standardized performance metrics, enabling enhanced trust and interoperability during current and future combat operations.												
FY 2017 Plans: Execute Joint Staff-sponsored Bold Quest systems-of-systems interoperability assessment, including integration of Cyber and ISR capabilities with command and control of Conventional and Special Operations Force missions from a multinational perspective at the tactical level. Continue incorporating Mission Partner Environment concepts to increase Allied and coalition interoperability.												

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Exhibit R-2A, RDT&E Project Justification: FY 2018 The Joint Staff		Date: May 2017	
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604826J / <i>Joint C5 Capability Development, Integration, and Interoperability Assessments</i>	Project (Number/Name) 003 / <i>Joint Fires C2 Interoperability</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
These efforts directly support the 2016 National Military Strategy and the CJCS' focus areas. Continue leading accreditation visits of current JFS ESC member programs and provided staff assistance for development of new start close air support-related training and certification programs.			
FY 2018 Plans: Plan and execute Joint Staff-sponsored Bold Quest 2018 systems-of-systems interoperability assessment, including integration of Cyber and ISR capabilities with command and control of Conventional and Special Operations Force missions from a multinational perspective at the tactical level. These efforts directly support the 2016 National Military Strategy and the CJCS' focus areas. Continue leading accreditation visits of current JFS ESC member programs and provided staff assistance for development of close air support-related training and certification programs.			
Accomplishments/Planned Programs Subtotals		4.425	4.150
C. Other Program Funding Summary (\$ in Millions) N/A			
Remarks			
D. Acquisition Strategy Biannual review of C4/Cyber resources includes an examination of the current and future Budget/Spend Plan, Lines of Effort and Acquisition Strategy. The award of a Multi Award Contract (MAC) seeks efficiencies in the performance of requirements for C4/Cyber and Information services, and promotes contractor teaming to provide critical technical and management support. The MAC approach also seeks to reduce the costs of current contract support through the elimination of multiple fees for service contracts, and through the competitive award of contract services.			
E. Performance Metrics 1) Lead development of situational awareness and cooperative/non-cooperative identification capabilities that enable U.S. and NATO/Coalition warfighters to identify friendly, enemy, and neutral forces for "shoot/don't shoot" decisions. (2) Synchronize Service testing, acquisition and fielding of Mode 5 IFF capability, with focus on Full Operational Capability (FOC) in 2020. Monitor Service fielding progress of one hundred sixty-nine (169) platform types. (3) Complete Definition Package for Block 2 of Digitally Aided Close Air Support (DACAS) coordinated implementation in conjunction with participating Service programs of record. Effort will enable over twenty (20) U.S. and partner nation systems to be more interoperable in the CAS mission area.			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 The Joint Staff		Date: May 2017
Appropriation/Budget Activity 0400 / 4	R-1 Program Element (Number/Name) PE 0604826J / <i>Joint C5 Capability Development, Integration, and Interoperability Assessments</i>	Project (Number/Name) 003 / <i>Joint Fires C2 Interoperability</i>
<p>(4) Expand digital call-for-fire solution development to include enhanced multi-national interoperability with six (6) partner nations.</p> <p>(5) Conduct Accreditation Assessments for fourteen (14) of thirty current signatory schoolhouses (8 Joint Terminal Attack Controller (JTAC), 2 Forward Air Controller (Airborne), and 4 Joint Fires Observer (JFO) Schoolhouses).</p> <p>(6) Lead development and refinement of four (4) U.S. and NATO joint fires-related doctrine and Tactics, Techniques, and Procedures (TTP) publications.</p> <p>(7) Lead planning, coordination and execution of two (2) Bold Quest systems of systems interoperability assessment to facilitate U.S. and coalition integration.</p> <p>(8) Plan and conduct quarterly Joint Fire Support and Combat ID-Friendly Force Tracking Executive Steering Committee and working group meetings to address identified shortfalls in those mission areas.</p>		

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 The Joint Staff **Date:** May 2017

Appropriation/Budget Activity 0400: Research, Development, Test & Evaluation, Defense-Wide / BA 6: RDT&E Management Support	R-1 Program Element (Number/Name) PE 0605126J / Joint Integrated Air & Missile Defense Organization (JIAMDO)
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COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	343.535	34.139	38.059	36.581	-	36.581	36.469	33.901	33.500	33.500	Continuing	Continuing
P001: Core	119.901	14.339	14.329	9.343	-	9.343	10.271	10.271	10.476	10.476	Continuing	Continuing
P002: Homeland	67.544	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
P003: Black Dart	23.039	2.444	3.000	3.000	-	3.000	3.300	3.300	3.366	3.366	Continuing	Continuing
P004: Joint Distributed Engineering Plant	14.248	3.000	2.500	2.738	-	2.738	2.900	2.475	2.533	2.533	Continuing	Continuing
P005: Nimble Fire	61.539	8.000	12.230	16.000	-	16.000	14.500	13.500	12.650	12.650	Continuing	Continuing
P006: Cruise Missile Combat Identification (CID)	57.264	6.356	6.000	5.500	-	5.500	5.498	4.355	4.475	4.475	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Joint Integrated Air and Missile Defense Organization(JIAMDO) is the organization within the Department of Defense (DoD) chartered to plan, coordinate, and oversee Integrated Air and Missile Defense (IAMD) requirements, joint operational concepts, and operational architectures. As part of the Joint Staff (JS), JIAMDO supports the Chairman in meeting his Title 10 responsibilities as they relate to IAMD issues. JIAMDO is the operational community's proponent for characteristics, requirements, and capabilities in IAMD, and is the joint IAMD proponent within the DoD's resource allocation structures. JIAMDO also leads IAMD mission and utility analysis, integrates IAMD within the Force Protection joint capability area, and conducts evaluations, demonstrations of joint IAMD architectures, and provides advocacy for innovative, technically mature, and affordable solutions.

JIAMDO has established a close partnership with Combatant Commands (CCMDs) and maintains liaison offices at major CCMD locations to facilitate coordination of integration issues and requirements. In particular, JIAMDO maintains close coordination with U.S. Strategic Command (USSTRATCOM) and U.S. Northern Command (USNORTHCOM) in support of ballistic missile defense of the U.S. JIAMDO provides the CJCS and the Joint Requirements Oversight Council the ability to meet statutory responsibilities to review the cost, schedule, and performance criteria of Missile Defense Agency missile defense programs, and assesses the validity of those criteria in relation to national and military requirements. At the request of USSTRATCOM and at the direction of the CJCS, JIAMDO supports USSTRATCOM in the development of the IAMD Prioritized Capabilities List and the Global Integrated IAMD Assessment and analysis of the Ballistic Missile Defense System. JIAMDO supports the USSTRATCOM ballistic missile early warning mission by ensuring operational and technical requirements are integrated into the theater missile warning architecture. JIAMDO also provides direct support to North American Aerospace Defense Command and USNORTHCOM for homeland air and cruise missile surveillance issues and technical oversight of homeland capability solutions.

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 The Joint Staff				Date: May 2017	
Appropriation/Budget Activity		R-1 Program Element (Number/Name)			
0400: Research, Development, Test & Evaluation, Defense-Wide / BA 6: RDT&E Management Support		PE 0605126J / Joint Integrated Air & Missile Defense Organization (JIAMDO)			
B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	33.983	32.759	32.581	-	32.581
Current President's Budget	34.139	38.059	36.581	-	36.581
Total Adjustments	0.156	5.300	4.000	-	4.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	0.156	-			
• SBIR/STTR Transfer	-	-			
• Additional Support to P005: Nimble Fire	-	0.000	4.000	-	4.000
• FY17PB Amend: Addition funds for JRICM (JIAMDO-Core)	-	5.300	-	-	-
Change Summary Explanation					
JIAMDO-Core: JIAMDO moved its offices out of contracted facilities into government-owned facilities and merged its processes with those of the Joint Staff J8, avoiding the need for administrative and security support contracts, rent, and the various support costs associated with rental offices.					
JIAMDO-Core (FY17): \$5.3 million is required to address emergency warfighting readiness requirements. Joint Regional IAMD Capability Mix (JRICM) II is a DepSecDef and JROC directed Regional IAMD study, directing the Joint Staff, Joint Integrated Air and Missile Defense Organization (JIAMDO), in coordination with USSTRATCOM, USCYBERCOM, Intelligence Communities, Agencies and Services to assess the impact of emerging non-kinetic capabilities to supplement regional IAMD.					
JIAMDO-Homeland: Program development and management were handed off to the Air Force. JIAMDO retains only requirements and integration oversight responsibilities not requiring program funding.					
JIAMDO-Nimble Fire: Increased funding for FY 2018 will be used to hold two large Nimble Fire events in support of U.S. Fleet Forces Command, USPACOM, USSTRATCOM and USEUCOM. Additionally, funds will be used to improve Electronic Warfare, Multi-spectral Environment, Advanced Capability Model, and Space Warfare.					

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Exhibit R-2A, RDT&E Project Justification: FY 2018 The Joint Staff										Date: May 2017		
Appropriation/Budget Activity 0400 / 6					R-1 Program Element (Number/Name) PE 0605126J / Joint Integrated Air & Missile Defense Organization (JIAMDO)				Project (Number/Name) P001 / Core			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
P001: Core	119.901	14.339	14.329	9.343	-	9.343	10.271	10.271	10.476	10.476	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Joint Integrated Air and Missile Defense Organization (JIAMDO) is the organization within the Department of Defense (DoD) chartered to plan, coordinate, and oversee joint Integrated Air and Missile Defense (IAMD) requirements, joint operational concepts, and operational architectures. As part of the Joint Staff, JIAMDO supports the Chairman of the Joint Chiefs of Staff in meeting his Title 10 responsibilities as they relate to IAMD issues. JIAMDO is the operational community's proponent for characteristics, requirements, and capabilities in IAMD, and is the joint IAMD proponent within the DoD's resource allocation structures. JIAMDO also leads IAMD mission area and utility analyses, integrates IAMD within the Force Protection joint capability area, and conducts evaluations and demonstrations of joint IAMD architectures and concepts.

JIAMDO has established a close partnership with Combatant Commands (CCMDs) and maintains liaison offices at major CCMD locations to facilitate coordination of integration issues and requirements. In particular, JIAMDO maintains close coordination with USSTRATCOM and USNORTHCOM in support of ballistic missile defense of the U.S. JIAMDO provides the CJCS and the Joint Requirements Oversight Council the ability to meet statutory responsibilities to review the cost, schedule, and performance criteria of Missile Defense Agency missile defense programs, and assesses the validity of those criteria in relation to national and military requirements. At the request of USSTRATCOM, and at the direction of the CJCS, JIAMDO supports USSTRATCOM in development of the IAMD Prioritized Capability List, the Global Integrated IAMD Assessment, and analysis of the Ballistic Missile Defense System (BMDS). JIAMDO supports the USSTRATCOM ballistic missile early warning mission by ensuring operational and technical requirements are integrated into the theater missile warning architecture. JIAMDO also provides direct support to North American Aerospace Defense Command and USNORTHCOM for homeland air and cruise missile surveillance issues.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018
Title: Core	14.339	14.329	9.343
Description: Provides overall staff support for JIAMDO operations in the area of ballistic missile defense, air and cruise missile defense, homeland defense, requirements management, combat identification, modeling & simulation, all other JIAMDO analytical functions and products, senior level briefings, and all travel costs for government and contractor support personnel (including Combatant Commander liaison personnel). This includes performing analyses, demonstrations, and programmatic assessments of technology, operations, requirements, and weapons systems. In coordination with Services and CCMDs, JIAMDO Core also funds the definition, assessment, development, and approval of Joint IAMD Operational Concepts, Operational Architectures, and capability requirements to guide the Department's joint/interagency/combined fully integrated and net-centric capable IAMD (including defense against cruise missiles, unmanned aerial vehicles, and ballistic missiles). JIAMDO Core also provides funding to: <ul style="list-style-type: none"> • Develop and integrate joint studies, simulations, wargames, force resource allocation, and interoperability initiatives 			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 The Joint Staff		Date: May 2017	
Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0605126J / <i>Joint Integrated Air & Missile Defense Organization (JIAMDO)</i>	Project (Number/Name) P001 / <i>Core</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
<ul style="list-style-type: none"> • Manage relevant Congressional interaction and CCMD interface through a cadre of liaisons collocated with major headquarters • Directly support and sponsor homeland air surveillance related demonstration and analysis activities • Run the IAMD Working Group and co-chair the Protection Functional Capabilities Board focusing CCMD, Joint Staff, and Service collaboration efforts in generation of joint concepts and development of the IAMD architecture and roadmap • Develop U.S. positions for, and provide the U.S. head of delegation to, the NATO Air and Missile Defense Committee <p>JIAMDO Core further enables strategic planning development, infrastructure, security, travel, and other support activities. Funding pays for: contracted Systems Engineering and Technical Assistance (SETA) support for Air & Cruise Missile Defense (ACMD), Ballistic Missile Defense (BMD), Homeland Air Security (HAS) strategic planning, studies & analysis, combat ID, modeling & simulation, all other JIAMDO analytical functions and products, senior level briefings, and all travel costs for government and contractor support personnel (including Combatant Commander liaison personnel). Additionally, the JIAMDO CORE budget funds daily on-site security management personnel to meet DoD, National Industrial Security Program Operating Manual (NISPOM), and other security regulations, for all administrative and support functions related to higher security classifications, as well as basic office supplies and furniture, and classified/unclassified data connections.</p> <p>FY 2016 Accomplishments: Performed Air and Cruise Missile Defense, and Ballistic Missile Defense directed studies in support of the Chairman and related program support activities including: contracting, finance, systems engineering and technical assistance, administration, security, communications, leased space, and supply. Provided contracted expertise in support of studies and analysis directed by Congress, Defense Planning Guidance, Resource Management Decisions, Joint Requirements Oversight Council, and other higher sources. Additional reductions in contract advisory and assistance services are projected. Awarded new SETA contract in Aug 2016.</p> <p>FY 2017 Plans: Continue performing Ballistic Missile Defense studies as directed by higher authority and provide contracted expertise in support of all JIAMDO analytical and requirements management activities. Pursue further changes in program support activities as a result of reorganization and office move to the Pentagon. Ancillary support functions such as administrative, security, communications, Information Technology, and finance will no longer require JIAMDO funding as they will be provided by the JS. Systems Engineering and Technical Assistance contract will still be in place to provide necessary mission support.</p> <p>FY 2018 Plans: Continue performing Ballistic Missile Defense studies as directed by higher authority and provide contracted expertise in support of all JIAMDO analytical and requirements management activities.</p>			
Accomplishments/Planned Programs Subtotals		14.339	14.329
			9.343

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Exhibit R-2A, RDT&E Project Justification: FY 2018 The Joint Staff		Date: May 2017
Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0605126J / <i>Joint Integrated Air & Missile Defense Organization (JIAMDO)</i>	Project (Number/Name) P001 / <i>Core</i>
C. Other Program Funding Summary (\$ in Millions) N/A Remarks D. Acquisition Strategy N/A E. Performance Metrics (1) Support two major Nimble Fire exercises during FY 2018. (2) Conduct two IAMD Working Groups and at least one Functional Capabilities Board per month. (3) Conduct the annual Black Dart Counter-Unmanned Aerial System technology demonstration. (4) Support U.S. Representative to NATO Air Defense Council and Missile Defense Committee including 2 overseas meetings per year and numerous lower-level supporting functions. (5) Develop and maintain operational architecture compliance with DoD Architectural Framework (DODAF) standards. (6) Ensure 100% of all government employee travel is in accordance with the Joint Federal Travel Regulation/Joint Travel Regulation and all contractor travel is in accordance with applicable regulations. (7) Maintain all unclassified/classified LANs on a daily basis in accordance with the Joint Staff's Office of the Chief Information Officer guidance/policy. (8) Ensure all computers, NIPRNET/SIPRNET, are refreshed according to applicable policy/guidance.		

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Exhibit R-2A, RDT&E Project Justification: FY 2018 The Joint Staff										Date: May 2017		
Appropriation/Budget Activity 0400 / 6					R-1 Program Element (Number/Name) PE 0605126J / Joint Integrated Air & Missile Defense Organization (JIAMDO)				Project (Number/Name) P002 / Homeland			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
P002: Homeland	67.544	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Homeland program transitioned to a USAF-led Program of Record across the Future Year Defense Program in the beginning of FY 2016. JIAMDO will retain operational and requirements oversight.

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Exhibit R-2A, RDT&E Project Justification: FY 2018 The Joint Staff										Date: May 2017		
Appropriation/Budget Activity 0400 / 6					R-1 Program Element (Number/Name) PE 0605126J / Joint Integrated Air & Missile Defense Organization (JIAMDO)				Project (Number/Name) P003 / Black Dart			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
P003: Black Dart	23.039	2.444	3.000	3.000	-	3.000	3.300	3.300	3.366	3.366	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
A. Mission Description and Budget Item Justification												
The Joint Integrated Air and Missile Defense Organization (JIAMDO) is the organization within the Department of Defense (DoD) chartered to plan, coordinate, and oversee Joint Integrated Air and Missile Defense (IAMD) requirements, joint operational concepts, and operational architectures. As part of the Joint Staff, JIAMDO supports the Chairman of the Joint Chiefs of Staff in meeting his Title 10 responsibilities as they relate to IAMD issues. JIAMDO is the operational community's proponent for characteristics, requirements, and capabilities in IAMD, and is the joint IAMD proponent within the DoD's resource allocation structures. JIAMDO also leads AMD mission area and utility analyses, integrates air and missile defense within the Force Protection joint capability area, and conducts evaluations and demonstrations of joint IAMD architectures and concepts.												
JIAMDO has established a close partnership with Combatant Commands (CCMDs) and maintains liaison offices at major CCMD locations to facilitate coordination of integration issues and requirements. In particular, JIAMDO maintains close coordination with U.S. Strategic Command (USSTRATCOM) and U.S. Northern Command (USNORTHCOM) in support of ballistic missile defense of the U.S. JIAMDO provides the CJCS and the Joint Requirements Oversight Council the ability to meet statutory responsibilities to review the cost, schedule, and performance criteria of Missile Defense Agency missile defense programs, and assesses the validity of those criteria in relation to national and military requirements. At the request of USSTRATCOM and at the direction of the CJCS, JIAMDO supports USSTRATCOM in development of the IAMD Prioritized Capability List, the Global Integrated Air and Missile Defense Assessment, and analysis of the Ballistic Missile Defense System (BMDS). JIAMDO supports the USSTRATCOM ballistic missile early warning mission by ensuring operational and technical requirements are integrated into the theater missile warning architecture. JIAMDO also provides direct support to North American Aerospace Defense Command and USNORTHCOM for homeland air and cruise missile surveillance issues.												
B. Accomplishments/Planned Programs (\$ in Millions)									FY 2016	FY 2017	FY 2018	
Title: Black Dart Counter Unmanned Aircraft Systems Technology Demonstration									2.444	3.000	3.000	
Description: Provides funding to support administration and execution of Black Dart demonstrations. Black Dart is a unique joint, interagency demonstration focusing on rapid development and implementation of Counter - Unmanned Aircraft Systems (CUAS) technology from readily-available commercial and governmental products. Objectives include: • Execute live-fly, live-fire CUAS technology demonstration to assess and validate existing and emerging Integrated Air and Missile Defense (IAMD) capabilities • Present emerging solutions to inform requirements decision-making • Identify and develop IAMD operational concepts, system interoperability, and operational architectures for the CUAS mission set • Advocate for Warfighters’ desired CUAS capabilities and affordable, integrated solutions												

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Exhibit R-2A, RDT&E Project Justification: FY 2018 The Joint Staff		Date: May 2017	
Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0605126J / <i>Joint Integrated Air & Missile Defense Organization (JIAMDO)</i>	Project (Number/Name) P003 / <i>Black Dart</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
<p><i>FY 2016 Accomplishments:</i> Most tactically relevant BLACK DART to date: • Flew 355 sorties from 25 different UAS variants • Flew tactical ISR and Attack flight profiles from 16 geographically dispersed launch locations • Developed detailed threat scenarios based on direct input from Combatant Commanders to provide specific recommendations on materiel and non-materiel requirements to the warfighter • Created a contested electromagnetic spectrum for CUAS sensors Provided a venue for rapid capability delivery to the Warfighter: • Developed innovative materiel and non-materiel solutions that enhance all phases of the Joint Engagement Sequence versus the UAS threat • Refined non-kinetic negation system techniques and capabilities through 89 separate negation events Provided a venue for innovation and collaboration: • Expanded interagency participation to demonstrate C-UAS options in both Title 10 and Title 50 operational environments • Multiple cross-governmental development programs were exercised to include DoD/DoE and DoD/DHS • Increased observation from coalition partners from the Pacific operational theater</p> <p><i>FY 2017 Plans:</i> Continue FY 2016 plans including: Demonstrate UAS capabilities to employ within visual range (WVR) and beyond visual range (BVR) weapons in a counter-UAS role. Explore 'On-the-Move' capabilities. Expand the breadth, complexity, and integration of cyber capabilities. Expand scenarios to include dynamic and contested electromagnetic spectrum.</p> <p><i>FY 2018 Plans:</i> Continue FY 2017 Plans including: Expand coalition partner participation. Develop scenarios integrating systems across land, littoral, and maritime domains.</p>			
Accomplishments/Planned Programs Subtotals		2.444	3.000
C. Other Program Funding Summary (\$ in Millions)			
N/A			
Remarks			
D. Acquisition Strategy			
N/A			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 The Joint Staff		Date: May 2017
Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0605126J / Joint Integrated Air & Missile Defense Organization (JIAMDO)	Project (Number/Name) P003 / Black Dart
E. Performance Metrics (1) Complete events within schedule and budget. Events provide useful data to improve C-UAS capability. (2) Document gaps, develop and substantiate hardware, software, and employment concepts. (3) Field C-UAS capability.		

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Exhibit R-2A, RDT&E Project Justification: FY 2018 The Joint Staff										Date: May 2017		
Appropriation/Budget Activity 0400 / 6					R-1 Program Element (Number/Name) PE 0605126J / Joint Integrated Air & Missile Defense Organization (JIAMDO)				Project (Number/Name) P004 / Joint Distributed Engineering Plant			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
P004: Joint Distributed Engineering Plant	14.248	3.000	2.500	2.738	-	2.738	2.900	2.475	2.533	2.533	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Joint Integrated Air and Missile Defense Organization (JIAMDO) is the organization within the Department of Defense (DoD) chartered to plan, coordinate, and oversee Joint Integrated Air and Missile Defense (IAMD) requirements, joint operational concepts, and operational architectures. As part of the Joint Staff, JIAMDO supports the Chairman of the Joint Chiefs of Staff in meeting his Title 10 responsibilities as they relate to IAMD issues. JIAMDO is the operational community's proponent for characteristics, requirements, and capabilities in IAMD, and is the joint IAMD proponent within the DoD's resource allocation structures. JIAMDO also leads AMD mission area and utility analyses, integrates air and missile defense within the Force Protection joint capability area, and conducts evaluations and demonstrations of joint IAMD architectures and concepts.

JIAMDO has established a close partnership with Combatant Commands (CCMDs) and maintains liaison offices at major CCMD locations to facilitate coordination of integration issues and requirements. In particular, JIAMDO maintains close coordination with U.S. Strategic Command (USSTRATCOM) and U.S. Northern Command (USNORTHCOM) in support of ballistic missile defense of the U.S. JIAMDO provides the CJCS and the Joint Requirements Oversight Council the ability to meet statutory responsibilities to review the cost, schedule, and performance criteria of Missile Defense Agency missile defense programs, and assesses the validity of those criteria in relation to national and military requirements. At the request of USSTRATCOM and at the direction of the CJCS, JIAMDO supports USSTRATCOM in development of the IAMD Prioritized Capability List, the Global Integrated Air and Missile Defense Assessment, and analysis of the Ballistic Missile Defense System (BMDS). JIAMDO supports the USSTRATCOM ballistic missile early warning mission by ensuring operational and technical requirements are integrated into the theater missile warning architecture. JIAMDO also provides direct support to North American Aerospace Defense Command and USNORTHCOM for homeland air and cruise missile surveillance issues.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018
Title: Joint Distributed Engineering Plant (JDEP)	3.000	2.500	2.738
Description: Conducted a joint test event to assess the interoperability of joint, IAMD weapon systems that leveraged commercial-off-the-shelf (COTS) Networks to perform Joint Integrated Fire Control. This effort provided users the means to create family-of-system (FoS) environments by linking existing capabilities using hardware, software, and operators in a live-fly environment.			
FY 2016 Accomplishments: Fund an appropriate joint distributed test event to assess the interoperability of joint, IAMD weapons systems. Provide users the means to create FoS environments by linking existing capabilities using hardware, software, and operator-in-the-loop. Link			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 The Joint Staff		Date: May 2017	
Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0605126J / <i>Joint Integrated Air & Missile Defense Organization (JIAMDO)</i>	Project (Number/Name) P004 / <i>Joint Distributed Engineering Plant</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
<p>existing Service and Joint combat system engineering and test sites via distributed communications. Conducted a high-fidelity weapons system hardware-in-the-loop Coalition Correlation/Decorrelation Interoperability Test (C/DIT) which identified and accelerated change to the Military Standard 6016 default parameter values, promoting increased IAMD interoperability across the joint and Allied link networks.</p> <p>FY 2017 Plans: Fund an appropriate joint/coalition IAMD interoperability program and test event to link Service and Agency systems, providing test and evaluations to improve the Joint Common Tactical Airspace Picture (CTAP). Supervise and conduct a live, virtual and constructive test event utilizing real-world C-UAS data within a hardware-in-the-loop model to improve L16 network IAMD communications; determine IAMD capability requirements and verify architectures; improve interoperability and ensure IAMD of current weapon systems; and evaluate concepts of operations and tactics, techniques, and procedures.</p> <p>FY 2018 Plans: Fund an appropriate joint distributed test event to assess the interoperability of joint, IAMD weapons systems. Provide users the means to create FoS environments by linking existing capabilities using hardware, software, and operator-in-the-loop. Link existing Service and Joint combat system engineering and test sites via distributed communications. Reduce developmental cycle times by leveraging existing facilities.</p>			
Accomplishments/Planned Programs Subtotals		3.000	2.500
C. Other Program Funding Summary (\$ in Millions)			
N/A			
Remarks			
D. Acquisition Strategy			
N/A			
E. Performance Metrics			
<p>(1) Each JDEP event develops measures of effectiveness (MOE) & measures of performance (MOP) based on an eighteen month test planning and event process.</p> <p>(2) Complete events within schedule and budget.</p> <p>(3) Events provide useful data to improve Air Missile Defense interoperability, with implemented and recommended corrective changes.</p> <p>(4) Events must be linked to the current approved IAMD Architecture, provide joint benefit, contribute to Joint Interoperability, and address IAMD ICD capability gaps.</p>			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 The Joint Staff										Date: May 2017		
Appropriation/Budget Activity 0400 / 6					R-1 Program Element (Number/Name) PE 0605126J / Joint Integrated Air & Missile Defense Organization (JIAMDO)				Project (Number/Name) P005 / Nimble Fire			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
P005: Nimble Fire	61.539	8.000	12.230	16.000	-	16.000	14.500	13.500	12.650	12.650	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Joint Integrated Air and Missile Defense Organization (JIAMDO) is the organization within the Department of Defense (DoD) chartered to plan, coordinate, and oversee Joint Integrated Air and Missile Defense (IAMD) requirements, joint operational concepts, and operational architectures. As part of the Joint Staff, JIAMDO supports the Chairman of the Joint Chiefs of Staff in meeting his Title 10 responsibilities as they relate to IAMD issues. JIAMDO is the operational community's proponent for characteristics, requirements, and capabilities in IAMD, and is the joint IAMD proponent within the DoD's resource allocation structures. JIAMDO also leads AMD mission area and utility analyses, integrates air and missile defense within the Force Protection joint capability area, and conducts evaluations and demonstrations of joint IAMD architectures and concepts.

JIAMDO has established a close partnership with Combatant Commands (CCMDs) and maintains liaison offices at major CCMD locations to facilitate coordination of integration issues and requirements. In particular, JIAMDO maintains close coordination with U.S. Strategic Command (USSTRATCOM) and U.S. Northern Command (USNORTHCOM) in support of ballistic missile defense of the U.S. JIAMDO provides the CJCS and the Joint Requirements Oversight Council the ability to meet statutory responsibilities to review the cost, schedule, and performance criteria of Missile Defense Agency missile defense programs, and assesses the validity of those criteria in relation to national and military requirements. At the request of USSTRATCOM and at the direction of the CJCS, JIAMDO supports USSTRATCOM in development of the IAMD Prioritized Capability List, the Global Integrated Air and Missile Defense Assessment, and analysis of the Ballistic Missile Defense System (BMDS). JIAMDO supports the USSTRATCOM ballistic missile early warning mission by ensuring operational and technical requirements are integrated into the theater missile warning architecture. JIAMDO also provides direct support to North American Aerospace Defense Command and USNORTHCOM for homeland air and cruise missile surveillance issues.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018
Title: JIAMDO Nimble Fire	8.000	12.230	16.000
Description: The Deputy Secretary of Defense assigned responsibility for IAMD development at the Virtual Warfare Center to JIAMDO. Nimble Fire is the Department's only joint IAMD operator-in-the-loop modeling and simulation capability exploring the Chairman of the Joint Chiefs of Staff's top 5 most critical Joint IAMD capabilities: wide-area surveillance and engagement quality tracking, pre-launch interdiction, non-kinetic post-launch capabilities, ballistic missile discrimination, and increased weapons ranges and lethality. Nimble Fire events explore joint IAMD capabilities and concepts in the FYDP (+2) timeframe combining experienced operators from the tactical communities, virtual simulations accredited by the program offices, current and future advanced capabilities, an integrated air, ballistic and cruise missile threat, and informed scenarios from the Department's analytical agenda and CCMD operational plans. JIAMDO brings together stakeholders across the engineering, analytical, and tactical communities to conduct multiple events to assess Joint interoperability of Service and MDA programs of record, explore			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 The Joint Staff			Date: May 2017		
Appropriation/Budget Activity 0400 / 6		R-1 Program Element (Number/Name) PE 0605126J / Joint Integrated Air & Missile Defense Organization (JIAMDO)	Project (Number/Name) P005 / Nimble Fire		
B. Accomplishments/Planned Programs (\$ in Millions)			FY 2016	FY 2017	FY 2018
concepts of employment, inform tactics, techniques and procedures and concepts of operation, provide insights that help shape CCMD integrated priorities and future operational plans, and inform senior leader acquisition and requirements decisions.					
<p>FY 2016 Accomplishments:</p> <p>In response to JROC tasking, JIAMDO built upon FY 2015 accomplishments executing two Nimble Fire events in FY 2016 in support of the Services, MDA, USEUCOM, USPACOM, and USSTRATCOM and providing funding and personnel that were instrumental in successfully executing two additional events in support of the Joint Strike Fighter Joint Project Office (JSF JPO) and the Navy respectively. Across all four events executed in FY 2016, Nimble Fire project resulted in significant cost-avoidance for the Department and Services through identifying real-world system issues, supporting live venues, and providing the backbone simulation environment for other users. Major accomplishments include:</p> <ul style="list-style-type: none">• Identifying real-world issues on multiple systems including E-2, E-3, Integrated Air and Missile Defense Battle Command System (IBCS), and F-15. Issues fed back to program offices to take corrective action• Impact of advanced capabilities on tactical fight (details classified)• Human-machine and Link-16 network challenges associated with executing integrated fire control kill chains• Potential benefits of future sensors, weapons and capabilities (e.g., next generation jammer (NGJ), airborne early warning)• Concepts of employment (CONEMPS) for 4th and 5th generation fighters employing with F-35 Joint Strike Fighter to inform Service tactics, techniques and procedures (e.g., Air Force 3-1)• USMC operator feedback on CAC2S tactical display and CTN interface identified key limitations with respect to track functionality• Continued exploration of Naval Integrated Fire Control – Counter Air (NIFC-CA) related kill chains (details classified) <p>FY 2017 Plans:</p> <p>Execute two Nimble Fire events in support of U.S. Fleet Forces Command, USPACOM, USSTRATCOM and USEUCOM. Provide material support for two additional Service and/or program office events. Additionally, accomplish significant upgrades to the VWC environment and IAMD systems and capabilities:</p> <ul style="list-style-type: none">• Electronic Warfare improvements in coordination with USSTRATCOM, Joint Electromagnetic Preparedness for Advanced Combat (JEPAC), the Services and MDA to better model red and blue electronic attack and electronic protection, visualize impacts, and conduct analysis of its impact on the tactical fight. E.g., Eagle Passive-Active Warning Survivability Systems (EPAWSS) for F-15, Integrated Defensive Electronic Countermeasures (IDECM) for F/A-18E, Surface Electronic Warfare Improvement Program (SEWIP) for Aegis, basic electromagnetic interference effects, and foundation for representing GPS modeling• Multi-spectral Environment improvements include upgrading the simulation backbone and service models to better handle capabilities such as Infrared Search and Track (IRST) sensors and kill chains, environmental effects such as rain and clouds, and higher-fidelity threat signatures					

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Exhibit R-2A, RDT&E Project Justification: FY 2018 The Joint Staff			Date: May 2017		
Appropriation/Budget Activity 0400 / 6		R-1 Program Element (Number/Name) PE 0605126J / Joint Integrated Air & Missile Defense Organization (JIAMDO)		Project (Number/Name) P005 / Nimble Fire	
B. Accomplishments/Planned Programs (\$ in Millions)			FY 2016	FY 2017	FY 2018
<ul style="list-style-type: none"> Advanced Capability Model improvements include expanded integrated fire control concepts involving capabilities such as Naval Integrated Fire Control – Counter Air (NIFC-CA) and fighter-centric kill chains, incorporation of advanced sensor capabilities such as the new IAMD Radar (AMDR) for Aegis, Link-16 network enhancements, future threat kill chains and capabilities, and directed energy. Additionally, integrate an Advanced Gun Weapon System model into the environment to explore tactical command and control challenges and contributions to the overall defense of critical assets Space Warfare – integrate higher fidelity representations of Overhead Persistent Infrared (OPIR) assets and national to tactical (N2T) contributions to the tactical fight Non-Program of Record Experimentation of innovative uses of existing sensors and weapons across traditional IAMD assets. E.g., ground-based sensors providing fire-control quality tracking to tactical air assets, contributions of unmanned assets to the air picture and joint engagement sequence Explore integration of offensive and defensive capabilities (kinetic and non-kinetic) in protection of select critical assets in USEUCOM <p>FY 2018 Plans:</p> <p>Execute two large Nimble Fire events in support of U.S. Fleet Forces Command, USPACOM, USSTRATCOM and USEUCOM. Provide material support for two additional Service and/or program office events. Additionally, accomplish significant upgrades to the VWC environment and IAMD systems and capabilities:</p> <ul style="list-style-type: none"> Electronic Warfare improvements in coordination with USSTRATCOM, JEPAC, the Services and MDA to better model red and blue electronic attack and electronic protection, visualize impacts, and conduct analysis of its impact on the tactical fight E.g., Eagle Passive-Active Warning Survivability Systems (EPAWSS) for F-15, Integrated Defensive Electronic Countermeasures (IDECM) for F/A-18E, Surface Electronic Warfare Improvement Program (SEWIP) for Aegis, basic electromagnetic interference effects, and foundation for representing GPS modeling Multi-spectral Environment improvements include upgrading the simulation backbone and service models to better handle capabilities such as Infrared Search and Track (IRST) sensors and kill chains, environmental effects such as rain and clouds, and higher-fidelity threat signatures Advanced Capability Model improvements include expanded integrated fire control concepts involving capabilities such as Naval Integrated Fire Control – Counter Air (NIFC-CA) and fighter-centric kill chains, incorporation of advanced sensor capabilities such as the new IAMD Radar (AMDR) for Aegis, Link-16 network enhancements, future threat kill chains and capabilities, and directed energy. Additionally, integrate an Advanced Gun Weapon System model into the environment to explore tactical command and control challenges and contributions to the overall defense of critical assets Space Warfare – integrate higher fidelity representations of Overhead Persistent Infrared (OPIR) assets and national to tactical (N2T) contributions to the tactical fight 					

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Exhibit R-2A, RDT&E Project Justification: FY 2018 The Joint Staff		Date: May 2017	
Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0605126J / <i>Joint Integrated Air & Missile Defense Organization (JIAMDO)</i>	Project (Number/Name) P005 / <i>Nimble Fire</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
<ul style="list-style-type: none"> • Non-Program of Record Experimentation of innovative uses of existing sensors and weapons across traditional IAMD assets. E.g., ground-based sensors providing fire-control quality tracking to tactical air assets, contributions of unmanned assets to the air picture and joint engagement sequence • Explore integration of offensive and defensive capabilities (kinetic and non-kinetic) in protection of select critical assets in USEUCOM 			
Accomplishments/Planned Programs Subtotals		8.000	12.230
C. Other Program Funding Summary (\$ in Millions)			
N/A			
Remarks			
D. Acquisition Strategy			
N/A			
E. Performance Metrics			
(1) Complete events within schedule and budget.			
(2) Document gaps and shortfalls.			
(3) Inform the Joint Capabilities Board (JCB) on results and findings.			
(4) Specific details are classified.			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 The Joint Staff										Date: May 2017		
Appropriation/Budget Activity 0400 / 6					R-1 Program Element (Number/Name) PE 0605126J / Joint Integrated Air & Missile Defense Organization (JIAMDO)				Project (Number/Name) P006 / Cruise Missile Combat Identification (CID)			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
P006: Cruise Missile Combat Identification (CID)	57.264	6.356	6.000	5.500	-	5.500	5.498	4.355	4.475	4.475	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

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B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018
Title: Cruise Missile Combat Identification (CID)	6.356	6.000	5.500
Description: Establishes joint requirements for emerging national and tactical combat identification technology and positions it for fielding to frontline weapon systems and the warfighter. Monitors, assesses, and enhances current joint Air and Cruise Missile Defense Combat ID programs.			
FY 2016 Accomplishments: Details of this program are classified.			
FY 2017 Plans:			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 The Joint Staff		Date: May 2017	
Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0605126J / <i>Joint Integrated Air & Missile Defense Organization (JIAMDO)</i>	Project (Number/Name) P006 / <i>Cruise Missile Combat Identification (CID)</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
Details of this program are classified.			
FY 2018 Plans: Details of this program are classified.			
Accomplishments/Planned Programs Subtotals		6.356	5.500
C. Other Program Funding Summary (\$ in Millions) N/A			
Remarks			
D. Acquisition Strategy Not required for Budget Activities 1, 2, 3 and 6.			
E. Performance Metrics Details of this program are classified.			

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 The Joint Staff **Date: May 2017**

Appropriation/Budget Activity 0400: Research, Development, Test & Evaluation, Defense-Wide / BA 6: RDT&E Management Support					R-1 Program Element (Number/Name) PE 0204571J / Joint Staff Analytical Support							
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	13.516	5.983	7.464	7.712	-	7.712	6.870	5.135	5.134	5.134	Continuing	Continuing
P001: Future Joint Force Development	4.410	5.983	5.564	5.712	-	5.712	5.470	5.135	5.134	5.134	Continuing	Continuing
P002: Global Force Management Data Initiative (GFM DI)	9.106	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
P003: GFM DI Enterprise Force Structure (EFS) Integration	0.000	0.000	1.900	2.000	-	2.000	1.400	0.000	0.000	0.000	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Joint Staff Analytical Support (JSAS) family of programs provides defense analytical support capabilities for The Joint Staff (TJS) and Combatant Commands (CCMDs). JSAS encompasses the developmental tools and infrastructure required to conduct analyses and formulates the results to best assist the Chairman in fulfilling his statutory responsibilities. Key deliverables provided by JSAS include development and implementation of Joint Concepts, wide-ranging force structure assessments, course of action development for the Joint Force environment, analyses and studies to aid in decision-making, and other analysis efforts to implement timely, low-cost joint force development initiatives.

B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	5.983	7.464	6.312	-	6.312
Current President's Budget	5.983	7.464	7.712	-	7.712
Total Adjustments	0.000	0.000	1.400	-	1.400
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Additional support for Global Force Management Data Initiative (GFM DI)	0.000	0.000	1.400	-	1.400

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 The Joint Staff		Date: May 2017
Appropriation/Budget Activity 0400: Research, Development, Test & Evaluation, Defense-Wide / BA 6: RDT&E Management Support	R-1 Program Element (Number/Name) PE 0204571J / Joint Staff Analytical Support	
<u>Change Summary Explanation</u> FY 2018: Increase in funding to P003 GFM DI to complete development and fielding of Joint Planning Services pilot that is fully integrated with Joint Planning and Execution Services Framework. FY 2019 thru FY 2022: Decrease in funding for FY 2019 thru FY 2022 is a result of mandated 25% Management Headquarters Activities (MHA) reductions prescribed by the 2016 NDAA.		

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Exhibit R-2A, RDT&E Project Justification: FY 2018 The Joint Staff										Date: May 2017		
Appropriation/Budget Activity 0400 / 6					R-1 Program Element (Number/Name) PE 0204571J / Joint Staff Analytical Support				Project (Number/Name) P001 / Future Joint Force Development			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
P001: Future Joint Force Development	4.410	5.983	5.564	5.712	-	5.712	5.470	5.135	5.134	5.134	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
A. Mission Description and Budget Item Justification												
The Joint Staff Analytical Support (JSAS) program supports the Chairman of the Joint Chiefs of Staff (CJCS) Title 10, Section 153 statutory responsibilities that directs the analytical support, management, development, evaluation, and implementation of joint concepts in order to advance the operational effectiveness of the future Joint Force and enable the introduction of new capabilities. The Joint Concepts Program assists the CJCS in the formulation of “best military advice” by providing a long-term (out to 20 years) vision of how the Joint Force will be developed to respond to the future operating environment characterized by trans-regional, multi-domain, and multi-functional challenges. Key deliverables include: The Joint Operating Environment (JOE); Capstone Concept for Joint Operations (CCJO); identification, development, and implementation of Joint Concepts necessary to address future operating environment challenges and achieve objectives of the National Military Strategy (NMS); and CJCSI 3010 Guidance for Development and Implementation of Joint Concepts.												
B. Accomplishments/Planned Programs (\$ in Millions)										FY 2016	FY 2017	FY 2018
Title: Future Joint Force Development										5.983	5.564	5.712
Description: FY 2016 efforts focused on supporting the President’s “Sustaining U.S. Global Leadership Priorities for the 21st Century Defense” with emphasis on concept assessment of the Chairman’s Capstone Concept for Joint Operations, implementing the Joint Operational Access Concept, and developing new operational concepts to support achievement of the NMS. Specific work focused on joint concept development, implementation, and assessment through the Iron Crucible Wargaming series resulting in joint capability gap analysis and recommendations for non-materiel solutions that will improve current and future joint force capability including operating in anti-access and area denial (A2/AD) environments, joint command & control, counterterrorism, and defeating threats in all domains, including cyber.												
FY 2016 Accomplishments: FY 2016 efforts focused on completing the update of the Capstone Concept for Joint Operations: Joint Force 2030 (CCJO) (in draft with the CJCS at the end of FY 2016), publishing the Joint Operating Environment 2035 (JOE), developing a new Family of Joint Concepts framework aligned with the NMS, and developing five new Joint Concepts with the Joint Concept Community to guide and shape future joint force development. Active implementation included 14 Joint Concepts into Doctrine, Organization, Training, Materiel Leadership and Education, Personnel, Facilities, and Policy (DOTMLPF-P) processes during FY 2016 resulting in 3 studies, 5 Capabilities-Based Assessments (CBA), 14 DOTMLPF-P Change Requests (DCR), 1 Initial Capabilities Document (ICD), 3 Capability Development Documents (CDD), 1 Capability Production Document (CPD), and development of 3 Joint Knowledge Online (JKO) courses. The final update for the Joint Operational Access Concept Implementation Plan was signed May 2016 signaling that appropriate DOTMLPF-P processes are developing capabilities critical to addressing Anti-Access/												

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Exhibit R-2A, RDT&E Project Justification: FY 2018 The Joint Staff			Date: May 2017		
Appropriation/Budget Activity 0400 / 6		R-1 Program Element (Number/Name) PE 0204571J / Joint Staff Analytical Support		Project (Number/Name) P001 / Future Joint Force Development	
B. Accomplishments/Planned Programs (\$ in Millions)			FY 2016	FY 2017	FY 2018
Area Denial (A2/AD) challenges. 18 legacy concepts were approved by the Director of the Joint Staff for archival. The CJCSI 3010 was approved Aug 2016 with improved terminology and process descriptions to guide joint concept development and implementation. Initiated the pilot year of the DepSecDef directed Warfighting Lab Incentive Fund (WLIF) program, resulting in 13 OSD-funded projects designed to spur and support warfighting field experiments, demonstrations, and operational user input to develop innovative capabilities, and new operational and organizational constructs to address emerging warfighter challenges.					
FY 2017 Plans: Complete CJCS approval of the CCJO. In partnership with selected CCMDs and the Services, begin developing the approved Family of Joint Concepts needed to address the 4+1 strategic challenges expressed in the NMS, out to 2035. Continue futures study to inform our understanding of the challenges of the future operating environment. Complete development of 5 new Joint Concepts from FY 2016 and initiate 2 new Joint Concepts aligned to the National Military Strategy (NMS). Continue implementing approved Joint Concepts IAW CJCSI 3010. Expand multinational partnerships in futures and concept development. Support Joint Staff 2017 efforts by integrating Joint Concepts across the Joint Staff to inform capability development decisions. Continue to lead execution and oversight of the DepSecDef directed WLIF program to spur innovative force development.					
FY 2018 Plans: Continue support for CJCS's NMS and CCJO. In partnership with selected CCMDs and the Services, continue developing the approved Family of Joint Concepts needed to address the 4+1 strategic challenges expressed in the NMS, out to 2035. Continue futures study to inform our understanding of the challenges of the future operating environment. Complete development of 2 new Joint Concepts from FY 2017 and initiate 2 new Joint Concepts aligned to the NMS. Continue implementing approved Joint Concepts IAW CJCSI 3010. Continue multinational partnerships in futures and concept development. Continue integrating Joint Concepts across the Joint Staff to inform capability development decisions. Continue to lead execution and oversight of the DepSecDef directed WLIF program to spur innovative force development.					
Accomplishments/Planned Programs Subtotals			5.983	5.564	5.712
C. Other Program Funding Summary (\$ in Millions)					
N/A					
Remarks					
D. Acquisition Strategy					
N/A					

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Exhibit R-2A, RDT&E Project Justification: FY 2018 The Joint Staff		Date: May 2017
Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0204571J / <i>Joint Staff Analytical Support</i>	Project (Number/Name) P001 / <i>Future Joint Force Development</i>
E. Performance Metrics <p>Concept development performance metrics are derived from the Chairman's Title 10 responsibilities and CJCSI 3010.02E Guidance for Developing and Implementing Joint Concepts and, as such, support the purpose of informing the Department's senior leadership by examining military problems and providing an azimuth for future joint force development.</p> <p>Performance measure 1 – Identify and develop Joint Concepts to examine military challenges and propose innovative joint solutions and associated capabilities in support of defense needs and priorities. Metrics: Aligns with and informs the NMS. Informed by rigorous futures analysis. Creates relevance and advocacy among operations, plans, and force development communities.</p> <p>Performance measure 2 – Lead the development of Joint Concepts in collaboration with joint and multinational partners. Metrics: Joint Concepts governance system promotes "best military advice" for the CJCS. Ideas and solutions are rigorously and objectively evaluated within a joint and multinational context. Joint concepts are continually monitored to ensure consistency, relevancy, and utility throughout their life cycle.</p> <p>Performance measure 3 – Implement Joint Concepts. Metrics: Transition plans promote informed decisions for joint force development. Leverage, integrate or inform related capability development programs for maximum efficiency and effectiveness.</p>		

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Exhibit R-2A, RDT&E Project Justification: FY 2018 The Joint Staff										Date: May 2017		
Appropriation/Budget Activity 0400 / 6					R-1 Program Element (Number/Name) PE 0204571J / Joint Staff Analytical Support				Project (Number/Name) P002 / Global Force Management Data Initiative (GFM DI)			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
P002: Global Force Management Data Initiative (GFM DI)	9.106	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Joint Staff Analytical Support (JSAS) family of programs provides defense analytical support capabilities for the Joint Staff (TJS) and Combatant Commands (CCMDs). JSAS encompasses the developmental tools and infrastructure required to conduct analyses and formulates the results to best assist the Chairman in fulfilling his statutory responsibilities. Under the umbrella of analytical support tools are the Automated Global Force Management Tool (AGT) and the Collaborative Issue Resolution Tool (CIRT), both which will meet requirements set forth in Title 10 U.S.C. and the Unified Command Plan (UCP) for automating the Global Force Management Implementation Guidance Forces For (Assignment and Apportionment) tables. Additionally, the Joint Organizational Server (JOS) will be the enabler system for Joint Staff personnel to be entered, near-real-time, into the automated Forces For Process.

RDT&E efforts for GFM DI ended in FY 2015.

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2016	FY 2017	FY 2018
Title: N/A	0.000	-	-
Description: N/A			
FY 2016 Accomplishments: N/A			
Accomplishments/Planned Programs Subtotals	0.000	-	-

C. Other Program Funding Summary (\$ in Millions)
N/A

Remarks

D. Acquisition Strategy
N/A

E. Performance Metrics
N/A

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Exhibit R-2A, RDT&E Project Justification: FY 2018 The Joint Staff										Date: May 2017		
Appropriation/Budget Activity 0400 / 6					R-1 Program Element (Number/Name) PE 0204571J / Joint Staff Analytical Support				Project (Number/Name) P003 / GFM DI Enterprise Force Structure (EFS) Integration			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
P003: GFM DI Enterprise Force Structure (EFS) Integration	0.000	0.000	1.900	2.000	-	2.000	1.400	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Global Force Management Data Initiative (GFM DI) Enterprise Force Structure (EFS) integration effort provides the next steps for GFM Mission Application enhancements intrinsic to balancing global force demand against the total military force. This complex and multi-variant task requires modernized technologies that must provide integrated information by linking authoritative force structure data (derived from the GFM DI Organizational Servers) to C2 data (resident in GFM mission applications). The Joint Staff Operations Directorate is responsible for GFM Allocation and is the Functional Manager of the GFM mission applications. Accordingly, the Joint Staff Operations Directorate will employ a joint strategy for efficiently fulfilling Enterprise Force Structure (EFS) data utility.

The DoD must quickly transition from legacy systems that promulgate data disparity across the Defense enterprise in order to meet National military objectives that have evolved from large force scenarios to operations that include small-to-full scale activities. As stated in both the NSS and NMS, our adversaries demonstrate the ability to readily transition from non-kinetic to kinetic means. Consequently, Information Technology (IT) superiority, capabilities, and recognition of associated vulnerabilities are an operational imperative. Yet, warfighters, strategic planners and GFM decision makers are unable to seamlessly exchange information in a manner that keeps pace with globally changing threats to rapidly and accurately accomplish force sourcing activities to support SecDef allocation decisions. TJS is mandated to utilize the Service Org Server (OS) EFS data to enhance managing, assessing, and displaying the worldwide disposition of U.S. Forces. Key deliverables include incrementally developed, operationally realistic capability enhancements focused on Resource-Informed Planning and GFM sourcing functionality required by JROCMs, the Capability Development Document (CDD) for GFM DI; Joint Command and Control (JC2) Capability Definition Package (CDP); Joint Operation Planning Process (JOPP) and Assessment CDP; and Force Planning & Deployment Planning/Execution CDP.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018
Title: Critical upgrades to GFM Mission Applications directly supporting Enterprise Force Structure Integration.	-	1.900	2.000
Description: The GFM Mission DI EFS integration effort requires RDT&E funds to upgrade GFM Mission Applications in order to operationalize the force structure data from the Service's Organizational Servers to actual forces for employment within the purview of Allocation and Joint Command and Control. This GFM DI effort within the Joint Staff Analytical Support (JSAS) family of programs: will immediately streamline the SECDEFs "Forces for Unified Commands" memorandum Assignment Tables. RDT&E efforts for Assignment and Apportionment functions ended in FY 2015 with the declaration of the Automated Global Force Management Tool (AGT) Full Operation Capability (FOC). In order to complete the GFM DI tasks, efforts must begin as early as possible to ensure all GFM DI planned milestones, reflected in Section E, are realized and thereby enable a Global Visibility Capability. GFM applications managed by the Joint Staff are used by the JSAS family of programs. This effort to fund critical upgrades is a precondition to GFM DI EFS Integration.			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 The Joint Staff			Date: May 2017		
Appropriation/Budget Activity 0400 / 6		R-1 Program Element (Number/Name) PE 0204571J / Joint Staff Analytical Support	Project (Number/Name) P003 / GFM DI Enterprise Force Structure (EFS) Integration		
B. Accomplishments/Planned Programs (\$ in Millions)			FY 2016	FY 2017	FY 2018
<p>FY 2017 Plans:</p> <p>Specific RDT&E work will focus on development of a Joint Force Capabilities Catalog (JFCC) that draws upon authoritative Service force structure and GFM data aggregated in a prototype Global Laydown Server (GLS). This approach is essential in a budget constrained environment to fulfill the DoD CIO "DoD Cloud Way Forward" focused on service-oriented architecture that flattens the legacy "Silos of Databases" paradigm by leveraging decentralized infrastructure services. It will enable DoD CIO foundational IT changes with enhanced cybersecurity that provides information sharing within the Joint Command and Control mission partner environment without redundant or duplicative resources. The strategy will result in initial incremental development of the Joint Force Capability Catalog (JFCC) virtual application with a Force Element Inventory Predictive Analysis Tool (FEI PAT) utilizing dynamic force visibility that provides timely, accurate and dynamic data representing U.S. Forces in motion for the 34 GFM leading indicators and Combatant Commanders initial force requirements as identified in the NMS priority OPLANS. The Initial Operating Capability (IOC) will be achieved by first aggregating the Service Org Server data into the Global Laydown Server to link Service generated Organization Unique Identifiers (OUIDs) for force elements identified to establish the Joint C2 relationships to the Allocation process (OPCON and TACON Links). This will provide the capability to establish the OUID/ Unit Identification Code (UIC) linkages in Joint Operation Planning and Execution System (JOPES) Time-Phased Force Deployment Data (TPFDDs), then map them to GFM allocation information (Force Tracking Number [FTN], Request for Forces [RFF], Deployment Order/Line Number [DEPORD/LNR]), and Assignment of the Forces For Unified Commands</p> <p>FY 2018 Plans:</p> <p>Specific RDT&E work will focus on the continued incremental development of the Joint Force Capabilities Catalog (JFCC) that will operationalize the DoD directed GFM DI by linking full DoD Service force structure to dynamic GFM factors (Capabilities, Readiness, Availability, Employment/Location) within the GLS thereby providing a dynamic representation of the disposition of all military forces. The GLS algorithms will enable the GFM mission applications to present meaningful information required for timely and accurate decision making to assist the Chairman in providing best military advice. The JFCC will serve as a user interface that uses the GLS algorithms to streamline operations planning and GFM execution in support of CCMD Warfighter requirements. The FY 2018 strategy will focus on a Unit Type Capabilities registration functionality within the JFCC that will unify the unit-based readiness and unit type reporting process by obtaining on-hand forces (personnel and equipment) via the EFS (GFM DI) standard format. The FY 2018 incremental development of the JFCC virtual application and associated dynamic force visibility will provide the true inventory of force availability based on Service employable entities (Unit Types) and sustainability factors, to enable the use of on-hand Service Force capabilities identified down to the Service-defined lowest deployable entities (Unit Types) for executive decision making and GFM mission execution.</p>					
Accomplishments/Planned Programs Subtotals			-	1.900	2.000

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Exhibit R-2A, RDT&E Project Justification: FY 2018 The Joint Staff		Date: May 2017
Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0204571J / <i>Joint Staff Analytical Support</i>	Project (Number/Name) P003 / <i>GFM DI Enterprise Force Structure (EFS) Integration</i>
C. Other Program Funding Summary (\$ in Millions) N/A		
Remarks		
D. Acquisition Strategy N/A		
E. Performance Metrics <p>The JSAS efforts will result in a Global Laydown Server and Joint Force Capabilities Catalog that supports a Global Visibility Capability (GVC) allowing for enhanced GFM and Joint future force integration along with implementation of concepts to meet the information requirements needed to support timely and dynamic response to combatant commanders' unforeseen contingency requirements. This is a cost-effective yet full spectrum approach to support and assist the Chairman in fulfilling his statutory responsibilities while improving current and future joint force management, and are measured by the following:</p> <p>(1) Meet IOC that enables rapid generation of GFM decision-making information for Policy-makers and warfighting Combatant Commands based on authoritative Service force capability, readiness, availability and current employment data.</p> <p>(2) Reducing the manual process of assembling Capability, Readiness, Availability, Employment (CRAE) data, is the first step to providing enhanced force management decision-making. Mining this data is currently a labor-intensive, time-consuming process and significantly impedes rapid response capabilities. Automating this data aggregation requires EFS Data services and Web Service Interfaces supporting a Joint Force Capabilities Catalog (JFCC) as described in the EFS Capability Package (CP) and is critical to operationalizing the force structure data and achieve GFM DI Next Steps Allocation.</p> <p>(3) Services, CCMDs, Joint Staff and OSD will be able to efficiently manage (collect and analyze) force generation data supporting GFM in far less time than the current process, and with an authoritative common view of the sourcing-to-employment tracking of forces. This is accomplished by the automated linking of the Organization Unique Identifier (OUID) attributes from the GFM DI Org Servers (OS) to the Unit Identification Code (UIC) resident in JOPES.</p> <p>(4) The JFCC will enable the rapid generation of information when making time-sensitive decisions and allow a Joint Planner to inculcate the association of standard and consistent force structure instance data and consistently applied data "types" with force structure data referenced over time in the GFM sourcing solution generation and deployment planning, execution, and distribution processes.</p> <p>(5) Ability to meet the VCJCS guidance to meet the GFM DI Full Operating Capability (FOC) by FY 2020 for GFM Allocation.</p>		

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 The Joint Staff	Date: May 2017
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Appropriation/Budget Activity					R-1 Program Element (Number/Name)							
0400: Research, Development, Test & Evaluation, Defense-Wide / BA 6: RDT&E Management Support					PE 0303166J / Support to Information Operations Capability (IO) Capabilities							
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	23.875	10.404	0.857	0.673	-	0.673	0.673	0.673	0.781	0.781	Continuing	Continuing
001: Information Operations Range	23.875	10.404	0.857	0.673	-	0.673	0.673	0.673	0.781	0.781	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Joint Information Operations Range (JIOR) provides DoD a closed-loop, persistent, geographically distributed network to conduct training, testing, and experimentation in support of Computer Network Attack (CNA)/Computer Network Defense (CND) in a threat representative environment with realistic and relevant targets and command & control systems of interest. JIOR uniquely provides Services, Combatant Commanders (CCMD), and other government agencies the ability to test deployment and collaboratively gain insights into advanced Cyberspace, Information Operations (IO), and Electronic Warfare (EW) capabilities under current and future operational environment conditions. JIOR integrates other cyberspace ranges, replicates critical infrastructure, cyber targets, Internet traffic, and opposing forces. These provide the capacity to meet Presidential policy and CJCS mandates for training and certification of 6000+ cyber warriors by 2017 and DoD/Interagency cyber vulnerability assessments. The JIOR security construct allows users to develop, test, and secure their unique cyber capabilities and protect their identity during range activities. The JIOR conducts multiple, simultaneous, and disparate training, testing, and experimentation events.

B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	10.404	0.857	0.673	-	0.673
Current President's Budget	10.404	0.857	0.673	-	0.673
Total Adjustments	0.000	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			

Change Summary Explanation

Decrease from FY 2016 to FY 2017 due to realignment of funds to Operations and Maintenance (O&M).

C. Accomplishments/Planned Programs (\$ in Millions)	FY 2016	FY 2017	FY 2018
Title: Information Operations Range	10.404	0.857	0.673

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 The Joint Staff		Date: May 2017		
Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 6: RDT&E Management Support</i>		R-1 Program Element (Number/Name) PE 0303166J / <i>Support to Information Operations Capability (IO) Capabilities</i>		
C. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017	FY 2018
<p>Description: The Joint Information Operations Range (JIOR) is a closed-loop network that forms a live-fire range utilizing encrypted tunneling over existing networks to conduct training, testing, and experimentation in support of Information Operations (IO), Electronic Warfare (EW), Computer Network Attack (CNA)/Computer Network Defense (CND)), and Cyberspace mission areas in a threat representative environment.</p> <p>FY 2016 Accomplishments: Continued FY 2015 efforts:</p> <p>(1) Expanded national, DoD, and Inter-Agency awareness and support regarding IO and cyber related activities. (2) Improved the threat representation and operational relevance of the network. (3) Improved the integration of LVC simulations with other Joint training and testing communities and infrastructures.</p> <p>FY 2017 Plans: The Joint Staff conducted a thorough program review and determined the majority of IO Range expenses were better suited to the O&M appropriation for proper execution.</p> <p>Continues FY 2016 efforts:</p> <p>(1) Expand national, DoD, and Inter-Agency awareness and support regarding IO and cyber related activities. (2) Improve the threat representation and operational relevance of the network. (3) Improve the integration of LVC simulations with other Joint training and testing communities and infrastructures.</p> <p>FY 2018 Plans: (1) Continues FY 2017 efforts. (2) Evaluate and deploy network automation tools to better manage the JIOR.</p>				
Accomplishments/Planned Programs Subtotals		10.404	0.857	0.673
D. Other Program Funding Summary (\$ in Millions) N/A				
Remarks				
E. Acquisition Strategy N/A				

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 The Joint Staff		Date: May 2017
Appropriation/Budget Activity 0400: Research, Development, Test & Evaluation, Defense-Wide / BA 6: RDT&E Management Support	R-1 Program Element (Number/Name) PE 0303166J / Support to Information Operations Capability (IO) Capabilities	
F. Performance Metrics The Joint Staff conducted a thorough program review and determined the majority of IO Range expenses were better suited to the O&M appropriation for proper execution. Measures: JIOR modernization results in reduced network reconfiguration time for use and reuse of DoD Enterprise Cyber Range Environment (DECRE) ranges. - Number of Defense Research and Engineering Network (DREN) circuits remaining and rate of replacement with Defense Information Systems Network (DISN) circuits (Cost). - Estimated man-hours saved due to transforming manual paper-driven planning processes to on-demand automated services (Schedule). - Sufficient capacity & agility to support Cyber Mission Forces force development and MDAP/C2 systems cybersecurity assessments & testing (Outcomes). - Improved rapid response for short-notice mission rehearsal requirements from days to on-demand (Outcomes).		

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 The Joint Staff **Date:** May 2017

Appropriation/Budget Activity 0400: Research, Development, Test & Evaluation, Defense-Wide I BA 6: RDT&E Management Support	R-1 Program Element (Number/Name) PE 0804767J I COCOM Exercise Engagement and Training Transformation (CE2T2) - MHA
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COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	-	0.000	0.000	44.500	-	44.500	42.940	40.071	40.063	41.044	Continuing	Continuing
758: Joint National Training Capability (JNTC)	-	0.000	0.000	32.550	-	32.550	31.370	29.052	29.044	30.025	Continuing	Continuing
761: Joint Simulations Systems (JSS)	-	0.000	0.000	1.103	-	1.103	1.067	1.000	1.000	1.000	Continuing	Continuing
769: Joint Knowledge Development & Distribution Capability (JKDDC)	-	0.000	0.000	4.168	-	4.168	4.126	4.108	4.108	4.108	Continuing	Continuing
701: Air Force Joint National Training Capability (JNTC)	-	0.000	0.000	2.964	-	2.964	2.917	2.869	2.869	2.869	Continuing	Continuing
772: Navy Joint National Training Capability (JNTC)	-	0.000	0.000	3.715	-	3.715	3.460	3.042	3.042	3.042	Continuing	Continuing

A. Mission Description and Budget Item Justification

These programs support readiness of the joint force by creating a Joint Training Environment to replicate the complex and changing operational environment. These investments directly support defense strategic guidance and enhance joint warfighting readiness by building training capabilities that support the operational readiness of the force. The elements associated with this coordinated effort consist of:

- Joint National Training Capability (JNTC)
- Joint Simulation System (JSS)
- Joint Knowledge Development & Distribution Capability (JKDDC)
- USSTRATCOM SPACE CYBER
- Air Force Joint National Training Capability (JNTC)
- Navy Joint National Training Capability (JNTC)

JNTC: The mission of the Joint National Training Capability (JNTC) program is to advance joint capabilities and interoperability by concentrating on emerging joint training requirements through collective training experiences using a managed set of globally distributed capabilities and activities. The program resources Service and

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 The Joint Staff		Date: May 2017
Appropriation/Budget Activity 0400: Research, Development, Test & Evaluation, Defense-Wide I BA 6: RDT&E Management Support	R-1 Program Element (Number/Name) PE 0804767J I COCOM Exercise Engagement and Training Transformation (CE2T2) - MHA	
<p>SOF joint training and enabling capabilities that improve interoperability and realism of tactical and operational joint training between the Services and USSOCOM. JNTC enables joint collective training for Combatant Commands and Services by developing relevant joint training content and ensuring global distributed access. The enabling capabilities support the Services and USSOCOM in their requirement to provide trained and ready forces in support of Combatant Command operational requirements. This program will focus efforts on improving, rather than consuming readiness and create a ready surge force consistent with Chairman’s guidance.</p> <p>JSS: The Joint Simulation System (JSS), consisting of the Joint Theater Level Simulation (JTLS) and the Joint Conflict and Tactical Simulation (JCATS), provides a low cost, distributed or deployable, web-based joint training capability with a small technical and operator footprint. JSS funding provides warfighters with joint simulations and tools that enhance and enable Joint training across Services, Combatant Commands, Combat Support Agencies, NATO, and multinational partners. The Joint simulations and tools provided by JSS funding are critical enablers that support the delivery of trained, capable, and interoperable joint forces. JSS’s intent is to maintain a capability to share simulation environments with coalition partners by continuing limited investments to ensure JTLS and JCATS remain relevant and provide reliable, low-cost, small footprint, distributed, and deployable joint training solutions.</p> <p>JKDDC: Joint Knowledge Development & Distribution Capability (JKDDC) Joint Knowledge Online (JKO) is the program of record for online joint training that implements and operationalizes the OSD T2 JKDDC. JKO directly supports the CE2T2 program by developing, delivering, tracking, reporting, and supporting online training for Combatant Command exercises; Combatant Command required training; doctrinally based Joint Operations Core Curriculum; multinational, coalition, Interagency training; OSD required training (externally funded): and, administration of the Senior Enlisted Joint Professional Military Education (SEJPME) program. JKO expends research, development test and evaluation (RDTE) funding for leading edge technology review, market research, and integration to directly enhance specific aspects of the training capability as required to support Combatant Commanders, CE2T2 Program Goals and Objectives, and the Chairman Joint Chiefs of Staff (CJCS) training guidance. JKO satisfies all requirements necessary to provide the CE2T2 stakeholders with a distributed learning capability and access to web-based training content, learning resources, and distributed online training tools.</p> <p>USSTRATCOM CYBER: The USSTRATCOM CYBER funding provided architecture and analysis support to Space Security and Defense Program (SSDP) and the JOINT SPACE OPERATIONS CENTER (JICSpOC) through Modeling, Simulation and Analysis (MS&A); Trade-Off Analysis; Concept Development; Scenario Development; and Military Utility Analysis.</p> <p>Air Force JNTC: The Air Force JNTC funding provides a focused upgrade to develop models for space-based and Cyber capabilities for integration into the Joint Live, Virtual, and Constructive (JLVC) environment. The Air Force supports development of cross-domain solutions that enable the integration of systems with disparate security requirements, and significantly increases the training audience to additional joint and coalition participants. Additionally, the Air force supports the integration of tactical models into the virtual environment.</p> <p>Navy JNTC: These funds enable the Navy to develop unique maritime capabilities that integrate JLVC elements into a seamless joint training environment. The Navy program activities include conducting research, development, test and evaluation, and cross-service architecture certification on joint-capable systems. Additionally, the program develops cross-domain architectures for U.S. and Coalition Forces and ensures sister service modeling/simulation and instrumentation efforts follow a unified standard.</p>		

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 The Joint Staff	Date: May 2017
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Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 6: RDT&E Management Support</i>	R-1 Program Element (Number/Name) PE 0804767J I <i>COCOM Exercise Engagement and Training Transformation (CE2T2) - MHA</i>
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B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	0.000	0.000	44.500	-	44.500
Current President's Budget	0.000	0.000	44.500	-	44.500
Total Adjustments	0.000	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			

Change Summary Explanation

COCOM Exercise Engagement and Training Transformation (CE2T2) transfers to The Joint Staff in FY 2018 in PE 0804767J from 0804767D8Z. All Prior Year, FY 2016 and FY 2017 data will be reported by OSD P&R.

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Exhibit R-2A, RDT&E Project Justification: FY 2018 The Joint Staff										Date: May 2017		
Appropriation/Budget Activity 0400 / 6					R-1 Program Element (Number/Name) PE 0804767J / COCOM Exercise Engagement and Training Transformation (CE2T2) - MHA				Project (Number/Name) 758 / Joint National Training Capability (JNTC)			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
758: Joint National Training Capability (JNTC)	-	0.000	0.000	32.550	-	32.550	31.370	29.052	29.044	30.025	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

COCOM Exercise Engagement and Training Transformation (CE2T2) transfers to The Joint Staff in FY 2018 in PE 0804767J from 0804767D8Z.

A. Mission Description and Budget Item Justification

Investment in the Joint National Training Capability (JNTC) program will enable Service and Combatant Commands to train as they operate. The net funding increase from FY 2016 through FY 2018 represents planned growth and internal reprogramming decisions to accelerate development of a cloud-enabled joint training environment. The funding requested continues to modernize joint training capabilities into a single integrating architecture for Joint Training that is aligned to the DoD Chief Information Officer IT mandates. Funding supports the development of cloud-enabled modular training application services. Program intent is to reduce dependence on touch labor, and mitigate the impact of reductions in operation and sustainment funding. Focus must be maintained to deliver operationally relevant training environments and respond to changes in global security landscape and the warfighter's operational environment. JNTC enables the Department of Defense to be responsive to the warfighters' pace of changing operational concepts, threat environments, and best practices. In FY 2018, this investment continues expanding capabilities and access for Service and Combatant Command trainers to plan and execute joint training. Funds support improved relevance and realism of training by providing capabilities that replicate the contemporary and future operating environment.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018
Title: Joint National Training Capability (JNTC)	-	-	32.550
Description: JNTC provides the technical standards, architecture (blueprint), and development processes required to integrate/link joint training programs. The Joint Training Environment is envisioned as an integrated network of training sites and nodes, and accessible joint training and force development services. By leveraging existing training programs and initiating specific actions, JNTC develops credible opposing force capabilities and expanded access to assets typically unavailable to the training audience. This enhances the integration of joint training objectives into Service training events. Funding in this account supports the technical integration of Joint and Service modeling and simulation training capabilities. The resulting capabilities enable selective aggregation of training audiences at the Combatant Command, Joint Task Force, and Component Command Headquarter levels. The funding supports modernization of the Joint Training Environment (JTE) to increase warfighter access to semi-automated training enablers within the Joint Training Synthetic Environment (JTSE) through web-based, modular cloud capabilities.			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 The Joint Staff			Date: May 2017		
Appropriation/Budget Activity 0400 / 6		R-1 Program Element (Number/Name) PE 0804767J / COCOM Exercise Engagement and Training Transformation (CE2T2) - MHA	Project (Number/Name) 758 / Joint National Training Capability (JNTC)		
B. Accomplishments/Planned Programs (\$ in Millions)			FY 2016	FY 2017	FY 2018
The Adaptive Training Capability Program (ATCP) is a subordinate component of JNTC that enables the Joint Force to be responsive to the warfighters’ pace of changing operational concepts, threat environments, and best practices. ATCP funding advances joint capabilities and interoperability by addressing emerging joint training requirements through a managed set of globally distributed JLVC enablers. ATCP funding promotes joint context to Service training programs and joint enablers supporting Combatant Command training requirements and CJCS High Interest Training Issues identified in the Chairman’s Annual Training Guidance. FY 2018 Plans: <ul style="list-style-type: none">• Integrate the role player access capability into the Joint Training Tool environment.• Continue to mature Joint Training Tool modular services to reach a Tier 1 and 2 joint training initial operating capability in FY 2019. This includes smart graphics that allow planners to describe an operation with graphics which auto-initiates the Joint Training Tool service modules to replicate the movement of forces, adjudicate interaction with opposing forces, and return results of the operation that can drive a training scenario and stimulate the appropriate decision points.• Continue Joint Training Tool scenario development to support a broader range of joint training options.• Continue to mature Joint Training Tool cloud capabilities and explore cloud hosting options for the long-term.					
Accomplishments/Planned Programs Subtotals			-	-	32.550
C. Other Program Funding Summary (\$ in Millions) N/A					
Remarks					
D. Acquisition Strategy N/A					
E. Performance Metrics RDT&E development efforts are evaluated based on the performance metrics below. This ensures the Joint Force Trainer capabilities development effort synchronizes with warfighter requirements. Performance metrics include, but are not limited to: access, cost, realism, relevance, and technology and are defined below. <ul style="list-style-type: none">• Access – Develop design standards that enable participation across DoD and, as applicable, with Coalition Partners. Make the environment available to meet user demands.• Cost – Enable the Joint Force Trainer to prepare and execute training at a more effective and efficient cost than current capabilities allow.• Realism – Enable the Joint Force Trainer to create a training environment that is closer to the real world environment than current capabilities allow.					

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Exhibit R-2A, RDT&E Project Justification: FY 2018 The Joint Staff		Date: May 2017
Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0804767J / <i>COCOM Exercise Engagement and Training Transformation (CE2T2) - MHA</i>	Project (Number/Name) 758 / <i>Joint National Training Capability (JNTC)</i>
<ul style="list-style-type: none"> • Relevance – Maintain operational relevance through adaptation to the changing operational environment. • Technology – Sustain the training environment network through developments for distributed home station training that include modular cloud-enabled training services. <p>Measures:</p> <ul style="list-style-type: none"> • Cost - Vendors provide ordered hours and projected costs remain within 10 percent of government estimates. • Schedule - Task completions (software enhancements, bug fixes, and cyber security requirements) delivered within 6 months of government estimate. • Performance - Product results, outcomes or milestones meet specified requirements and successfully pass more than 80 percent of operational assessment test cases. • DoD Demand - Number of Commands, Services, and Agencies using Joint Staff developed training products. • Partner Nation Demand - Number of partner nations using Joint Staff developed training products. 		

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Exhibit R-2A, RDT&E Project Justification: FY 2018 The Joint Staff										Date: May 2017		
Appropriation/Budget Activity 0400 / 6					R-1 Program Element (Number/Name) PE 0804767J / COCOM Exercise Engagement and Training Transformation (CE2T2) - MHA				Project (Number/Name) 761 / Joint Simulations Systems (JSS)			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
761: Joint Simulations Systems (JSS)	-	0.000	0.000	1.103	-	1.103	1.067	1.000	1.000	1.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

COCOM Exercise Engagement and Training Transformation (CE2T2) transfers to The Joint Staff in FY2018 in PE 0804767J from 0804767D8Z.

A. Mission Description and Budget Item Justification

The Joint Simulation System (JSS) will decompose, harvest, and reuse DoD investment in joint simulations to develop cloud-enabled modular services (CEMS), reaching Initial Operating Capability in FY 2016. JSS will further development of existing Joint Conflict and Tactical Simulation (JCATS) and Joint Theater Level Simulation (JTLS) as required, to remain relevant and responsive to meet Combatant Command training requirements as the Joint Training Environment is implemented. JSS will provide design and development of web-based applications used as services in CEMS environment.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018
Title: Joint Simulation System (JSS)	-	-	1.103
Description: This effort provides warfighters with joint simulations and tools that enhance and enable Joint training across Services, Combatant Commands, agencies and coalition partners. These joint simulations and tools are part of an overall Joint Live Virtual Constructive baseline of training capabilities. They represent a set of training enablers, and “certified systems” that are interoperable and acceptable for usage within the joint training environment. The joint simulations and tools provided by JSS are critical enablers that support the delivery of trained, capable, and interoperable Joint Forces.			
FY 2018 Plans: <ul style="list-style-type: none"> • Modernize Joint Theater Level Simulation graphical user interface to take advantage of established open source and commercial enhancements. • Modernize Joint Theater Level Simulation after action review capability for more efficient and faster queries and data retrieval. • Develop the Joint Theater Level Simulation Combat Systems Prototype into a web-based modular capability in support of the Joint Training Synthetic Environment. • Virtualize and eliminate the Joint Theater Level Simulation and Joint Conflict and Tactical Simulation client server architecture in pursuit of a fully web-based service. 			
Accomplishments/Planned Programs Subtotals			
	-	-	1.103

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Exhibit R-2A, RDT&E Project Justification: FY 2018 The Joint Staff		Date: May 2017
Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0804767J / COCOM Exercise Engagement and Training Transformation (CE2T2) - MHA	Project (Number/Name) 761 / Joint Simulations Systems (JSS)
C. Other Program Funding Summary (\$ in Millions) N/A Remarks D. Acquisition Strategy N/A E. Performance Metrics RDT&E development efforts are evaluated based on performance metrics. This ensures the development of Joint Force Trainer (subject matter experts) capabilities synchronizes with warfighter requirements. Performance metrics include, but are not limited to: time, cost, realism, and fidelity and are defined below. <ul style="list-style-type: none"> • Time – Will the effort enable the Joint Force Trainer (subject matter expert) to prepare and execute training more timely than current capabilities allow? • Cost – Will the effort enable the Joint Force Trainer (subject matter expert) to prepare and execute training at a more effective and efficient cost than current capabilities allow? • Realism – Will the effort enable the Joint Force Trainer (subject matter expert) to create a training environment that is closer to the real world environment than current capabilities allow? • Fidelity – Will the effort enable the Joint Force Trainer (subject matter expert) to create more detailed capabilities in the training environment than current capabilities allow? Measures: <ul style="list-style-type: none"> • Cost - Vendors provide ordered hours and projected costs remain within 10 percent of government estimates. • Schedule - Task completions (software enhancements, bug fixes, and cyber security requirements) delivered within 6 months of government estimate. • Performance - Product results, outcomes or milestones meet specified requirements and successfully pass more than 80 percent of operational assessment test cases. JTLS and JCATS availability of use in support of all training activities remains above 95 percent. • DoD Demand - Number of exercises/events supported by JTLS and JCATS. • Partner Nation Demand - Number of partner nations using Joint Staff developed training products (active foreign military sales cases). 		

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Exhibit R-2A, RDT&E Project Justification: FY 2018 The Joint Staff										Date: May 2017		
Appropriation/Budget Activity 0400 / 6					R-1 Program Element (Number/Name) PE 0804767J / COCOM Exercise Engagement and Training Transformation (CE2T2) - MHA				Project (Number/Name) 769 / Joint Knowledge Development & Distribution Capability (JKDDC)			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
769: Joint Knowledge Development & Distribution Capability (JKDDC)	-	0.000	0.000	4.168	-	4.168	4.126	4.108	4.108	4.108	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

COCOM Exercise Engagement and Training Transformation (CE2T2) transfers to The Joint Staff in FY2018 in PE 0804767J from 0804767D8Z.

A. Mission Description and Budget Item Justification

Joint Knowledge Online (JKO) is the DoD unique and authoritative source for online joint training. JKO is tasked to develop a DoD enterprise-wide, Joint Individual Training Toolkit of web-enabled individual and small group training products, services, and enabling training technology. Products and services are developed in response to OSD (P&R) CE2T2 Program Goals & Objectives guidance, CJCS High Interest Training Issues, Joint Staff training priorities, and JKO Stakeholders (Combatant Commands, Services, and Combat Support Agencies, Interagency, and Multinational) prioritized training requirements. JKO supports a career-long joint learning continuum, joint professional military education, and tailored common training standards to Service members for tasks that are jointly executed, resulting in trained, capable, and interoperable joint forces. JKO research and development will improve all components of the Joint Content Management Architecture including:

- JKO Learning Content Management System (LCMS): Development and enhancement is required to integrate advanced individual and staff training technologies and methodologies with larger scale, collective training exercises, and modernize military training capability with a DoD enterprise-wide online training toolkit. JKO LCMS is necessary to develop, host and deliver JKO courses and track/report students' progress, completions and survey results more effectively and efficiently. JKO LCMS extends web-based, distributed access to mission-critical joint training requirements. There are currently over 2.7 million registered users of the JKO LCMS.
- Small Group Scenario Trainer (SGST) desktop modeling and simulation based training: This JKO capability trains and prepares thousands of military and civilian personnel deploying to Combatant Command theaters of operation prior to serving in their assigned Combined/Joint Task Force (C/JTF) billets. Specifically, C/JTF 'battle staffs' will be adequately trained, as individuals and the staffs collectively, based on SGST development and implementation throughout the joint training enterprise. JKO integration of SGST simulation exercise scenarios and prerequisite JKO courses enable blended learning training support to large-scale, collective training exercises that augment the Joint Event Learning Cycle and in meeting combatant commanders exercise objectives.
- JKO mobile application training device development: Development and enhancements facilitate the global distribution of web-based joint training content on portable, hand-held platforms (cell phones and tablets). JKO Mobile App extends access to training courses and learning resources to personal use of mobile phones and tablets.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018
Title: Joint Knowledge Development & Distribution Capability (JKDDC)	-	-	4.168

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Exhibit R-2A, RDT&E Project Justification: FY 2018 The Joint Staff		Date: May 2017	
Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0804767J / COCOM Exercise Engagement and Training Transformation (CE2T2) - MHA	Project (Number/Name) 769 / Joint Knowledge Development & Distribution Capability (JKDDC)	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
<p>Description: Joint Knowledge Online (JKO) advance technology initiatives primarily include the JKO Learning Content Management System (LCMS) application, Small Group Scenario Trainer (SGST) desktop modeling and simulation based training capability, and mobile courseware training applications. These capabilities increase access to, and facilitate the training and preparation of hundreds of thousands of military and civilian personnel deploying to Combatant Command (CCMD) theaters of operation prior to serving in their assigned Combined/Joint Task Force (C/JTF) billets. JKO LCMS development and enhancements are required to develop, host, deliver, track/report and support students' completions, progress and survey results more effectively and efficiently. C/JTF "battle staffs" will be better trained, as individuals and the staffs collectively, based on SGST development and implementation throughout the joint training enterprise. JKO mobile courseware training device development facilitates the global distribution of web-based joint training content on portable, hand-held platforms for DoD personnel.</p> <p>FY 2018 Plans: Develop, test and deliver 2 JKO Learning Content Management System (LCMS) releases resulting in improved cybersecurity, and a more effective and efficient online training management application that is interoperable with DoD personnel management systems. Requirements will be derived from CCMD user feedback and DoD training priorities directed by DASD(R) and the Chairman's Training Guidance to provide a DoD enterprise-wide online training toolkit, and develop content for pre-exercise training and support - as required by the Services - and support individual and unit training for Special Purpose - Marine Air Ground Task Force (SP-MAGTF) missions. JKO anticipates these enhancements will improve access and the ease of use for the projected ~50,000 daily log-ins and ~550,000 monthly course completions by DoD personnel. Improvements to the JKO LCMS will directly benefit thousands of individuals by providing them global 24/7 access to mandatory joint training as they prepare to participate in CCMD exercises and real world missions. JKO will also focus on enhancements to improve the management of individuals' training records and readiness reporting as the JKO LCMS extends information sharing and web services with DoD personnel management systems. JKO will continue to enhance functionality based on user experience and feedback.</p> <ul style="list-style-type: none"> • Develop, test, and deliver 4 JKO Small Group Scenario Trainer (SGST) desktop modeling and simulation application releases resulting in a more effective and efficient training capability integrated within the JKO Learning Content Management System (LCMS). JKO anticipates these enhancements will improve the quality of the training experience for CCMD exercise participants resulting in their heightened preparedness for real world operations. The SGST will be used as part of the OSD endorsed Blended Learning Training component in approximately 8 CCMD collective training exercises to prepare individuals serving on CCMD required small functional teams and C/JTF "battle staffs." Individual training proficiency improvement will be measured and quantified as part of the exercise design. JKO will continue to enhance SGST functionality based on user experience and feedback. 			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 The Joint Staff		Date: May 2017	
Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0804767J / COCOM Exercise Engagement and Training Transformation (CE2T2) - MHA	Project (Number/Name) 769 / Joint Knowledge Development & Distribution Capability (JKDDC)	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
<ul style="list-style-type: none"> JKO will assess, refine, and continue executing its comprehensive plan to enhance the JKO mobile application and mobile training products. JKO's planned components include courseware and video conversions to portable hand-held devices while leveraging other DoD agencies, interagency, and multinational training courseware ported to the JKO mobile application. JKO anticipates the development and conversion of ~200 training courses, eBooks, Podcasts, job aids, and videos resulting in reduced cost for classroom training and thousands of hours delivered onsite and on demand to DoD personnel mobile platforms worldwide. JKO will continue to enhance its mobile capability based on user experience and feedback. 			
Accomplishments/Planned Programs Subtotals		-	4.168
C. Other Program Funding Summary (\$ in Millions)			
N/A			
Remarks			
D. Acquisition Strategy			
N/A			
E. Performance Metrics			
Joint Staff prescribed performance metrics include, but are not limited to: time, cost, realism, and fidelity and are defined below.			
<ul style="list-style-type: none"> Time – Will the effort enable the Joint Force Trainer (subject matter expert) to prepare and execute training more timely than current capabilities allow? Cost – Will the effort enable the Joint Force Trainer (subject matter expert) to prepare and execute training at a more effective and efficient cost than current capabilities allow? Realism – Will the effort enable the Joint Force Trainer (subject matter expert) to create a training environment that is closer to the real world environment than current capabilities allow? Fidelity – Will the effort enable the Joint Force Trainer (subject matter expert) to create more detailed capabilities in the training environment than current capabilities allow? 			
Measures:			
<ul style="list-style-type: none"> Identify, develop, test and implement 15 or more cyber-security, operational, and functional JKO LCMS requirements. Identify, develop, test and implement 12 or more cyber-security, operational, and functional JKO SGST requirements. Identify, develop, test and implement 6 or more cyber-security, operational, and functional JKO mobile App requirements. 			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 The Joint Staff										Date: May 2017		
Appropriation/Budget Activity 0400 / 6					R-1 Program Element (Number/Name) PE 0804767J / COCOM Exercise Engagement and Training Transformation (CE2T2) - MHA				Project (Number/Name) 701 / Air Force Joint National Training Capability (JNTC)			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
701: Air Force Joint National Training Capability (JNTC)	-	0.000	0.000	2.964	-	2.964	2.917	2.869	2.869	2.869	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
Note COCOM Exercise Engagement and Training Transformation (CE2T2) transfers to The Joint Staff in FY2018 in PE 0804767J from 0804767D8Z.												
A. Mission Description and Budget Item Justification The Air Force JNTC funding provides a focused upgrade to develop models for space-based capabilities for integration into the Joint Live, Virtual, and Constructive (JLVC) environment. The Air Force supports development of cross-domain solutions that enable the integration of systems with disparate security requirements, and significantly increases the training audience to additional joint and coalition participants.												
B. Accomplishments/Planned Programs (\$ in Millions)									FY 2016	FY 2017	FY 2018	
Title: Air Force Joint National Training Capability (JNTC) Description: The Air Force continues to develop joint enablers that drive realistic/effective training by producing a deployable Electronic Warfare training capability for Europe which replicates highly advanced Surface-to-Air Missiles and advanced Anti-Aircraft Artillery threats for U.S. and coalition forces. Additionally, the Air Force assists in the engineering, development, and deployment of Joint Cross Domain Information Sharing (JCDIS) Enterprise Network Architecture which will enable joint and coalition participants to train while protecting classified information. Furthermore, the Air Force is creating cyber-contested environments in the distributed mission operations setting to challenge the joint exercise/training audience. Finally, comprehensive space effects are being integrated into the JLVC federation of models. FY 2018 Plans: • Live, Virtual, Constructive - Operational Training (LVC-OT) training solution supporting collaborative planning, cost, after-action, and ROI metrics. • Cyber simulator environment generator/Blue cyber effects simulation. • Space Simulation improvements to model both space effects and OPFOR capabilities affecting the space environment.									-	-	2.964	
Accomplishments/Planned Programs Subtotals									-	-	2.964	
C. Other Program Funding Summary (\$ in Millions) N/A												

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Exhibit R-2A, RDT&E Project Justification: FY 2018 The Joint Staff		Date: May 2017
Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0804767J / <i>COCOM Exercise Engagement and Training Transformation (CE2T2) - MHA</i>	Project (Number/Name) 701 / <i>Air Force Joint National Training Capability (JNTC)</i>
C. Other Program Funding Summary (\$ in Millions) Remarks D. Acquisition Strategy N/A		
E. Performance Metrics RDT&E development efforts are evaluated based on performance metrics. This ensures the development of Joint Force Trainer (subject matter expert) capabilities synchronize with warfighter requirements. Performance metrics include, but are not limited to: time, cost, realism, and fidelity and are defined below. <ul style="list-style-type: none"> • Time – Will the effort enable the Joint Force Trainer (subject matter expert) to prepare and execute training more timely than current capabilities allow? • Cost – Will the effort enable the Joint Force Trainer (subject matter expert) to prepare and execute training at a more effective and efficient cost than current capabilities allow? • Realism – Will the effort enable the Joint Force Trainer (subject matter expert) to create a training environment that is closer to the real world environment than current capabilities allow? • Fidelity – Will the effort enable the Joint Force Trainer (subject matter expert) to create more detailed capabilities in the training environment than current capabilities allow? Measures: <ul style="list-style-type: none"> • Cyber: Establish a persistent simulation environment that can be configured rapidly and accurately to reflect the desired operating environment of the training audience. Also, create an ability to reflect cyber activities against a live Integrated Air Defense system. • Space: a fully operational GPS environment which allows space operators to actively participate in Distributed Mission Operations-Space LVC missile warning, GPS disruption and Infrared special events. Also develop space models to model Space as a contested environment to accurately portray impacts of adversary actions in the Space domain. • OPFOR: a prototype for a next generation tactical surface to air threat simulator emulating modern fielded threats fielded with potential adversary maneuver elements. • A plan for integrating Army ground instrumentation within the Air Force run Polygon range complex. 		

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Exhibit R-2A, RDT&E Project Justification: FY 2018 The Joint Staff										Date: May 2017		
Appropriation/Budget Activity 0400 / 6					R-1 Program Element (Number/Name) PE 0804767J / COCOM Exercise Engagement and Training Transformation (CE2T2) - MHA				Project (Number/Name) 772 I Navy Joint National Training Capability (JNTC)			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
772: Navy Joint National Training Capability (JNTC)	-	0.000	0.000	3.715	-	3.715	3.460	3.042	3.042	3.042	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

COCOM Exercise Engagement and Training Transformation (CE2T2) transfers to The Joint Staff in FY2018 in PE 0804767J from 0804767D8Z.

A. Mission Description and Budget Item Justification

These funds enable the Navy to develop unique maritime capabilities that integrate JLVC elements into a seamless joint training environment. The Navy program activities include conducting research, development, test and evaluation, and cross-service architecture certification on joint-capable systems. Additionally, the program develops cross-domain architectures for U.S. and Coalition Forces and ensures sister service modeling/simulation and instrumentation efforts follow a unified standard.

B. Accomplishments/Planned Programs (\$ in Millions)

		FY 2016	FY 2017	FY 2018
Title: Navy Joint National Training Capability (JNTC)		-	-	3.715
Description: Develops unique maritime capabilities that integrate Joint Live, Virtual, and Constructive (JLVC) elements into a seamless joint training environment. Using a scientific and phased approach that focuses on modeling ground, air, space, and maritime capabilities, this program researches new technologies and methods that provide a crucial technology-based foundation that supports all JNTC Training Transformation (T2), JLVC Federation, and Combatant Commanders Exercise and Engagement (CE2) operations.				
FY 2018 Plans:				
<ul style="list-style-type: none"> • Continue alignment of Navy LVC training standards with JLVC training standards to include with research of integrated standards with USMC's Aviation Distributed Virtual Training Environment (ADVTE). • Prototype and develop of integrated capabilities between Navy tactical training ranges and synthetic training capabilities in support of Navy LVC efforts. • Accelerate research and development of combat identification training simulation as an enabler for spectrum operations in support of the information warfare commander (IWC). • Accelerate exploration of technologies to enable Integrated Air and Missile Defense (IAMD) and other combined warfare area and joint training with coalition partners in the Pacific Fleet (PACFLT) Area of Responsibility including Japan, Korea, and Australia. 				

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Exhibit R-2A, RDT&E Project Justification: FY 2018 The Joint Staff		Date: May 2017	
Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0804767J / COCOM Exercise Engagement and Training Transformation (CE2T2) - MHA	Project (Number/Name) 772 / Navy Joint National Training Capability (JNTC)	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
• Continue collaborative development with Service and Agency partners to improve the realism and relevancy of tactical to operational level of war training capabilities.			
Accomplishments/Planned Programs Subtotals		-	3.715
C. Other Program Funding Summary (\$ in Millions) N/A			
Remarks			
D. Acquisition Strategy N/A			
E. Performance Metrics RDT&E development efforts are evaluated based on performance metrics. This ensures the Joint Force Trainer (subject matter expert) capabilities development effort synchronizes with warfighter requirements. Performance metrics include, but are not limited to: time, money, realism, and fidelity and are defined below. <ul style="list-style-type: none"> • Time – Will the effort enable the Joint Force Trainer (subject matter expert) to prepare and execute training more timely than current capabilities allow? • Cost – Will the effort enable the Joint Force Trainer (subject matter expert) to prepare and execute training at a more effective and efficient cost than current capabilities allow? • Realism – Will the effort enable the Joint Force Trainer (subject matter expert) to create a training environment that is closer to the real world environment than current capabilities allow? • Fidelity – Will the effort enable the Joint Force Trainer (subject matter expert) to create more detailed capabilities in the training environment than current capabilities allow? • The Navy will produce one Navy Training Baseline (NTB) software release to include documentation; will design and implement upgrades to Joint Semi-Automated Forces (JSAF) consistent with approved requirements and contractual requirements and document the effects of JSAF capabilities (robustness) and stability. Will design, implement, test, and integrate NTB enhancements in accordance with requirements. • For JSAF, Joint Simulation BUS (JBUS) reliability, scalability, and tactical control, the Navy will continuously update the Common Operational Picture (COP) during large scale JLVC exercises. 			

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 The Joint Staff										Date: May 2017		
Appropriation/Budget Activity 0400: Research, Development, Test & Evaluation, Defense-Wide I BA 7: Operational Systems Development					R-1 Program Element (Number/Name) PE 0208043J I Planning and Decision Aid System (PDAS)							
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	12.919	1.842	3.038	3.037	-	3.037	3.037	3.037	3.097	3.097	Continuing	Continuing
P001: Planning and Decision Aid System OPS	12.919	1.842	3.038	3.037	-	3.037	3.037	3.037	3.097	3.097	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Provides engineering and testing support to the Planning and Decision Aid System, a classified Joint Staff automated information system supporting the combatant commanders, Services, and Department of Defense Agencies.

B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	1.842	3.038	3.037	-	3.037
Current President's Budget	1.842	3.038	3.037	-	3.037
Total Adjustments	0.000	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			

Change Summary Explanation

Classified details provided in a separate budget exhibit submitted on SIPRNET.

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 The Joint Staff	Date: May 2017
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Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development</i>					R-1 Program Element (Number/Name) PE 0902298J / <i>Management HQ - OJCS</i>							
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	15.722	2.953	0.826	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
P001: <i>Joint Staff Information Network (JSIN)</i>	15.722	2.953	0.826	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

Note

Deputy Secretary of Defense (DepSecDef) approved the alignment of IT services in the Pentagon and the National Capital Region (NCR) to the Joint Service Provider (JSP) operating as a field service activity in Defense Information Systems Agency (DISA). In FY 2018, JSIN resources will permanently transfer to JSP (DISA PE 0305830K).

A. Mission Description and Budget Item Justification

Provides RDT&E funds for the Joint Staff Information Network (JSIN). JSIN is the network infrastructure (for both classified and unclassified information) enabling collaboration and information-sharing among the Joint Staff, Combatant Commands (CCMD) and the Services. The JSIN also provides crucial business-related, decision-making information, and workflow support affecting military operations in support of the JCS. JSIN improves actions processing for faster coordination of critical issues with Combatant Commands, Services, and Agencies, as well as within TJS.

<u>B. Program Change Summary (\$ in Millions)</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018 Base</u>	<u>FY 2018 OCO</u>	<u>FY 2018 Total</u>
Previous President's Budget	2.953	0.826	0.861	-	0.861
Current President's Budget	2.953	0.826	0.000	-	0.000
Total Adjustments	0.000	0.000	-0.861	-	-0.861
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Transfer to Joint Service Provider	-	-	-0.861	-	-0.861

Change Summary Explanation

Deputy Secretary of Defense (DepSecDef) approved the alignment of IT services in the Pentagon and the National Capital Region (NCR) to the Joint Service Provider (JSP) operating as a field service activity in Defense Information Systems Agency (DISA). In FY 2018, JSIN resources will permanently transfer to JSP (DISA PE 0305830K).

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Exhibit R-2A, RDT&E Project Justification: FY 2018 The Joint Staff										Date: May 2017		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 0902298J / Management HQ - OJCS				Project (Number/Name) P001 / Joint Staff Information Network (JSIN)			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
P001: Joint Staff Information Network (JSIN)	15.722	2.953	0.826	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
A. Mission Description and Budget Item Justification												
Provides RDT&E funds for the Joint Staff Information Network (JSIN). JSIN is the network infrastructure (for both classified and unclassified information) enabling collaboration and information-sharing among the Joint Staff, Combatant Commands (CCMD) and the Services. The JSIN also provides crucial business-related, decision-making information, and workflow support affecting military operations in support of the JCS. JSIN improves actions processing for faster coordination of critical issues with Combatant Commands, Services, and Agencies, as well as within TJS.												
B. Accomplishments/Planned Programs (\$ in Millions)										FY 2016	FY 2017	FY 2018
Title: Joint Staff Information Network (JSIN)										2.953	0.826	-
Description: Provides RDT&E funds for the Joint Staff Information Network (JSIN). JSIN is the network infrastructure (for both classified and unclassified information) enabling collaboration and information-sharing among the Joint Staff, Combatant Commands (CCMD) and the Services. The JSIN also provides crucial business-related, decision-making information, and workflow support affecting military operations in support of the JCS. JSIN improves actions processing for faster coordination of critical issues with Combatant Commands, Services, and Agencies, as well as within TJS.												
FY 2016 Accomplishments: Joint Staff migration to JIE continues with placement of applications into JIE Core Data Centers and participation within Installation Processing Nodes. Mobile user access to JSIN services includes unclassified and classified mobile device use of JSIN-U and JSIN-S portals. Subscription to the Defense Information Systems Agency (DISA) provided Unified Capabilities portfolio will allow a full complement of voice, video, chat, web conferencing, email, and mobility functionality. Continued refinement of the U.S. Army Information Technology Agency desktop as a service, Application Virtualization (U/S), Cross Domain Services, Enterprise Content Management and Task Management (U) optimization and integration, Enterprise Services Implementation including Enterprise Task Management (U/S), Identity and Access Management capabilities, completion of a Managed Print Service (MPS) and consideration of DoD cloud services will achieve efficiencies, improve mission effectiveness, and strengthen our security posture.												
FY 2017 Plans:												

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Exhibit R-2A, RDT&E Project Justification: FY 2018 The Joint Staff		Date: May 2017	
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 0902298J / <i>Management HQ - OJCS</i>	Project (Number/Name) P001 / <i>Joint Staff Information Network (JSIN)</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
Work with the Joint Service Provider (JSP) to develop and refine methodologies to improve Active Directory hardening, network consolidation strategies, and improve data protection. Continue to develop and integrate more mobile capacities in the JS users as more and more systems are handheld and data hosted in the DOD cloud.			
Accomplishments/Planned Programs Subtotals		2.953	0.826
C. Other Program Funding Summary (\$ in Millions)			
N/A			
Remarks			
N/A			
D. Acquisition Strategy			
N/A			
E. Performance Metrics			
(1) Reduce technical support hours per desktop a minimum of 10% through deployment of thin client and virtualized management of the IT baseline.			
(2) Avoid cost for technology refresh of NIPR and SIPR desktops via the proper planning, testing, and piloting of a Joint Staff Thin Client solution.			
(3) Reduce the cost of building, operating, and maintaining Joint Staff specific solutions through implementation of enterprise capabilities, and adoption of new cost models for execution (Enterprise Task management, Unified Communications, JIE, and Managed Print Services (MPS))			
(4) Reduce redundancies in Core and Mission IT Capabilities through implementation of a comprehensive portfolio management policy and avoid cost through the institutionalization of investment management governance model.			
(5) Reduce cost of Joint Staff controlled IT-services by subscribing to locally hosted IT services providers, i.e, JSP.			

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**Department of Defense
Fiscal Year (FY) 2018 Budget Estimates**

May 2017



United States Special Operations Command

Defense-Wide Justification Book Volume 5 of 5

Research, Development, Test & Evaluation, Defense-Wide

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United States Special Operations Command • Budget Estimates FY 2018 • RDT&E Program

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Department of Defense
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

26 Apr 2017

Appropriation	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO
Research, Development, Test & Eval, DW	554,145	497,174	529,874				
Total Research, Development, Test & Evaluation	554,145	497,174	529,874				

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Department of Defense
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

26 Apr 2017

Appropriation	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Research, Development, Test & Eval, DW	497,174	529,874		529,874	639,325	4,920	644,245
Total Research, Development, Test & Evaluation	497,174	529,874		529,874	639,325	4,920	644,245

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Department of Defense
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

26 Apr 2017

	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO
<u>Summary Recap of Budget Activities</u>							
Applied Research	37,084	37,820	37,820				
Advanced Technology Development	56,864	61,620	61,620				
Operational System Development	460,197	397,734	430,434				
Total Research, Development, Test & Evaluation	554,145	497,174	529,874				
<u>Summary Recap of FYDP Programs</u>							
Intelligence and Communications	70,722	5,415	5,415				
Special Operations Forces	483,423	491,759	524,459				
Total Research, Development, Test & Evaluation	554,145	497,174	529,874				

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Department of Defense
 FY 2018 President's Budget Request
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	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Summary Recap of Budget Activities							

Applied Research	37,820	37,820		37,820	34,493		34,493
Advanced Technology Development	61,620	61,620		61,620	72,605		72,605
Operational System Development	397,734	430,434		430,434	532,227	4,920	537,147
Total Research, Development, Test & Evaluation	497,174	529,874		529,874	639,325	4,920	644,245
Summary Recap of FYDP Programs							

Intelligence and Communications	5,415	5,415		5,415	5,496		5,496
Special Operations Forces	491,759	524,459		524,459	633,829	4,920	638,749
Total Research, Development, Test & Evaluation	497,174	529,874		529,874	639,325	4,920	644,245

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Summary Recap of Budget Activities							
-----	-----	-----	-----	-----	-----	-----	-----
Applied Research	37,084	37,820	37,820				
Advanced Technology Development	56,864	61,620	61,620				
Operational System Development	460,197	397,734	430,434				
Total Research, Development, Test & Evaluation	554,145	497,174	529,874				
Summary Recap of FYDP Programs							
-----	-----	-----	-----	-----	-----	-----	-----
Intelligence and Communications	70,722	5,415	5,415				
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Total Research, Development, Test & Evaluation	554,145	497,174	529,874				

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 (Dollars in Thousands)

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Summary Recap of Budget Activities							

Applied Research	37,820	37,820		37,820	34,493		34,493
Advanced Technology Development	61,620	61,620		61,620	72,605		72,605
Operational System Development	397,734	430,434		430,434	532,227	4,920	537,147
Total Research, Development, Test & Evaluation	497,174	529,874		529,874	639,325	4,920	644,245
Summary Recap of FYDP Programs							

Intelligence and Communications	5,415	5,415		5,415	5,496		5,496
Special Operations Forces	491,759	524,459		524,459	633,829	4,920	638,749
Total Research, Development, Test & Evaluation	497,174	529,874		529,874	639,325	4,920	644,245

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 (Dollars in Thousands)

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U.S., Special Operations Command	554,145	497,174	529,874				
Total Research, Development, Test & Evaluation	554,145	497,174	529,874				

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Appropriation -----	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total
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U.S., Special Operations Command	497,174	529,874		529,874	639,325	4,920	644,245
Total Research, Development, Test & Evaluation	497,174	529,874		529,874	639,325	4,920	644,245

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Total Obligational Authority
(Dollars in Thousands)

26 Apr 2017

Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO	S e c
22	1160401BB	SOF Technology Development	02	37,084	37,820	37,820					U
		Applied Research		37,084	37,820	37,820					
68	1160402BB	SOF Advanced Technology Development	03	56,864	61,620	61,620					U
		Advanced Technology Development		56,864	61,620	61,620					
218	0304210BB	Special Applications for Contingencies	07	65,420							U
230	0305208BB	Distributed Common Ground/Surface Systems	07	5,302	5,415	5,415					U
248	1105219BB	MQ-9 UAV	07	21,388	17,804	17,804					U
249	1105232BB	RQ-11 UAV	07	758							U
250	1160279BB	Small Business Innovative Research/ Small Bus Tech Transfer Pilot Prog	07	15,897							U
251	1160403BB	Aviation Systems	07	172,965	159,143	163,543					U
252	1160405BB	Intelligence Systems Development	07	6,466	7,958	9,858					U
253	1160408BB	Operational Enhancements	07	61,463	64,895	90,895					U
254	1160431BB	Warrior Systems	07	32,677	44,885	45,285					U
255	1160432BB	Special Programs	07	3,284	1,949	1,949					U
256	1160434BB	Unmanned ISR	07		22,117	22,117					U
257	1160480BB	SOF Tactical Vehicles	07	2,477	3,316	3,316					U
258	1160483BB	Maritime Systems	07	57,544	54,577	54,577					U
259	1160489BB	Global Video Surveillance Activities	07	3,933	3,841	3,841					U

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 Total Obligational Authority
 (Dollars in Thousands)

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Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Se
22	1160401BB	SOF Technology Development	02	37,820	37,820		37,820	34,493		34,493	U
		Applied Research		37,820	37,820		37,820	34,493		34,493	
68	1160402BB	SOF Advanced Technology Development	03	61,620	61,620		61,620	72,605		72,605	U
		Advanced Technology Development		61,620	61,620		61,620	72,605		72,605	
218	0304210BB	Special Applications for Contingencies	07								U
230	0305208BB	Distributed Common Ground/Surface Systems	07	5,415	5,415		5,415	5,496		5,496	U
248	1105219BB	MQ-9 UAV	07	17,804	17,804		17,804	37,863		37,863	U
249	1105232BB	RQ-11 UAV	07								U
250	1160279BB	Small Business Innovative Research/ Small Bus Tech Transfer Pilot Prog	07								U
251	1160403BB	Aviation Systems	07	159,143	163,543		163,543	259,886		259,886	U
252	1160405BB	Intelligence Systems Development	07	7,958	9,858		9,858	8,245		8,245	U
253	1160408BB	Operational Enhancements	07	64,895	90,895		90,895	79,455	1,920	81,375	U
254	1160431BB	Warrior Systems	07	44,885	45,285		45,285	45,935		45,935	U
255	1160432BB	Special Programs	07	1,949	1,949		1,949	1,978		1,978	U
256	1160434BB	Unmanned ISR	07	22,117	22,117		22,117	31,766	3,000	34,766	U
257	1160480BB	SOF Tactical Vehicles	07	3,316	3,316		3,316	2,578		2,578	U
258	1160483BB	Maritime Systems	07	54,577	54,577		54,577	42,315		42,315	U
259	1160489BB	Global Video Surveillance Activities	07	3,841	3,841		3,841	4,661		4,661	U

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Defense-Wide
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 Total Obligational Authority
 (Dollars in Thousands)

26 Apr 2017

Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO	S e c
260	1160490BB	Operational Enhancements Intelligence	07	10,623	11,834	11,834					U
		Operational System Development		460,197	397,734	430,434					
Total Research, Development, Test & Eval, DW				554,145	497,174	529,874					

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Defense-Wide
 FY 2018 President's Budget Request
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 Total Obligational Authority
 (Dollars in Thousands)

26 Apr 2017

Appropriation: 0400D Research, Development, Test & Eval, DW

Line	Program Element No	Number	Item	Act	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total	S e c
260	1160490BB		Operational Enhancements Intelligence	07	11,834	11,834		11,834	12,049		12,049	U
			Operational System Development		397,734	430,434		430,434	532,227	4,920	537,147	
			Total Research, Development, Test & Eval, DW		497,174	529,874		529,874	639,325	4,920	644,245	

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U.S., Special Operations Command
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

26 Apr 2017

Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO	S e c
22	1160401BB	SOF Technology Development	02	37,084	37,820	37,820					U
		Applied Research		37,084	37,820	37,820					
68	1160402BB	SOF Advanced Technology Development	03	56,864	61,620	61,620					U
		Advanced Technology Development		56,864	61,620	61,620					
218	0304210BB	Special Applications for Contingencies	07	65,420							U
230	0305208BB	Distributed Common Ground/Surface Systems	07	5,302	5,415	5,415					U
248	1105219BB	MQ-9 UAV	07	21,388	17,804	17,804					U
249	1105232BB	RQ-11 UAV	07	758							U
250	1160279BB	Small Business Innovative Research/ Small Bus Tech Transfer Pilot Prog	07	15,897							U
251	1160403BB	Aviation Systems	07	172,965	159,143	163,543					U
252	1160405BB	Intelligence Systems Development	07	6,466	7,958	9,858					U
253	1160408BB	Operational Enhancements	07	61,463	64,895	90,895					U
254	1160431BB	Warrior Systems	07	32,677	44,885	45,285					U
255	1160432BB	Special Programs	07	3,284	1,949	1,949					U
256	1160434BB	Unmanned ISR	07		22,117	22,117					U
257	1160480BB	SOF Tactical Vehicles	07	2,477	3,316	3,316					U
258	1160483BB	Maritime Systems	07	57,544	54,577	54,577					U
259	1160489BB	Global Video Surveillance Activities	07	3,933	3,841	3,841					U

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U.S., Special Operations Command
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

26 Apr 2017

Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total	Se c
22	1160401BB	SOF Technology Development	02	37,820	37,820		37,820	34,493		34,493	U
	Applied Research			37,820	37,820		37,820	34,493		34,493	
68	1160402BB	SOF Advanced Technology Development	03	61,620	61,620		61,620	72,605		72,605	U
	Advanced Technology Development			61,620	61,620		61,620	72,605		72,605	
218	0304210BB	Special Applications for Contingencies	07								U
230	0305208BB	Distributed Common Ground/Surface Systems	07	5,415	5,415		5,415	5,496		5,496	U
248	1105219BB	MQ-9 UAV	07	17,804	17,804		17,804	37,863		37,863	U
249	1105232BB	RQ-11 UAV	07								U
250	1160279BB	Small Business Innovative Research/ Small Bus Tech Transfer Pilot Prog	07								U
251	1160403BB	Aviation Systems	07	159,143	163,543		163,543	259,886		259,886	U
252	1160405BB	Intelligence Systems Development	07	7,958	9,858		9,858	8,245		8,245	U
253	1160408BB	Operational Enhancements	07	64,895	90,895		90,895	79,455	1,920	81,375	U
254	1160431BB	Warrior Systems	07	44,885	45,285		45,285	45,935		45,935	U
255	1160432BB	Special Programs	07	1,949	1,949		1,949	1,978		1,978	U
256	1160434BB	Unmanned ISR	07	22,117	22,117		22,117	31,766	3,000	34,766	U
257	1160480BB	SOF Tactical Vehicles	07	3,316	3,316		3,316	2,578		2,578	U
258	1160483BB	Maritime Systems	07	54,577	54,577		54,577	42,315		42,315	U
259	1160489BB	Global Video Surveillance Activities	07	3,841	3,841		3,841	4,661		4,661	U

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U.S., Special Operations Command
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

26 Apr 2017

Appropriation: 0400D Research, Development, Test & Eval, DW

Line	Program Element No Number	Item	Act	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO	S e c -
260	1160490BB	Operational Enhancements Intelligence	07	10,623	11,834	11,834					U
	Operational System Development			460,197	397,734	430,434					
	Total U.S., Special Operations Command			554,145	497,174	529,874					

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U.S., Special Operations Command
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

26 Apr 2017

Appropriation: 0400D Research, Development, Test & Eval, DW

Line	Program Element No Number	Item		FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total	S e c
--	-----	----	---	-----	-----	-----	-----	-----	-----	-----	-
260	1160490BB	Operational Enhancements Intelligence	07	11,834	11,834		11,834	12,049		12,049	U
		Operational System Development		397,734	430,434		430,434	532,227	4,920	537,147	
		Total U.S., Special Operations Command		497,174	529,874		529,874	639,325	4,920	644,245	

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Appropriation 0400: Research, Development, Test & Evaluation, Defense-Wide

Line #	Budget Activity	Program Element Number	Program Element Title	Page
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Appropriation 0400: Research, Development, Test & Evaluation, Defense-Wide

Line #	Budget Activity	Program Element Number	Program Element Title	Page
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252	07	1160405BB	Intelligence Systems Development.....	Volume 5 - 855
253	07	1160408BB	Operational Enhancements.....	Volume 5 - 865
254	07	1160431BB	Warrior Systems.....	Volume 5 - 867
255	07	1160432BB	Special Programs.....	Volume 5 - 905
256	07	1160434BB	Unmanned ISR.....	Volume 5 - 907
257	07	1160480BB	SOF Tactical Vehicles.....	Volume 5 - 919
258	07	1160483BB	Maritime Systems.....	Volume 5 - 923
259	07	1160489BB	Global Video Surveillance Activities.....	Volume 5 - 941
260	07	1160490BB	Operational Enhancements Intelligence.....	Volume 5 - 943

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Global Video Surveillance Activities	1160489BB	259	07.....	Volume 5 - 941
Intelligence Systems Development	1160405BB	252	07.....	Volume 5 - 855
MQ-9 Unmanned Aerial Vehicle (UAV)	1105219BB	248	07.....	Volume 5 - 787
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Operational Enhancements Intelligence	1160490BB	260	07.....	Volume 5 - 943
RQ-11 UAV	1105232BB	249	07.....	Volume 5 - 795
SOF Advanced Technology Development	1160402BB	68	03.....	Volume 5 - 767
SOF Tactical Vehicles	1160480BB	257	07.....	Volume 5 - 919
SOF Technology Development	1160401BB	22	02.....	Volume 5 - 761
Small Business Innovative Research/Small Bus Tech Transfer	1160279BB	250	07.....	Volume 5 - 799
Special Applications for Contingencies	0304210BB	218	07.....	Volume 5 - 779
Special Programs	1160432BB	255	07.....	Volume 5 - 905
Unmanned ISR	1160434BB	256	07.....	Volume 5 - 907
Warrior Systems	1160431BB	254	07.....	Volume 5 - 867

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ORGANIZATIONS

1 SOW	1st Special Operations Wing
160th SOAR	160th Special Operations Aviation Regiment
AAC	Air Armament Center
AFRICOM	Africa Command
AFSOC	Air Force Special Operations Command
ARDEC	U.S. Army Armament Research, Development and Engineering Center
ARSOA	Army Special Operations Aviation
ATEC	Army Test and Evaluation Command
CACI	California Analysis Center, Incorporated
CENTCOM	Central Command
DARPA	Defense Advanced Research Projects Agency
DOD	Department of Defense
DTRA	Defense Threat Reduction Agency
EACS	Exploitation Analysis Centers
FDA	Food and Drug Administration
JITC	Joint Interoperability Test Center
JSOTF	Joint Special Operations Task Force
JTF	Joint Task Force
MARSOC	Marine Special Operations Command
NATC	Nevada Automotive Test Center
NAVAIRSYSCOM PMA-275	Naval Air Systems Command V-22 Joint Program Office
NAVSEA	Naval Systems Engineering Command
NGA	National Geospatial--Intelligence Agency
NPS	Naval Postgraduate School
NSA	National Security Agency
NSWC	Naval Special Warfare Command
OUSD(I)	Office of the Secretary of Defense, Intelligence
SOAR(A)	Special Operations Aviation Regiment (Airborne)
SOFSA	Special Operations Forces Support Activity
SPAWAR	Space and Naval Warfare Systems
TAPO	Technology Applications Program Office
TARDEC	Tank Automotive Research, Development and Engineering Center
USMC	United States Marine Corps
USSOCOM	United States Special Operations Command

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ACRONYMS

Acronym	Full Naming Convention
ADS-B	Automatic Dependent Surveillance-Broadcast
AECV	All Environment Capable Variant
AFSOC	Air Force Special Operations Command
ALGL	Advanced Lightweight Grenade Launcher
AM	Amplitude Modulation
AMN	Airborne Mission Network
APAS	Active Parallel Actuator System
ASE	Aircraft Survivability Equipment
ASIF	All Source Information Fusion
ASOM	Aerial Search Optimization Model
ATD	Advanced Technology Demonstration
ATPIALS	Advanced Tactical Precision Illuminator Aiming Laser System
ATW	Advanced Threat Warning
AvFID	Aviation Foreign Internal Defense
AVS	Air Variant System
BFT	Blue Force Tracking
BLOS	Beyond Line of Site
BNVD	Binocular Night Vision Device
BOI	Basis of Issue
C/CPAF	Cost/Cost Plus Award Fee
C/F&DR	Conditional Fielding and Deployment Release
C/FFP	Cost Plus Firm-Fixed Price
C/PIF	Cost Plus Incentive Fee
C2	Command and Control
C3	Command, Control, and Communications
C4	Command, Control, Communications, and Computer
C4I	Command, Control, Communications, Computers, and Intelligence
CA	Civil Affairs
CAAS	Common Avionics Architecture Systems
CAR	Combat Assault Rifle
CAS	Close Air Support

ACRONYMS

CASEVAC	Casualty Evacuation
CCFLIR	Combatant Craft Forward Looking Infrared Radar
CCH	Combatant Craft - Heavy
CCM	Combatant Craft - Medium
CCME	Combatant Craft Mission Equipment
CDAS	Cognitive Decision Aiding System
CDD	Capability Development Document
CDU	Control Display Units
CERP	Capital Equipment Replacement Program
CESE	Civil Engineering Support Equipment
CFE	Contractor Furnished Equipment
CI	Civil Information
CIED	Counter-Improvised Explosive Device
CIM	Civil Information Management
CIMDPS	Civil Information Management Data Processing System
CMNS	Combat Mission Needs Statement
CMS	Combat Mission Simulators
CNVD	Clip-On Night Vision Device
COP	Common Operational Picture
COTI	Clip-On Thermal Imagers
COTS	Commercial-Off-The-Shelf
CP	Counter-Proliferation
CPD	Capabilities Production Document
CQC	Close Quarter Combat
CSP	Common Sensor Payload
CT	Counter-Terrorism
DAP	Defensive Armed Penetrator
DCGS-SOF	Data Common Ground/Surface System--Special Operations Forces
DCM	Defensive Countermeasures
DCS	Dry Combat Submersible
DCU	Data Concentrator Unit
DDP	Detachment Deployment Packages

ACRONYMS

DDS	Dry Deck Shelter
DRWG	Data Common Ground/Surface System Working Group
DT&E	Development Test and Evaluation
DVE	Degraded Visual Environment
DVEPS	Degraded Visual Environment Piloted System
EA	Evolutionary Acquisition
ECM	Electronic Countermeasures
ECOS	Enhanced Combat Optical Sights
ECP	Engineering Change Proposal
EDM	Engineering Development Model
EGLM	Enhanced Grenade Launcher Module
EMD	Engineering and Manufacturing Development
EO/IR	Electro-Optical Infrared
ESA	Enhanced Situational Awareness
ETI	Evolutionary Technology Insertion
EW	Electronic Warfare
F&DR	Fielding and Deployment Release
FABS	Fly-Away Broadcast System
FCD	Field Computing Devices
FFT	Friendly Force Trackers
FLIR	Forward Looking Infrared Radar
FM	Frequency Modulation
FMBS	Family of Muzzle Brake Suppressors
FMV	Full Motion Video
FMV VDH-L	Full Motion Video Distribution Hub-Light
FOC	Full Operational Capability
FoS	Family of Systems
FRP	Full Rate Production
FSOV	Family of Special Operations Vehicles
FSWS	Family of Sniper Weapon System
FVL	Future Vertical Lift
FW	Fixed Wing

ACRONYMS

FY	Fiscal Year
GATM	Global Air Traffic Management
GCC	Geographical Combatant Commander
GEOINT	Geological Intelligence
GFE	Government Furnished Equipment
GIG	Global Information Grid
GMV	Ground Mobility Vehicle
GOTS	Government-Off-The-Shelf
GPPU	General Purpose Processing Units
GPS	Global Positioning System
GPU	Graphics Processing Unit
GSK	Ground Signals Intelligence Kit
HF	High Frequency
HFIS	Hostile Fire Indicator System
HFTTL	Hostile Forces Tagging, Tracking, and Locating
HHI	Hand Held Imager
HLM	Handheld Laser Marker
HSAC	High Speed Assault Craft
IC	Intelligence Community
IDIQ	Indefinite Delivery/Indefinite Quantity
IDS	Intrusion Detection System
IED	Improvised Explosive Devices
ILS	Integrated Logistics Support
IM	Insensitive Munitions
INOD	Improved Night/Day Observation/Fire Control Device
IOC	Initial Operational Capability
IR	Infrared
IRCM	Infrared Countermeasures
ISP	Integrated Survey Plan
ISR	Intelligence Surveillance and Reconnaissance
ISR&T	Intelligence, Surveillance, Reconnaissance, and Targeting
IT	Information Technology

ACRONYMS

JBS	Joint Base Station
JCID	Joint Capabilities Integration and Development
JCTD	Joint Concept Technology Demonstration
JOS	Joint Operational Stocks
JTCITS	Joint Tactical C4I Information Transceiver System
JTWS	Joint Threat Warning System
JUON	Joint Urgent Operational Need
LAM	Laser Acquisition Marker
LCM	Low Cost Modification
LCS	Load Carriage System
LFT&E	Live Fire Test and Evaluation
LIDAR	Light Detection and Ranging
LOS	Line of Sight
LPI/LPD	Low Probability of Intercept/Low Probability of Detection
LRBS	Long Range Broadcast System
LRIP	Low Rate Initial Production
LRU	Line Replaceable Unit
LSDB	Laser--Small Diameter Bomb
LTATV	Lightweight Tactical All Terrain Vehicle
MAAWS	Multi-Purpose Anti-Armor/Anti-Personnel Weapons System
MALET	Medium Altitude Long Endurance Tactical
MCE	Military Construction Collateral Equipment
MDAP	Major Defense Acquisition Program
MEDVAC	Medical Evacuation
MELB	Mission Enhancement Little Bird
MFD	Multi-Function Display
MFP-11	Major Force Program-11
MG	Machine Gun
MGS	Modular Glove System
MICH	Modular Integrated Communications Helmet
MIP	Military Intelligence Program
MIPR	Military Interdepartmental Purchase Request

ACRONYMS

MISO	Military Information Support Operations
MISOB	Military Information Support Operations Broadcast
MLE	Military Liaison Element
MOC	Media Operations Center
MPC	Media Production Center
MPK	Mission Planning Kits
MPU	Mission Processor Unit
MRAP	Mine Resistant Ambush Protected
MS	Milestone
MSSEP	Mobile SOF Strategic Entry Points
MTPS	Mission Training and Preparation System
MTS-B	Multi-Spectral Targeting System--B
MTUAS	Medium Tactical Unmanned Aerial System
MWS	Missile Warning System
NDAA	National Defense Authorization Act
NDI	Non-Developmental Item
NGFLIR	Next Generation Forward Looking Infrared Radar
NRE	Non-Recurring Engineering
NSAV	Non-Standard Aviation
NSCV	Non-Standard Commercial Vehicle
NSM	Non-Standard Materiel
NSSS	National Systems Support to SOF
NTM	National Technical Means
NVD	Night Vision Devices
OCO	Overseas Contingency Operations
OEM	Original Equipment Manufacturer
OFP	Operational Flight Program
OT	Operational Test
OT&E	Operational Test and Evaluation
P3I	Pre-Planned Product Improvement
PCU	Protective Combat Uniform
PDS	Product Distribution System

ACRONYMS

PE	Program Element
PED	Processing, Exploitation, and Dissemination
PGL	Precision Geo Location
PGM	Precision Guided Munitions
PME	Primary Mission Equipment
PMP	Prime Mission Product
PMT	Program Management
PN	Partner Nation
PRT	Predator Receiver Terminal
PSP	Precision Strike Package
PSR	Precision Sniper Rifle
QL-CBA	Quick-Look Capabilities-Based Assessment
RAMS	Removeable Airborne Military Information Support Operations System
RAV	Restricted Availability
RC-IED	Radio Counter-Improvised Explosive Device
RDT&E	Research, Development, Test, and Evaluation
RF	Radio Frequency
RFCM	Radio Frequency Countermeasures
RIS	Radio Integration System
RIS	Rail Interface Systems
ROH	Routine Overhaul
ROIC	Read Out Integrated Circuit
ROSES	Reduced Optical Signature Emissions Solution
RPG	Rocket Propelled Grenade
RRT	Rapid Reliable Targeting
RSTA	Reconnaissance, Surveillance, and Targeting Acquisition
RW	Rotary Wing
RWR	Radar Warning Receiver
S&T	Science & Technology
SAAF	Stuggart Army Air Field
SAFC	Special Applications for Contingencies
SAFEAIR	Safe Aircraft Recovery

ACRONYMS

SAM	Surface-to-Air Missiles
SAPNET	Special Access Program Network
SATCOM	Satellite Communications
SBIR	Small Business Innovative Research
SBUD	Simulator Block Updates
SCE	Special Communications Enterprise
SCO	SOF Cryptologic Operator
SDB	Small Diameter Bomb
SDN	SOF Deployable Node
SDN-EP	SOF Deployable Node--Extension Packages
SDV	Sea, Air, Land (SEAL) Delivery Vehicle
SEAL	Sea, Air, Land
SEALION	Sea, Air, Land, Insertion Observation Neutralization
SFA	Security Forces Assistance
SFAC	Security Forces Assistance Craft
SGM	Small Glide Munition
SIE	SOF Information Environment
SIGINT	Signals Intelligence
SIRFC	Suite of Integrated Radar Frequency Countermeasures
SKR	Silent Knight Radar
SO	Special Operations
SOCRATES	Special Operations Command, Research, Analysis and Threat Evaluation System
SOF	Special Operations Forces
SOFPREP	Special Operations Forces Planning, Rehearsal, and Execution Preparation
SOMPE	Special Operations Mission Planning Environment
SOPGM	Standoff Precision Guided Munitions
SoS	System of Systems
SOTVS	Special Operations Tactical Video System
SOW	Special Operations Wing
SPCOM	Special Communications Field Segment - Enterprise
SPEAR	SOF Personal Equipment Advanced Requirements
SR	Special Reconnaissance

ACRONYMS

SRTV	Secure Real-Time Video
SSE	Sensitive Site Exploitation
SSR	Sniper Support Rifle
STC	SOF Tactical Communications
STLD	Small Target Location Devices
STOL	Short Take-Off and Landing
STTR	Small Business Technology Transfer
STUAS	Small Tactical Unmanned Aerial Systems
SUAS	Small Unmanned Aircraft System
SW	Shortwave
SWCS	Shallow Water Combat Submersible
SWIR	Short Wave Infrared
TACLAN	Tactical Local Area Network
TAS	Threat Awareness System
TCCC	Tactical Combat Casualty Care
TF/TA	Terrain Following/Terrain Avoidance
TMF	Theater Mission Force
TT	Team Transportable
TTL	Tagging, Tracking and Locating
TV	Television
UAS	Unmanned Aerial System
UAV	Unmanned Aerial Vehicle
UBA	Underwater Breathing Apparatus
UHF	Ultra High Frequency
UI	User Interface
VAS-BM	Visual Augmentation-Binocular-Monocular
VASWA	Visual Augmentation System-Weapons Accessories
VBL	Visible Bright Light
VHF	Very High Frequency
VTC	Video Teleconferencing
WPNAC	Weapons Accessories
WST	Weapons System Trainer

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 United States Special Operations Command **Date:** May 2017

Appropriation/Budget Activity 0400: Research, Development, Test & Evaluation, Defense-Wide / BA 2: Applied Research					R-1 Program Element (Number/Name) PE 1160401BB / SOF Technology Development							
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	437.288	37.084	37.820	34.493	0.000	34.493	37.036	44.662	57.618	58.771	Continuing	Continuing
S100: SOF Technology Development	437.288	37.084	37.820	34.493	-	34.493	37.036	44.662	57.618	58.771	Continuing	Continuing

A. Mission Description and Budget Item Justification

This program element enables USSOCOM to conduct studies and develop laboratory prototypes for applied research and advanced technology development, as well as leverage other organizations' technology projects that may not otherwise be affordable within MFP-11. Applying small incremental amounts of investments to Department of Defense (DOD), other government agencies, and commercial organizations allows USSOCOM to influence the direction of technology development or the schedule against which it is being pursued, and to acquire emerging technologies for Special Operations Forces. This project provides an investment strategy for USSOCOM to link technology opportunities with capability deficiencies, capability objectives, technology thrust areas, human endurance and sensory performance, and technology development objectives.

B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	37.517	37.820	34.493	-	34.493
Current President's Budget	37.084	37.820	34.493	-	34.493
Total Adjustments	-0.433	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	0.860	-			
• SBIR/STTR Transfer	-1.293	-			

Change Summary Explanation

Funding:

FY 2016: Net decrease of -\$0.433 million is due to a transfer of -\$1.293 million for Small Business Innovative Research/Small Business Technology Transfer programs and reprogramming of \$0.860 million to fund development of a radio enclosure common connector for TALOS communications.

FY 2017: None.

FY 2018: None.

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 United States Special Operations Command		Date: May 2017
Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 2: Applied Research</i>	R-1 Program Element (Number/Name) PE 1160401BB / <i>SOF Technology Development</i>	
<p>Schedule: None.</p> <p>Technical: None.</p>		

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command										Date: May 2017		
Appropriation/Budget Activity 0400 / 2					R-1 Program Element (Number/Name) PE 1160401BB / SOF Technology Development				Project (Number/Name) S100 / SOF Technology Development			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
S100: SOF Technology Development	437.288	37.084	37.820	34.493	-	34.493	37.036	44.662	57.618	58.771	Continuing	Continuing

A. Mission Description and Budget Item Justification

This project conducts studies and develops laboratory prototypes for applied research and advanced technology developments, and leverages other organizations' technology projects that may not otherwise be affordable within MFP-11. Small incremental co-investments with DOD, other government agencies, and commercial organizations allow USSOCOM to influence the schedule and direction of technology developments, emerging technologies, and capabilities for Special Operations Forces (SOF), with significant economies of investment. This USSOCOM investment strategy is used to link technology opportunities with USSOCOM capability deficiencies, capability objectives; technology thrust areas, and technology objectives. Technology development needs in these areas may be advertised to industry and government research and development agencies via agency announcements and calls for white papers. Sub-projects within the SOF Technology Demonstration effort include:

- SOF Technology Development Sub-Project: This project conducts studies and develops laboratory prototypes for applied research and advanced technology developments, and leverages other organizations' technology projects that may not otherwise be affordable within MFP-11.
- Tagging, Tracking, and Locating (TTL) Sub-Project: TTL funds Applied Research projects identified in the USSOCOM Quick Look Capabilities Based Assessments (QL-CBA). TTL applies leading edge nanotechnology, biometric and biotechnology, and chemistry which is directed towards the development of revolutionary tags, taggants, sensors, communications, and data processing.
- Classified Sub-Project (provided under separate cover).

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018
Title: SOF Technology Development	18.992	18.858	15.157
FY 2016 Accomplishments: Continued ongoing technology development sub-projects in areas such as, but not limited to: long duration small form factor power supplies, alternative fuel power systems, reduced signature technologies, advance lightweight armor and materials, and began studying high data-rate throughput. Continued advance technologies for combat medical equipment, tactics, human performance, sensor and processing improvements, improved interfaces and displays, and secure communications. Continued pursuit of methods to reduce operator load and provide advanced protection. Developed technologies for improved and widened window of target engagement (escalation of force), pursued enhancements to technologies that can aid in detection of enemy intentions and movement, and continued development and exploration across the electromagnetic spectrum. Based upon agreed technology maturity metrics, transferred successful projects into programs of record. Continued the integration of critical			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command		Date: May 2017	
Appropriation/Budget Activity 0400 / 2	R-1 Program Element (Number/Name) PE 1160401BB / <i>SOF Technology Development</i>	Project (Number/Name) S100 / <i>SOF Technology Development</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
technologies focused on providing the dismounted special operator leap-ahead capabilities via innovative collaborative processes. Focus was on delivering prototype system for soldier protection and augmentation and continued development of situational awareness and command/control systems.			
FY 2017 Plans: Continue ongoing technology development sub-projects in areas such as, but not limited to: long duration small form factor power supplies, alternative fuel power systems, reduce signature technologies, high data-rate throughput, and advance lightweight armor and materials. Advance technologies for combat medical equipment, tactics, human performance, sensor and processing improvements, improve interfaces and displays, and secure communications. Continue pursuit of methods to reduce operator load and provide advanced protection. Develop technologies for improved and widened window of target engagement (escalation of force), pursue enhancements to technologies that can aid in detection of enemy intentions and movement, and continue development and exploration across the electromagnetic spectrum. Based upon agreed technology maturity metrics, transfer successful projects into programs of record. Continue the integration of critical technologies focused on providing the dismounted special operator leap-ahead capabilities via innovative collaborative processes. Focus is on delivering prototype system for soldier protection and augmentation and continue development of situational awareness and command/control systems.			
FY 2018 Plans: Continues ongoing technology development sub-projects in areas such as, but not limited to: long duration small form factor power supplies, alternative fuel power systems, reduces signature technologies, high data-rate throughput, and advances lightweight armor and materials. Advances technologies for combat medical equipment, tactics, human performance, sensor and processing improvements, improves interfaces and displays, and secure communications. Continues pursuit of methods to reduce operator load and provides advanced protection. Develops technologies for improved and widened window of target engagement (escalation of force), pursues enhancements to technologies that can aid in detection of enemy intentions and movement, and continues development and exploration across the electromagnetic spectrum. Based upon agreed technology maturity metrics, transfers successful projects into programs of record. Continues the integration of critical technologies focused on providing the dismounted special operator leap-ahead capabilities via innovative collaborative processes. Focus is on delivering prototype system for soldier protection and augmentation and continues development of situational awareness and command/control systems.			
Title: Tagging, Tracking, and Locating Technologies (TTL)		14.435	15.137
FY 2016 Accomplishments: Continued projects to exploit nanotechnology, biotechnology and chemistry for application to TTL and TTL-enabling systems. Initiated projects linked to the USSOCOM/DOD TTL Roadmap, which is updated via the JCS/J8-approved annual TTL QL-CBA.			15.441
FY 2017 Plans:			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command		Date: May 2017	
Appropriation/Budget Activity 0400 / 2	R-1 Program Element (Number/Name) PE 1160401BB / <i>SOF Technology Development</i>	Project (Number/Name) S100 / <i>SOF Technology Development</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
Continue projects to exploit nanotechnology, biotechnology and chemistry for application to TTL and TTL-enabling systems. Initiate projects linked to the USSOCOM/DOD TTL Roadmap, which is updated via the JCS/J8-approved annual TTL QL-CBA.			
FY 2018 Plans: Continues projects to exploit nanotechnology, biotechnology and chemistry for application to TTL and TTL-enabling systems. Initiates projects linked to the USSOCOM/DOD TTL Roadmap, which is updated via the JCS/J8-approved annual TTL QL-CBA.			
Title: Classified Sub-Project		3.657	3.825
FY 2016 Accomplishments: Details provided under separate cover.			
FY 2017 Plans: Details provided under separate cover.			
FY 2018 Plans: Details provided under separate cover.			
Accomplishments/Planned Programs Subtotals		37.084	37.820
C. Other Program Funding Summary (\$ in Millions) N/A			
Remarks			
D. Acquisition Strategy N/A			
E. Performance Metrics N/A			

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 United States Special Operations Command **Date:** May 2017

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 3: Advanced Technology Development (ATD)</i>					R-1 Program Element (Number/Name) PE 1160402BB / <i>SOF Advanced Technology Development</i>							
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	1,139.648	56.864	61.620	72.605	-	72.605	79.132	86.864	91.809	100.180	Continuing	Continuing
S200: <i>Advanced Technology Development</i>	1,122.265	45.512	48.097	53.362	-	53.362	57.062	64.413	68.971	76.867	Continuing	Continuing
SF101: <i>Engineering Analysis</i>	7.507	6.681	8.312	14.827	-	14.827	17.558	17.831	18.108	18.470	Continuing	Continuing
S225: <i>Information and Broadcast Systems Adv Tech</i>	9.876	4.671	5.211	4.416	-	4.416	4.512	4.620	4.730	4.843	Continuing	Continuing

A. Mission Description and Budget Item Justification

Advanced Technology Development (project S200) conducts rapid prototyping and Advanced Technology Demonstrations (ATDs). ATDs provide a means for demonstrating and evaluating the utility of emerging/advanced technologies in as realistic an operational environment as possible by Special Operations Forces (SOF) users. Evaluation results are included in a transition package, which assists in the initiation of or insertion into an acquisition program. ATDs also address projects that are a result of unique joint special mission or area-specific needs for which a few-of-a-kind prototypes must be developed on a rapid response basis, or are of sufficient time sensitivity to accelerate the prototyping effort of a normal acquisition program in any phase.

Engineering Analysis (project SF101) provides rapid response capability for the investigation, evaluation, and demonstration of technologies for SOF platform (ground, air, and maritime) and soldier system-unique requirements. Timely application of SOF-unique technology is critical and necessary to meet requirements in such areas as: sensor integration; enhanced situational awareness; near-real-time intelligence to include data fusion, threat detection and avoidance; electronic support measures for threat geo-location and specific emitter identification; navigation; target detection; weapon performance integration; and future SOF platform and soldier system requirements. Provides additional engineering analysis and testing required to transition items from national forces to theater forces.

Information and Broadcast Systems Advanced Technology (project S225) conducts rapid prototyping, advanced technology demonstrations, and advanced concept technology demonstrations of information and broadcast systems technology. Includes planning, analyzing, evaluating, and production information systems capabilities and distribution/dissemination broadcast systems capabilities. It provides a means for demonstrating and evaluating the utility of emerging/advanced technologies in as realistic an operational environment as possible by SOF users. This project also integrates efforts with each other and conducts technology demonstrations in conjunction with joint experiments and other assessment events. Evaluation results are included in a transition package, which assists in the initiation of or insertion into an acquisition program. The project also addresses unique, joint special mission or area-specific needs for which prototypes must be developed on a rapid response basis, or are of sufficient time sensitivity to accelerate the prototyping effort of a normal acquisition program in any phase.

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 United States Special Operations Command	Date: May 2017
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Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 3: Advanced Technology Development (ATD)</i>	R-1 Program Element (Number/Name) PE 1160402BB / <i>SOF Advanced Technology Development</i>
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B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	59.741	61.620	73.505	-	73.505
Current President's Budget	56.864	61.620	72.605	-	72.605
Total Adjustments	-2.877	0.000	-0.900	-	-0.900
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-0.820	-			
• SBIR/STTR Transfer	-2.057	-			
• Other Adjustments	-	-	-0.900	-	-0.900

Congressional Add Details (\$ in Millions, and Includes General Reductions)

Project: S200: *Advanced Technology Development*

Congressional Add: S200: *Advanced Technology Development*

	FY 2016	FY 2017
	2.000	-
Congressional Add Subtotals for Project: S200	2.000	-
Congressional Add Totals for all Projects	2.000	-

Change Summary Explanation

Funding:

FY 2016: Net decrease of -\$2.877 million is due to a decrease for transfer of funds to Small Business Innovative Research/Small Business Technology Transfer programs (-\$2.057 million), and a decrease for higher command priorities (-\$0.820 million).

FY 2017: None.

FY 2018: Decrease of -\$0.900 million is due to a realignment to higher command priorities.

Schedule: None.

Technical: None.

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command										Date: May 2017		
Appropriation/Budget Activity 0400 / 3					R-1 Program Element (Number/Name) PE 1160402BB / SOF Advanced Technology Development				Project (Number/Name) S200 / Advanced Technology Development			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
S200: Advanced Technology Development	1,122.265	45.512	48.097	53.362	-	53.362	57.062	64.413	68.971	76.867	Continuing	Continuing

A. Mission Description and Budget Item Justification

This project provides for rapid prototyping, Advanced Technology Demonstrations (ATDs) and Joint Capability Technology Demonstrations. It is a means for demonstrating and evaluating the utility of emerging/advanced technologies in operationally relevant environments with Special Operations Forces (SOF) users. This project integrates emerging technologies and presents them in technology demonstrations, in conjunction with joint experiments and other assessment events. Evaluation results often facilitate the initiation of new programs and the insertion of appropriate technologies to acquisition programs. The element also addresses unique, joint special mission or area-specific needs for which a few rapid prototypes must be developed on a responsive basis, or are of sufficient time sensitivity to accelerate prototyping efforts of a normal acquisition program in any phase. Sub-projects within the SOF Special Technology Development efforts include:

- Special Operations Forces Special Technology Sub-Project. This sub-project integrates emerging technologies and presents them in technology demonstrations, in conjunction with joint experiments and other assessment events. This project received a congressional add in FY 2016.
- Tagging, Tracking, and Locating (TTL) Technologies Sub-Project. TTL funds SOF unique ATDs identified in the USSOCOM Quick Look Capabilities Based Assessments (QL-CBA). TTL rapidly prototypes and expeditiously transitions projects from laboratory to acquisition Programs of Record/operational use to address SOF capability deficiencies.
- Classified Sub-Project (provided under separate cover).

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018
Title: SOF Special Technology Sub-Project	22.688	26.212	30.003
FY 2016 Accomplishments: Continued to develop and insert technology into existing programs. Technologies included: reduced signature profiles, improved weapons, communications, command, and control systems, sensors, and situational awareness tools; lightweight armor and materials, alternative power systems, eco-friendly sustainable energy devices, long duration, reduced size, high output power supplies, and technologies that reduce the load of the operator. Continued development of technologies supporting undersea and ground mobility. Evaluated and developed sensors across the electromagnetic spectrum to meet operational requirements. Continued the integration of critical technologies focused on providing the dismounted special operator leap-ahead capabilities via innovative collaborative processes. Continued effort for field prototype system incorporating technologies likely to transition			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command		Date: May 2017	
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 1160402BB / <i>SOF Advanced Technology Development</i>	Project (Number/Name) S200 / <i>Advanced Technology Development</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
to fielded systems. Based upon agreed technology maturity metrics, transferred successful projects into programs of record, and conducted field experimentations at various venues to facilitate technology insertion.			
FY 2017 Plans: Continue to develop and insert technology into existing programs. Technologies include, but are not limited to: reduced signature profiles, improved weapons, communications, command, and control systems, sensors, and situational awareness tools; lightweight armor and materials, alternative power systems, eco-friendly sustainable energy devices, long duration, reduced size, high output power supplies, and technologies that reduce the load of the operator. Continue development of technologies supporting undersea and ground mobility. Evaluate and develop sensors across the electromagnetic spectrum to meet operational requirements. Continue the integration of critical technologies focused on providing the dismounted special operator leap-ahead capabilities via innovative collaborative processes. Continue developing unique robotic systems to reduce the load of the operator and augment human performance. Continue to develop Command, Control, Computer, and Intelligence Technology to implement a robust, ultra-wideband communication capability. Continue effort for field prototype system incorporating technologies likely to transition to fielded systems. Based upon agreed technology maturity metrics, transfer successful projects into programs of record, and conduct field experimentations at various venues to facilitate technology insertion.			
FY 2018 Plans: Continues the development and insertion of technology into existing programs. Technologies include, but are not limited to: reduced signature profiles, improved weapons, communications, command, and control systems, sensors, and situational awareness tools; lightweight armor and materials, alternative power systems, eco-friendly sustainable energy devices, long duration, reduced size, high output power supplies, and technologies that reduce the load of the operator. Continues development of technologies supporting undersea and ground mobility. Evaluates and develops sensors across the electromagnetic spectrum to meet operational requirements. Continues the integration of critical technologies focused on providing the dismounted special operator leap-ahead capabilities via innovative collaborative processes. Continues developing unique robotic systems to reduce the load of the operator and augment human performance. Continues to develop Command, Control, Computer, and Intelligence Technology to implement a robust, ultra-wideband communication capability. Continues effort for field prototype system incorporating technologies likely to transition to fielded systems. Based upon agreed technology maturity metrics, transfers successful projects into programs of record, and conducts field experimentations at various venues to facilitate technology insertion.			
Title: Tagging, Tracking, and Locating Technologies (TTL) Sub-Project		15.390	16.201
FY 2016 Accomplishments:			17.572

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command			Date: May 2017			
Appropriation/Budget Activity 0400 / 3		R-1 Program Element (Number/Name) PE 1160402BB / SOF Advanced Technology Development		Project (Number/Name) S200 / Advanced Technology Development		
B. Accomplishments/Planned Programs (\$ in Millions)				FY 2016	FY 2017	FY 2018
Exploited and integrated recently-proven and emerging technologies for TTL and TTL-enabling systems. Continued projects toward maturity that are linked to the USSOCOM/DOD TTL Roadmap, which is updated via the JCS/J8-approved annual TTL QL-CBA. Increased focus on tactical sensors and enabling technologies in support of the special reconnaissance mission set. FY 2017 Plans: Exploit and integrate recently-proven and emerging technologies for TTL and TTL-enabling systems. Continue projects toward maturity that are linked to the USSOCOM/DOD TTL Roadmap, which is updated via the JCS/J8-approved annual TTL QL-CBA. Increase focus on tactical sensors and enabling technologies in support of the special reconnaissance mission set. FY 2018 Plans: Continues to exploit and integrate recently-proven and emerging technologies for TTL and TTL-enabling systems. Continues projects toward maturity that are linked to the USSOCOM/DOD TTL Roadmap, which is updated via the JCS/J8-approved annual TTL QL-CBA. Continues to increase focus on tactical sensors and enabling technologies in support of the special reconnaissance mission set.						
Title: Classified Sub-Project FY 2016 Accomplishments: Details provided under separate cover. FY 2017 Plans: Details provided under separate cover. FY 2018 Plans: Details provided under separate cover.				5.434	5.684	5.787
Accomplishments/Planned Programs Subtotals				43.512	48.097	53.362
				FY 2016	FY 2017	
Congressional Add: S200: Advanced Technology Development				2.000	-	
FY 2016 Accomplishments: Conduct rapid prototyping and advanced technology demonstrations.						
Congressional Adds Subtotals				2.000	-	
C. Other Program Funding Summary (\$ in Millions)						
N/A						
Remarks						

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command		Date: May 2017
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 1160402BB / <i>SOF Advanced Technology Development</i>	Project (Number/Name) S200 / <i>Advanced Technology Development</i>
D. Acquisition Strategy N/A		
E. Performance Metrics N/A		

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command										Date: May 2017		
Appropriation/Budget Activity 0400 / 3					R-1 Program Element (Number/Name) PE 1160402BB / SOF Advanced Technology Development				Project (Number/Name) SF101 / Engineering Analysis			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
SF101: Engineering Analysis	7.507	6.681	8.312	14.827	-	14.827	17.558	17.831	18.108	18.470	Continuing	Continuing

A. Mission Description and Budget Item Justification

This project provides a rapid response capability to support Special Operations Forces (SOF) platforms (ground, air and maritime), Unmanned Aerial Vehicle (UAV) payload sensors and soldier systems. The purpose is to correct system deficiencies, improve asset life, and enhance mission capability through the means of feasibility studies, analysis of alternatives, pre-developmental risk reduction studies, and engineering analyses. This project provides the engineering required to improve the design and performance integrity of the SOF platforms, UAV payload sensors and soldier support systems, sub-systems, equipment, and embedded computer software as they relate to the maintenance, overhaul, repair, quality assurance, modifications, materiel improvements, and service life extensions. This project also conducts risk reduction studies, analyses, and demonstrations to support emerging, time-critical weapons and sensor enhancements.

Platform Engineering Analysis: Funding supports engineering assessments and evaluation of technology, manufacturing, and integration readiness in six distinct areas: 1) small UAV payloads; 2) air-to-ground interoperability; 3) mission suite architectures; 4) common sensor suites; 5) low-cost, high-load-out Stand-Off Precision Guided Munitions (SOPGMs) and air-launched UAV; and 6) next generation Intelligence, Surveillance, and Reconnaissance (ISR) capabilities.

Soldier System Engineering Analysis: Funding supports engineering assessments and evaluation of technology feasibility, producibility, and integration readiness in the following areas: 1) next generation lightweight low-cost body armor and ballistic helmets 2) ballistic and laser variable light transmission protective eyewear 3) soldier worn sensors to assess ballistic and blast events as well as soldier health 4) next generation soldier worn load carriage systems 5) soldier worn head borne communications that provide greater situational awareness and hearing protection.

National to Theater Transition Engineering Analysis: Provides additional engineering analysis and testing required to transition items from national forces to theater forces.

Aviation Mission Improved Survivability: Begins engineering analysis activities to address aviation survivability such as signature management, situational awareness, and versatile mission equipment (payloads, communications and weapons) to achieve SOF mission objectives.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018
Title: Platform Engineering Analysis	4.177	4.928	10.649
FY 2016 Accomplishments:			
For small UAV payloads, identified, assessed, and evaluated the risks/benefits of efforts to reduce the size, weight, and power of current capabilities to be integrated into Group I-III UAV. Air-to-ground interoperability efforts identified shortfalls and gaps in current SOF air-to-ground communications architecture and recommended and evaluated interoperability enhancements.			
For mission suite architectures, identified, assessed, and evaluated open architecture approaches to reduce life-cycle costs,			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command		Date: May 2017	
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 1160402BB / <i>SOF Advanced Technology Development</i>	Project (Number/Name) SF101 / <i>Engineering Analysis</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
<p>increased responsive integration of new capabilities, and increased competition. In the area of common sensor suites, assessed and evaluated individual sensors and suites of sensors to optimize the commonality of sensors between manned ISR fleet and Group IV/V UAV. Identified low-cost and high load-out SOPGM and air-launched UAV commodities to reduce costs and provide force multipliers. Identified, assessed, and evaluated risks/benefits/suitability of emerging ISR products and suites. This includes but not limited to: hyper-spectral imaging, moving target indication, Light Detection and Ranging (LIDAR), Signals Intelligence (SIGINT) and high definition Electro Optics (EO)/Infra Red (IR) capabilities. Conducted combat diving thermal protection and electrical resistive suit design transition. Continued the use of Virtual Reality (VR) to aid definition of Pilot Vehicle Interface (PVI) requirements and design alternatives.</p> <p>FY 2017 Plans: For small UAV payloads, identify, assess, and evaluate the risks/benefits of efforts to reduce the size, weight, and power of current capabilities to be integrated into Group I-III UAV. Air-to-ground interoperability efforts identify shortfalls and gaps in current SOF air-to-ground communications architecture and recommend and evaluate interoperability enhancements. For mission suite architectures, identify, assess, and evaluate open architecture approaches to reduce life-cycle costs, increase responsive integration of new capabilities, and increase competition. In the area of common sensor suites, assess and evaluate individual sensors and suites of sensors to optimize the commonality of sensors between manned ISR fleet and Group IV/V UAV. Identify low-cost and high load-out SOPGM and air-launched UAV commodities to reduce costs and provide force multipliers. Identify, assess, and evaluate risks/benefits/suitability of emerging ISR products and suites. This includes but not limited to: hyper-spectral imaging, moving target indication, LIDAR, SIGINT and high definition EO/IR capabilities.</p> <p>FY 2018 Plans: For small UAV payloads, identifies, assesses, and evaluates the risks/benefits of efforts to reduce the size, weight, and power of current capabilities to be integrated into Group I-III UAV. Air-to-ground interoperability efforts identifies shortfalls and gaps in current SOF air-to-ground communications architecture and recommends and evaluates interoperability enhancements. For mission suite architectures, identifies, assesses, and evaluates open architecture approaches to reduce life-cycle costs, increase responsive integration of new capabilities, and increase competition. In the area of common sensor suites, assesses and evaluates individual sensors and suites of sensors to optimize the commonality of sensors between manned ISR fleet and Group IV/V UAV. Identifies low-cost and high load-out SOPGM and air-launched UAV commodities to reduce costs and provide force multipliers. Identifies, assesses, and evaluates risks/benefits/suitability of emerging ISR products and suites. This includes but not limited to: hyper-spectral imaging, moving target indication, LIDAR, SIGINT and high definition EO/IR capabilities.</p>			
Title: Soldier System Engineering Analysis		0.480	0.496
<p>FY 2016 Accomplishments: Continued to assess advanced body armor and ballistic helmet materials, concepts and prototypes to reduce soldier load and provide increased ballistic protection against the latest emerging threats. Reduced the number of eyewear lenses needed and to</p>			0.496

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command		Date: May 2017	
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 1160402BB / <i>SOF Advanced Technology Development</i>	Project (Number/Name) SF101 / <i>Engineering Analysis</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
<p>have one lens that provides ballistic and laser protection as well as automatically darkens/lightens based on combat conditions. Evaluated soldier worn sensors and heads up displays for operability within soldier worn components and subsystems. Assessed technologies feasibility and integration readiness of next generation load carriage systems such as exoskeletons and load-assist devices. Assessed proof of concepts and technologies for next generation head borne communications systems that provided reliable and secure wireless transmission in all combat conditions, as well as provided 360 degree situational awareness and noise attenuation while increasing hearing protection.</p> <p>FY 2017 Plans: Continue to assess advanced body armor and ballistic helmet materials, concepts and prototypes to reduce soldier load and provide increased ballistic protection against the latest emerging threats. Reduce the number of eyewear lenses needed and to have one lens that provides ballistic and laser protection as well as automatically darkens/lightens based on combat conditions. Evaluate soldier worn sensors and heads up displays for operability within soldier worn components and subsystems. Assess technologies feasibility and integration readiness of next generation load carriage systems such as exoskeletons and load-assist devices. Assess proof of concepts and technologies for next generation head borne communications systems that provide reliable and secure wireless transmission in all combat conditions, as well as provide 360 degree situational awareness and noise attenuation while increasing hearing protection.</p> <p>FY 2018 Plans: Continues to assess advanced body armor and ballistic helmet materials, concepts and prototypes to reduce soldier load and provide increased ballistic protection against the latest emerging threats. Reduces the number of eyewear lenses needed and to have one lens that provides ballistic and laser protection as well as automatically darkens/lightens based on combat conditions. Evaluates soldier worn sensors and heads up displays for operability within soldier worn components and subsystems. Assesses technologies feasibility and integration readiness of next generation load carriage systems such as exoskeletons and load-assist devices. Assesses proof of concepts and technologies for next generation head borne communications systems that provide reliable and secure wireless transmission in all combat conditions, as well as provide 360 degree situational awareness and noise attenuation while increasing hearing protection.</p>			
Title: National to Theater Engineering Analysis		2.024	2.138
<p>FY 2016 Accomplishments: Conducted additional testing and evaluation required on various equipment items such as communications, intelligence, weapons, scalable offensive hand grenade and operator protection planned for transition to SOF Theater Forces.</p> <p>FY 2017 Plans:</p>			2.182

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command		Date: May 2017	
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 1160402BB / <i>SOF Advanced Technology Development</i>	Project (Number/Name) SF101 / <i>Engineering Analysis</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
Conduct additional testing and evaluation required on various equipment items such as communications, intelligence, weapons, and operator protection planned for transition to SOF Theater Forces.			
FY 2018 Plans: Conducts additional testing and evaluation required on various equipment items such as communications, intelligence, weapons, and operator protection planned for transition to SOF Theater Forces.			
Title: Aviation Mission Improved Survivability			
FY 2017 Plans: Begin engineering analysis activities to improve SOF aviation mission survivability. Activities include, but are not limited to signature management (acoustic, infrared, radio frequency), situational awareness with full spectrum threat warning and countermeasures, and versatile mission equipment (payloads, communications and weapons) to improve SOF survivability in less than permissive operating environments.			
FY 2018 Plans: Continues engineering analysis activities to improve SOF aviation mission survivability. Activities include, but are not limited to signature management (acoustic, infrared, radio frequency), situational awareness with full spectrum threat warning and countermeasures, and versatile mission equipment (payloads, communications and weapons) to improve SOF survivability in less than permissive operating environments.			
Accomplishments/Planned Programs Subtotals		6.681	8.312
C. Other Program Funding Summary (\$ in Millions) N/A			
Remarks			
D. Acquisition Strategy N/A			
E. Performance Metrics N/A			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command										Date: May 2017		
Appropriation/Budget Activity 0400 / 3					R-1 Program Element (Number/Name) PE 1160402BB / SOF Advanced Technology Development				Project (Number/Name) S225 / Information and Broadcast Systems Adv Tech			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
S225: Information and Broadcast Systems Adv Tech	9.876	4.671	5.211	4.416	-	4.416	4.512	4.620	4.730	4.843	Continuing	Continuing

A. Mission Description and Budget Item Justification

This project conducts rapid prototyping of information and broadcast system technology. Includes cyber capabilities that predict the best media channels to reach potential target audiences, data mining and information collections tools, propaganda and social behavior analytical tools, cultural analysis tool sets and emerging technologies that support the planning and analytical needs for the Military Information Support Operations (MISO) forces. It provides a means for demonstrating and evaluating the utility of emerging/advanced technologies in as realistic an operational environment as possible by SOF users. This project integrates efforts and conducts technology demonstrations in conjunction with joint experiments and other assessment events and performs market research on emerging technologies that support all phases of MISO. Evaluation results are included in a transition package, which assists in the initiation of or insertion into an acquisition program. The project also addresses unique, joint special mission or area-specific needs. Seeks technologies that will transform current MISO capabilities through two major objectives: 1) Exploit technologies capable of disseminating products to reach target audiences across a variety of media to include audiences in denied areas. 2) Automate and improve MISO planning and analytical capability through technologies that are integrated into SOF planning systems (Cultural Analysis, Targeting, Theme Development, Media & Product Selection, Distribution & Dissemination, and Measures of Effectiveness). Develops software applications that increases the efficiency and shortens the timeline to get MISO dissemination packages approved. Develops hardware/software tools that facilitate the collaboration and sharing of information and other critical data.

Broadcast and Dissemination Modernization. Develops emerging technologies available in the marketplace to transform and modernize planning, analysis, development, broadcast, distribution, dissemination, and feedback capabilities for MISO forces. This initiative will also continue development of appropriate emerging technologies initially identified by Advance Technology Demonstrations and Joint Capability Technology Demonstrations to transition to acquisition programs. Technologies include: multi-frequency broadcast systems; digital broadcast capabilities; remote controlled electronic paper; near-real-time command and control of unattended systems, especially in denied areas; focused/beam speaker sound technologies; visual projection technologies; advanced commercial broadcast technologies including amplitude modulation and frequency modulation radio transmitters and antenna; television transmitter and antenna systems; internet and telephony dissemination and broadcast systems; technologies capable of long-loiter broadcast and delivery in denied and permissive environment; and technologies that automate and improve planning and analytical capability through integrated capabilities.

B. Accomplishments/Planned Programs (\$ in Millions)

Title: Broadcast and Dissemination Modernization	FY 2016	FY 2017	FY 2018
	4.671	5.211	4.416
FY 2016 Accomplishments: Continued to perform engineering studies, development, and demonstrations of distribution and broadcast systems. Developed advanced prototypes of MISO Functional Electronic Print leaflets and continued research on mass production techniques.			
FY 2017 Plans:			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command		Date: May 2017	
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 1160402BB / <i>SOF Advanced Technology Development</i>	Project (Number/Name) S225 / <i>Information and Broadcast Systems Adv Tech</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
Continue to perform engineering studies, development, and demonstrations of planning, analysis, distribution, and broadcast capabilities.			
FY 2018 Plans: Continues performance of engineering studies, development, and demonstrations of planning, analysis, distribution, and broadcast capabilities.			
Accomplishments/Planned Programs Subtotals		4.671	5.211
C. Other Program Funding Summary (\$ in Millions) N/A			
Remarks			
D. Acquisition Strategy N/A			
E. Performance Metrics N/A			

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 United States Special Operations Command	Date: May 2017
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Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development</i>					R-1 Program Element (Number/Name) PE 0304210BB / <i>Special Applications for Contingencies</i>							
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	244.715	65.420	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	310.135
9999: <i>Special Applications for Contingencies</i>	244.715	65.420	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	310.135

A. Mission Description and Budget Item Justification

NOTE: Beginning in FY 2017, this Program Element has been consolidated into SOCOM Program Element 1160434BB, Unmanned ISR.

This program element is part of the Military Intelligence Program (MIP). Special Applications for Contingencies (SAFC) provides for efforts to develop and integrate Unmanned Aerial Systems (UAS) payloads to advance ISR capabilities to address dynamic and emergent operational needs of the SOF user. Efforts include improving imagery/signals intelligence and electronic warfare payloads, capitalizing on developing technologies to reduce size, weight and power while addressing processing and data management challenges. It provides a mechanism for SOF user combat evaluation of emerging sensor technologies. SAFC applies focused Research & Development (R&D) for relatively low cost solutions to provide short lead-time contingency planning requirements where focused R&D will allow for test and evaluation of leading edge solutions to emergent problem sets.

B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	65.060	0.000	0.000	-	0.000
Current President's Budget	65.420	0.000	0.000	-	0.000
Total Adjustments	0.360	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	0.360	-			
• SBIR/STTR Transfer	-	-			

Change Summary Explanation

Funding:

FY 2016: Increase of \$0.360 million supported development of an Open System Auto-Pilot integration of virtual and physical user interfaces.

FY 2017: None.

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 United States Special Operations Command		Date: May 2017
Appropriation/Budget Activity	R-1 Program Element (Number/Name)	
0400: Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development	PE 0304210BB / Special Applications for Contingencies	
FY 2018: None.		
Schedule: None.		
Technical: None.		

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command										Date: May 2017		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 0304210BB / Special Applications for Contingencies				Project (Number/Name) 9999 / Special Applications for Contingencies			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
9999: Special Applications for Contingencies	244.715	65.420	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	310.135
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
A. Mission Description and Budget Item Justification												
This Military Intelligence Program (MIP) sub-project develops and deploys special capabilities to perform intelligence, surveillance, and reconnaissance (ISR) for deployed Special Operations Forces (SOF) using non-traditional means. It provides a mechanism for SOF user combat evaluation of emerging sensor technologies. This program also specifically addresses short lead-time contingency planning requirements where focused R&D will allow for test and evaluation of leading edge solutions to emergent problem sets.												
B. Accomplishments/Planned Programs (\$ in Millions)								FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Title: SAFC								19.820	-	-	-	-
FY 2016 Accomplishments:												
• Airborne Electronic Warfare (AEW) system providing unique situational awareness on signal sets are of great interest to SOF: Validated and updated kit configuration, moving the hardware out of the fuselage and into the transit bay. New AEW kit incorporates waterproofed hardware, multiple signal sets, and can be flown aboard a Puma I or Puma II UAS air vehicle.												
• Open System Auto-Pilot: Successfully replaced proprietary Puma I auto-pilot with low cost, commercial, non-proprietary device; aircraft flew well with no observed anomalous flight characteristics. Began effort to replace Scan Eagle auto-pilot with the same commercial auto-pilot used in Puma I; expected to fly in FY17.												
• Wi-Fi Exploitation Capability: Flew down-sized space, weight and power (SWAP) LANShark© hardware in Puma I UAS. Demonstrated initial capabilities including the ability to turn the payload off to conserve battery power.												
Title: Classified Program								45.600	-	-	-	-
FY 2016 Accomplishments: Additional details can be provided under separate cover.												
Accomplishments/Planned Programs Subtotals								65.420	-	-	-	-

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command										Date: May 2017	
Appropriation/Budget Activity 0400 / 7				R-1 Program Element (Number/Name) PE 0304210BB / <i>Special Applications for Contingencies</i>				Project (Number/Name) 9999 / <i>Special Applications for Contingencies</i>			
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
• PROC/1108STU: <i>Small Tactical Unmanned Aerial Systems</i>	1.392	-	-	-	-	-	-	-	-	0.000	2.892
• PROC/0201UMNISR: <i>Unmanned ISR</i>	-	80.820	13.295	38.933	52.228	6.103	5.343	10.940	11.163	Continuing	Continuing
Remarks											
D. Acquisition Strategy											
SAFC acquisition strategy is evolutionary and spiral-based for technology insertion and low volume procurement. As a non-standard DOD acquisition program, it allows sensor capability for maximum flexibility to respond to quickly emerging, short lead time, contingency based requirements.											
E. Performance Metrics											
N/A											

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 United States Special Operations Command **Date:** May 2017

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development</i>					R-1 Program Element (Number/Name) PE 0305208BB / <i>Distributed Common Ground/Surface Systems</i>							
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	32.509	5.302	5.415	5.496	-	5.496	6.345	6.451	6.580	6.712	Continuing	Continuing
S400A: <i>Distributed Common Ground/Surface Systems</i>	32.509	5.302	5.415	5.496	-	5.496	6.345	6.451	6.580	6.712	Continuing	Continuing

A. Mission Description and Budget Item Justification

This program element is part of the Military Intelligence Program (MIP). The Distributed Common Ground/Surface System Special Operations Forces (DCGS-SOF) is part of a family of systems providing Intelligence, Surveillance, and Reconnaissance Processing, Exploitation, Dissemination (PED), and analytical capabilities at the Joint Task Force level and below through a combination of reach back, forward support, and collaboration. The mission tailored infrastructure interconnects the warfighter and sensors to find and fix High Value Targets and provides a network-enabled, interoperable construct allowing continual, unimpeded sharing of intelligence data, information and services with SOF and between the Services, other national intelligence agencies, combatant commands and multi-national partners. It connects the SOF warfighter with the essential intelligence information and provides situation awareness information to the SOF leadership at all echelons. The four components of DCGS-SOF include the following: The Enterprise provides infrastructure and processing capability to allow for worldwide SOF intelligence information sharing. Full Motion Video PED provides (FMV) PED capabilities in garrison and deployed environments of manned and unmanned sensors. SILENT DAGGER provides Signals Intelligence exploitation capability in both garrison and deployed environments. The All Source Information Fusion (ASIF) will provide the intelligence analytical tools via a global and disconnected architecture.

B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	5.302	5.415	5.496	-	5.496
Current President's Budget	5.302	5.415	5.496	-	5.496
Total Adjustments	0.000	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			

Change Summary Explanation

Funding:

FY 2016: None.

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 United States Special Operations Command		Date: May 2017
Appropriation/Budget Activity	R-1 Program Element (Number/Name)	
0400: Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development	PE 0305208BB / Distributed Common Ground/Surface Systems	
FY 2017: None.		
FY 2018: None.		
Schedule: None.		
Technical: None.		

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command										Date: May 2017		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 0305208BB / <i>Distributed Common Ground/Surface Systems</i>				Project (Number/Name) S400A / <i>Distributed Common Ground/Surface Systems</i>			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
S400A: <i>Distributed Common Ground/Surface Systems</i>	32.509	5.302	5.415	5.496	-	5.496	6.345	6.451	6.580	6.712	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This program element is part of the Military Intelligence Program (MIP). The Distributed Common Ground/Surface System Special Operations Forces (DCGS-SOF) is part of a family of systems providing Intelligence, Surveillance and Reconnaissance (ISR) Processing, Exploitation, Dissemination (PED), and analytical capabilities at the Joint Task Force level and below through a combination of reach back, forward support, and collaboration. The mission tailored infrastructure interconnects the warfighter and sensors to find and fix High Value Targets and provides a network-enabled, interoperable construct allowing continual, unimpeded sharing of intelligence data, information and services with SOF and between the Services, other national intelligence agencies, combatant commands and multi-national partners. It connects the SOF warfighter with the essential intelligence information and provides situation awareness information to the SOF leadership at all echelons. The four components of DCGS-SOF include the following: The Enterprise provides infrastructure and processing capability to allow for worldwide SOF intelligence information sharing. Full Motion Video (FMV) PED provides PED capabilities in garrison and deployed environments of manned and unmanned sensors. SILENT DAGGER provides Signals Intelligence exploitation capability in both garrison and deployed environments. The All Source Information Fusion (ASIF) will provide the intelligence analytical tools via a global and disconnected architecture.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018
Title: DCGS	5.302	5.415	5.496
FY 2016 Accomplishments: Continued to integrate emerging technologies and capability for Enterprise and ASIF to include: Advanced analytics, user interface, and disconnected operations into the DCGS-SOF baseline; Continued to refine and integrate FMV PED emerging technologies and capabilities such as: request for information tool and voice-to-text translation. Continued DCGS-SOF Limited Objective Events and exercise participation to test integration efforts. Began development of the DCGS-SOF next generation pipeline development.			
FY 2017 Plans: Continue integration of emerging technologies and capability for Enterprise and ASIF to include: Advanced analytics, user interface, cloud technologies, and disconnected operations into the DCGS-SOF baseline. Continue to refine and integrate FMV PED emerging technologies and capabilities such as: over-watch/compound monitoring, develop analyst trip wire tools, next generation imaging, coalition interoperability and video exploitation tools, patterns of movement characterization and detection			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command										Date: May 2017		
Appropriation/Budget Activity 0400 / 7				R-1 Program Element (Number/Name) PE 0305208BB / Distributed Common Ground/Surface Systems				Project (Number/Name) S400A / Distributed Common Ground/Surface Systems				
B. Accomplishments/Planned Programs (\$ in Millions)										FY 2016	FY 2017	FY 2018
for single mission. Continue development of the DCGS-SOF next generation pipeline. Continue Defense Intelligence Information Environment and Joint Information environment coordination.												
FY 2018 Plans: Continues integration of emerging technologies and capability for Enterprise and ASIF to include: Advanced analytics, user interface, and disconnected operations into the DCGS-SOF baseline. Continues refining and integration of FMV PED emerging technologies and capabilities such as: over-watch/compound monitoring, develop analyst trip wire tools, next generation analytics processing, upgrading imaging and video exploitation tools, patterns of movement characterization and detection for single mission. Continues DCGS-SOF Limited Objective Events and exercise participation to test integration efforts. Continues development of the interoperability with Coalition partners, Defense Intelligence Information Environment, and Joint Information Environment.												
Accomplishments/Planned Programs Subtotals										5.302	5.415	5.496
C. Other Program Funding Summary (\$ in Millions)												
Line Item	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost	
• PROC/020401INTL: Distributed Common Ground/Surface System	16.333	15.232	11.042	-	11.042	15.676	16.995	15.248	12.684	Continuing	Continuing	
Remarks												
D. Acquisition Strategy												
DCGS-SOF leverages SOF programs, DoD partners, National labs, and other Government Agencies to integrate commercial/government off-the-shelf systems, and other mature technologies into the Program of Record which resides within the SOF Information Enterprise and enables more agile access to (searchable, discoverable) and sharing of data and services to meet SOF-peculiar documented requirements. The technology allows for seamless integration and federation with DoD, interagency, and Coalition tactical ISR PED systems. The DCGS-SOF program office employs an agile development process with capability insertions into the development baseline for assessment and future deployment into the operational baseline. All development requirements are prioritized through the DCGS Requirements Working Group (DRWG) chaired by J2. Once approved, the requirements are evaluated and scheduled by an engineering development team. Using this methodology allows capabilities to be inserted in a fast and agile manner based on user requirements and priorities. All evolutionary technology insertions (ETIs) in the R-4 schedule are based on current program office projections. If requirements change based on the DRWG, the ETI and version capabilities identified may change.												
E. Performance Metrics												
N/A												

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 United States Special Operations Command **Date:** May 2017

Appropriation/Budget Activity					R-1 Program Element (Number/Name)							
0400: Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development					PE 1105219BB / MQ-9 Unmanned Aerial Vehicle (UAV)							
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	41.910	21.388	17.804	37.863	-	37.863	14.259	14.528	14.819	15.115	Continuing	Continuing
S851: MQ-9 Unmanned Aerial Vehicle (UAV)	41.910	21.388	17.804	37.863	-	37.863	14.259	14.528	14.819	15.115	Continuing	Continuing

A. Mission Description and Budget Item Justification

This program element identifies, develops, integrates, and tests Special Operations Forces (SOF)-unique mission kits, mission payloads, weapons, and modifications on MQ-9 UAVs, ground control stations, and training systems as a component of the Medium Altitude Long Endurance Tactical program. USSOCOM is designated as the DOD lead for planning, synchronizing, and as directed, executing Overseas Contingency Operations (OCO) against terrorist networks. USSOCOM requires the capability to find, fix, finish, exploit, and analyze time-sensitive high-value targets. These targets can often only be identified with patient collection of information and require rapid, decisive action during the short periods in which they present themselves. This program element addresses the primary areas of Intelligence, Surveillance, Reconnaissance, and Target (ISR&T) Acquisition, and Strike.

B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	22.151	17.804	17.863	-	17.863
Current President's Budget	21.388	17.804	37.863	-	37.863
Total Adjustments	-0.763	0.000	20.000	-	20.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.763	-			
• Other	-	-	20.000	-	20.000

Congressional Add Details (\$ in Millions, and Includes General Reductions)

Project: S851: MQ-9 Unmanned Aerial Vehicle (UAV)

Congressional Add: MQ-9 UAV

	FY 2016	FY 2017
	4.000	-
Congressional Add Subtotals for Project: S851	4.000	-
Congressional Add Totals for all Projects	4.000	-

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 United States Special Operations Command		Date: May 2017
Appropriation/Budget Activity 0400: Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development	R-1 Program Element (Number/Name) PE 1105219BB / MQ-9 Unmanned Aerial Vehicle (UAV)	
<u>Change Summary Explanation</u> Funding: FY 2016: Decrease of -\$0.763 million is due to a transfer of funds to Small Business Innovative Research/Small Business Technology Transfer programs. FY 2017: None. FY 2018: Increase of \$20.000 million is to support MQ-9 capability enhancements for mission kits, mission payloads, weapons, and modifications. Schedule: None. Technical: None.		

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command										Date: May 2017		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 1105219BB / MQ-9 Unmanned Aerial Vehicle (UAV)				Project (Number/Name) S851 / MQ-9 Unmanned Aerial Vehicle (UAV)			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
S851: MQ-9 Unmanned Aerial Vehicle (UAV)	41.910	21.388	17.804	37.863	-	37.863	14.259	14.528	14.819	15.115	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project identifies, develops, integrates, and tests Special Operations Forces (SOF) - unique mission kits, mission payloads, weapons, and modifications on MQ-9 UAVs, ground control stations, and training systems. As the supported combatant command in Overseas Contingency Operations (OCO), USSOCOM requires the capability to find, fix, finish, exploit, and analyze time-sensitive high-value targets. These targets can often only be identified with patient collection of information and require rapid, decisive action during the short periods in which they present themselves. This project addresses the primary areas of Intelligence, Surveillance, Reconnaissance, and Target (ISR&T) Acquisition and Strike. This project received congressional add in FY 2016.

B. Accomplishments/Planned Programs (\$ in Millions)

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Title: MQ-9 UAV	17.388	17.804	37.863	-	37.863
FY 2016 Accomplishments: Developed, tested, and integrated SOF-unique mission kits, mission payloads, weapons and modifications on MQ-9 UAVs, ground control stations, and training systems.					
FY 2017 Plans: Develop, test, and integrate SOF-unique emerging technology mission kits, mission payloads, weapons and modifications on MQ-9 UAVs, ground control stations, and training systems.					
FY 2018 Base Plans: Develops, tests, and integrates SOF-unique emerging technology mission kits, mission payloads, weapons and modifications on MQ-9 UAVs, ground control stations, and training systems.					
Accomplishments/Planned Programs Subtotals	17.388	17.804	37.863	-	37.863
	FY 2016	FY 2017			
Congressional Add: MQ-9 UAV	4.000	-			
FY 2016 Accomplishments: Developed, tested, and integrated SOF-unique mission kits, mission payloads, weapons and modifications on MQ-9 UAVs, ground control stations, and training systems.					
Congressional Adds Subtotals	4.000	-			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command										Date: May 2017	
Appropriation/Budget Activity 0400 / 7			R-1 Program Element (Number/Name) PE 1105219BB / MQ-9 Unmanned Aerial Vehicle (UAV)				Project (Number/Name) S851 / MQ-9 Unmanned Aerial Vehicle (UAV)				
C. Other Program Funding Summary (\$ in Millions)											
			<u>FY 2018</u>	<u>FY 2018</u>	<u>FY 2018</u>					<u>Cost To</u>	
<u>Line Item</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>Base</u>	<u>OCO</u>	<u>Total</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>Complete</u>	<u>Total Cost</u>
• PROC/1108MQ9: MQ-9 Unmanned Aerial Vehicle	17.226	54.033	21.660	19.780	41.440	24.835	5.411	5.519	5.629	Continuing	Continuing
Remarks											
D. Acquisition Strategy											
MQ-9 UAV is an evolutionary acquisition program that identifies, develops, tests and integrates SOF-unique mission kits, mission payloads, weapons, and modifications on MQ-9 UAVs, ground control stations, and training systems to increase the Intelligence, Surveillance, Reconnaissance, and Targeting acquisition and strike capabilities of SOF. Proprietary issues with operational flight program software, sensor operating software, and aircraft modification considerations dictate sole source contracts.											
E. Performance Metrics											
N/A											

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Exhibit R-3, RDT&E Project Cost Analysis: FY 2018 United States Special Operations Command												Date: May 2017			
Appropriation/Budget Activity 0400 / 7						R-1 Program Element (Number/Name) PE 1105219BB / MQ-9 Unmanned Aerial Vehicle (UAV)				Project (Number/Name) S851 / MQ-9 Unmanned Aerial Vehicle (UAV)					
Product Development (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
MQ-9 UAVs, Ground Control Stations, and Training Systems	SS/ Various	General Atomics Aeronautical Services : San Diego, CA	16.033	10.350	Jun 2016	10.954	Jun 2017	30.669	Jun 2018	-		30.669	Continuing	Continuing	-
MQ-9 UAVs, Ground Control Stations, and Training Systems	SS/ Various	Raytheon : McKinney, TX	2.500	2.500	Jul 2016	2.500	Jul 2017	2.500	Jul 2018	-		2.500	Continuing	Continuing	-
MQ-9 UAVs, Ground Control Stations, and Training Systems (Congressional Add)	SS/ Various	General Atomics Aeronautical Services : San Diego, CA	-	3.000	Jun 2016	-		-		-		-	0.000	3.000	-
Prior Years Completed Projects	Various	Various : Various	12.900	-		-		-		-		-	0.000	12.900	-
Subtotal			31.433	15.850		13.454		33.169		-		33.169	-	-	-
Test and Evaluation (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
MQ-9 UAVs, Ground Control Stations, and Training Systems	SS/ Various	General Atomics Aeronautical Services : San Diego, CA	6.177	4.538	Jun 2016	4.350	Jun 2017	4.694	Jun 2018	-		4.694	Continuing	Continuing	-
MQ-9 UAVs, Ground Control Stations, and Training Systems Overseas Contingency Operations (OCO)	SS/ Various	General Atomics Aeronautical Services : San Diego, CA	4.300	-		-		-		-		-	0.000	4.300	-
MQ-9 UAVs, Ground Control Stations, and Training Systems (Congressional Add)	SS/ Various	General Atomics Aeronautical Services : San Diego, CA	-	1.000	Jun 2016	-		-		-		-	0.000	1.000	-
Subtotal			10.477	5.538		4.350		4.694		-		4.694	-	-	-

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Exhibit R-3, RDT&E Project Cost Analysis: FY 2018 United States Special Operations Command											Date: May 2017				
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 1105219BB / MQ-9 Unmanned Aerial Vehicle (UAV)					Project (Number/Name) S851 / MQ-9 Unmanned Aerial Vehicle (UAV)					
			Prior Years	FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			41.910	21.388		17.804		37.863		-		37.863	-	-	-

Remarks

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Exhibit R-4, RDT&E Schedule Profile: FY 2018 United States Special Operations Command

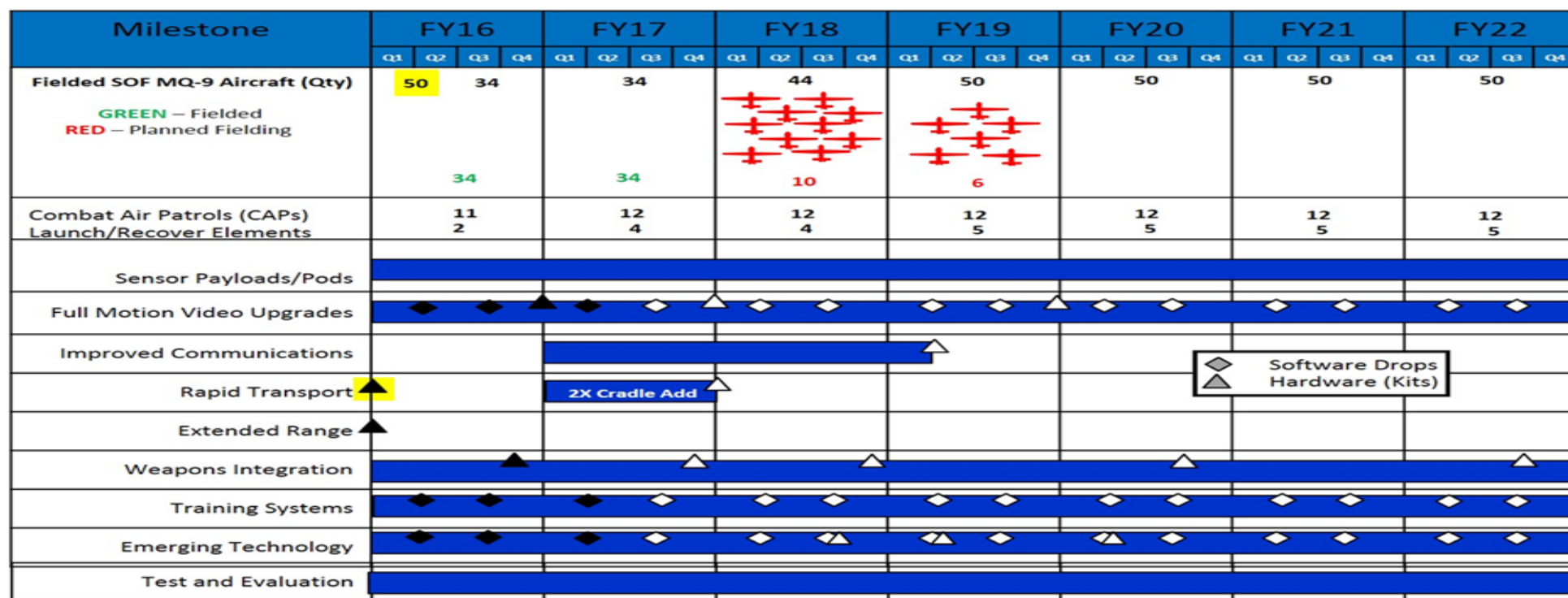
Date: May 2017

Appropriation/Budget Activity
0400 / 7

R-1 Program Element (Number/Name)
PE 1105219BB / MQ-9 Unmanned Aerial
Vehicle (UAV)

Project (Number/Name)
S851 / MQ-9 Unmanned Aerial Vehicle
(UAV)

MALET MQ-9 Schedule



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Exhibit R-4A, RDT&E Schedule Details: FY 2018 United States Special Operations Command			Date: May 2017
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1105219BB / MQ-9 Unmanned Aerial Vehicle (UAV)	Project (Number/Name) S851 / MQ-9 Unmanned Aerial Vehicle (UAV)	

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
MQ-9 UAVs, Ground Control Stations, and Training Systems				
Sensor Payloads/Pods	1	2016	4	2022
Full Motion Video Upgrades	1	2016	4	2022
Improved Communications	1	2017	2	2019
Rapid Transport	1	2016	2	2018
Extended Range	1	2016	4	2016
Weapons Integration	1	2016	4	2022
Training Systems	1	2016	4	2022
Emerging Technology	1	2016	4	2022
Test and Evaluation	1	2016	4	2022

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 United States Special Operations Command	Date: May 2017
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Appropriation/Budget Activity	R-1 Program Element (Number/Name)											
0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development</i>	PE 1105232BB / RQ-11 UAV											
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	1.639	0.758	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	2.397
S853: <i>RQ-11 UAV</i>	1.639	0.758	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	2.397

A. Mission Description and Budget Item Justification

NOTE: Beginning in FY2017, this Program Element has been consolidated into SOCOM Program Element 1160434BB, Unmanned ISR.

This program element is part of the Military Intelligence Program. Two programs are in this program element: Small Unmanned Aerial System (SUAS) and the Multi-mission Tactical Unmanned Aerial System (MTUAS). SUAS identifies, develops, integrates, and tests Special Operations Forces (SOF) unique mission kits, mission payloads, air vehicle enhancements, and modifications on the SUAS and related ground control stations. MTUAS identifies, develops, integrates, and tests Special Operations Forces (SOF) unique mission kits, mission payloads, air vehicle enhancements, and modifications on the MTUAS and related ground control stations.

USSOCOM has been designated as the DOD lead for planning, synchronizing, and as directed, executing global operations against terrorist networks and targets. USSOCOM requires the capability to find, fix, and finish time-sensitive high-value fixed and fleeting targets at the unit and team level without placing personnel and units in harm's way. These targets can often only be identified with patient collection of information and require rapid, decisive action during the short periods in which they present themselves. This line item addresses the primary areas of Intelligence, Surveillance, Reconnaissance, and Targeting (ISR&T) capabilities for SOF.

B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	0.758	0.000	0.000	-	0.000
Current President's Budget	0.758	0.000	0.000	-	0.000
Total Adjustments	0.000	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			

Change Summary Explanation

Funding:

FY 2016: None.

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 United States Special Operations Command		Date: May 2017
Appropriation/Budget Activity	R-1 Program Element (Number/Name)	
0400: Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development	PE 1105232BB / RQ-11 UAV	
FY 2017: None.		
FY 2018: None.		
Schedule: None.		
Technical: None.		

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command										Date: May 2017		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 1105232BB / RQ-11 UAV				Project (Number/Name) S853 / RQ-11 UAV			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
S853: RQ-11 UAV	1.639	0.758	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	2.397
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project is part of the Military Intelligence Program. Two programs are in this project: Small Unmanned Aerial System (SUAS) and the Multi-mission Tactical Unmanned Aerial System (MTUAS). SUAS identifies, develops, integrates, and tests Special Operations Forces (SOF)-unique mission kits, mission payloads, air vehicle enhancements, and modifications on the SUAS and related ground control stations. MTUAS identifies, develops, integrates, and tests Special Operations Forces (SOF) unique mission kits, mission payloads, air vehicle enhancements, and modifications on the MTUAS and related ground control stations. The current material solution for SUAS is the All Environment Capable Variant (AECV) of the Puma UAS. The current material solution for MTUAS is the Scan Eagle UAS.

USSOCOM has been designated as the DOD lead for planning, synchronizing, and as directed, executing global operations against terrorist networks and targets. USSOCOM requires the capability to find, fix, and finish time-sensitive high-value fixed and fleeting targets at the unit and team level without placing personnel and units in harm's way. These targets can often only be identified with patient collection of information and require rapid, decisive action during the short periods in which they present themselves. This line item addresses the primary areas of Intelligence, Surveillance, Reconnaissance, and Targeting capabilities for SOF.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Title: SUAS	0.261	-	-	-	-
FY 2016 Accomplishments: Developed, integrated, and tested SOF-unique mission kits, mission payloads, and modifications to the SUAS and ground control station, to include but not limited to: improved capabilities for geo-location, collection of push-to-talk, communications, specialized tagging, tracking, and locating, and enhanced communications relay and work to miniaturize previously developed payloads.					
Title: MTUAS	0.497	-	-	-	-
FY 2016 Accomplishments: Developed, integrated, and tested SOF-unique mission kits, mission payloads, and modifications to the MTUAS and ground control station, to include but not limited to: signals intelligence gathering and geo-location.					
Accomplishments/Planned Programs Subtotals	0.758	-	-	-	-

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command	Date: May 2017
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Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1105232BB / RQ-11 UAV	Project (Number/Name) S853 / RQ-11 UAV
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C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u> <u>Base</u>	<u>FY 2018</u> <u>OCO</u>	<u>FY 2018</u> <u>Total</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• PROC/0809RQ11: RQ-11 Unmanned Aerial Vehicle	21.298	-	-	-	-	-	-	-	-	0.000	21.298
• PROC/0201UMNISR: Unmanned ISR	-	80.820	13.295	38.933	52.228	6.103	5.343	10.940	11.163	Continuing	Continuing

Remarks

D. Acquisition Strategy

The SUAS and MTUAS are evolutionary acquisition programs that deliver, integrate, and qualify SOF-unique mission kits, mission payloads, weapons, air vehicle enhancements, and ground control station upgrades. Contracting methods depend on the type of development effort. Competitive source selection will be conducted as much as possible. Proprietary considerations may direct some effort to the Original Equipment Manufacturer.

E. Performance Metrics

N/A

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 United States Special Operations Command **Date:** May 2017

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 1160279BB / <i>Small Business Innovative Research/Small Bus Tech Transfer</i>
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COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	187.371	15.897	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
S050: <i>Small Business Innovative Research</i>	184.322	13.823	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
S051: <i>Small Business Technology Transfer</i>	3.049	2.074	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

A. Mission Description and Budget Item Justification

This program element consists of a highly competitive three-phase award system that provides qualified small business concerns with the opportunity to propose high quality innovative ideas that meet specific research and development needs of USSOCOM. Small Business Innovative Research (SBIR) is a result of the Small Business Development Act of 1992. It was enacted by Congress in Public Law 97-219, reenacted by Public Law 99-443, and reauthorized by the SBIR Program Reauthorization Act of 2012. Starting in FY 1994, the SBIR program was refocused toward dual use and defense reinvestment efforts. Phase I projects evaluate the scientific technical merit and feasibility of an idea. Phase II projects expand the results of, and further pursue, the developments of Phase I. Phase III is for commercialization of the results of Phase II and requires the use of private or non-SBIR federal funding. USSOCOM participates annually in the DOD Request for Proposal process. USSOCOM then awards its proposed SBIR projects. FY 2014 is the first year USSOCOM is participating in the Small Business Technology Transfer (STTR) program. The STTR goal is similar to the SBIR program, but the STTR program has the additional goal to expand public/private sector partnerships between small business and nonprofit U.S. research institutions.

B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	0.000	0.000	0.000	-	0.000
Current President's Budget	15.897	0.000	0.000	-	0.000
Total Adjustments	15.897	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	15.897	-			

Change Summary Explanation

Funding:

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 United States Special Operations Command		Date: May 2017
Appropriation/Budget Activity	R-1 Program Element (Number/Name)	
0400: Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development	PE 1160279BB / Small Business Innovative Research/Small Bus Tech Transfer	
FY 2016: Increase of \$15.897 million is due to reprogramming from various program elements for the congressionally mandated Small Business Innovative Research (\$13.823 million) and Small Business Technology Transfer (\$2.074 million) programs.		
FY 2017: None.		
FY 2018: None.		
Schedule: None.		
Technical: None.		

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command										Date: May 2017		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 1160279BB / Small Business Innovative Research/Small Bus Tech Transfer				Project (Number/Name) S050 / Small Business Innovative Research			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
S050: Small Business Innovative Research	184.322	13.823	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project consists of a highly competitive three-phase award system that provides qualified small business concerns with the opportunity to propose high quality innovative ideas that meet specific research and development needs of USSOCOM. Small Business Innovative Research (SBIR) is a result of the Small Business Development Act of 1992. It was enacted by Congress in Public Law 97-219, reenacted by Public Law 99-443, and reauthorized by the SBIR Program Reauthorization Act of 2012. Starting in FY 1994, the SBIR program was refocused toward dual use and defense reinvestment efforts. Phase I projects evaluate the scientific technical merit and feasibility of an idea. Phase II projects expand the results of, and further pursue, the developments of Phase I. Phase III is for commercialization of the results of Phase II and requires the use of private or non-SBIR federal funding. USSOCOM participates annually in the DOD Request for Proposal process. USSOCOM then awards its proposed SBIR projects.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018
Title: Small Business Innovative Research (SBIR)	13.823	-	-
FY 2016 Accomplishments: Awarded numerous Phase I and Phase II contracts and contract options for SBIR topics: Alternative for Redundant Global Positioning System Navigation, Environmentally Stable Portable Point of Care Blood Analyzer, Next Generation Identity Management Technologies/Tools, and Optically Transparent Tapered Resistive Films.			
Accomplishments/Planned Programs Subtotals	13.823	-	-

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

D. Acquisition Strategy

The Small Business Innovative Research (SBIR) is a three-phase program that provides early-stage R&D to small companies. Eligible projects must fulfill an R&D need identified by DOD and have the potential to be developed into a product or service for commercial or defense markets. SBIR is designed to stimulate technological innovation, increase private sector commercialization of federal R&D, increase small business participation in federally funded R&D and foster participation by minority and disadvantaged firms in technological innovation.

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command		Date: May 2017
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160279BB / Small Business Innovative Research/Small Bus Tech Transfer	Project (Number/Name) S050 / Small Business Innovative Research

E. Performance Metrics
N/A

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command										Date: May 2017		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 1160279BB / <i>Small Business Innovative Research/Small Bus Tech Transfer</i>				Project (Number/Name) S051 / <i>Small Business Technology Transfer</i>			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
S051: <i>Small Business Technology Transfer</i>	3.049	2.074	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification
Small Business Technology Transfer (STTR) goal is the expand public/private sector partnerships between small business and nonprofit U.S. research institutions.

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2016	FY 2017	FY 2018
Title: Small Business Technology Transfer (STTR)	2.074	-	-
FY 2016 Accomplishments: A Science and Technology (STTR) Phase II contract was awarded to produce a prototype for the Hydraulic Based Actuator to support USSOCOM's Tactical Assault Light Operator Suite program.			
Accomplishments/Planned Programs Subtotals	2.074	-	-

C. Other Program Funding Summary (\$ in Millions)
N/A

Remarks

D. Acquisition Strategy
STTR provides early-stage R&D funding directly to small companies working cooperatively with researchers at universities and other research institutions. STTR program is also a three-phased program and designed to stimulate technological innovation, increase private sector commercialization of federal R&D, increase small business participation in federally funded R&D and foster participation by minority and disadvantaged firms in technological innovation.

E. Performance Metrics
N/A

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 United States Special Operations Command **Date:** May 2017

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 1160403BB / <i>Aviation Systems</i>
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COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	730.470	172.965	163.543	259.886	-	259.886	177.606	124.157	108.961	94.514	Continuing	Continuing
SF100: <i>Aviation Systems Advanced Development</i>	603.132	106.358	91.659	175.543	-	175.543	105.713	44.226	24.273	15.860	Continuing	Continuing
SF200: CV-22	2.993	0.000	15.590	14.259	-	14.259	21.635	27.961	8.000	0.000	Continuing	Continuing
S750: <i>Mission Training and Preparation Systems</i>	12.837	6.810	7.890	8.181	-	8.181	8.252	8.309	9.408	9.596	Continuing	Continuing
S875: <i>AC/MC-130J</i>	22.763	7.143	7.964	9.351	-	9.351	17.236	24.127	53.408	54.908	Continuing	Continuing
D615: <i>Rotary Wing Aviation</i>	88.745	52.654	40.440	52.552	-	52.552	24.770	19.534	13.872	14.150	Continuing	Continuing

Program MDAP/MAIS Code:
Project MDAP/MAIS Code(s): 212

A. Mission Description and Budget Item Justification

Aviation Systems Advanced Development:

This project provides for the development, demonstration, and integration of current and maturing technologies for Special Operations Forces (SOF)-unique aviation and training requirements. Timely application of SOF-unique technology is critical and necessary to meet requirements in such areas as: SOF specific avionics; Low Probability of Intercept/Low Probability of Detection (LPI/LPD) Terrain Following/Terrain Avoidance (TF/TA) radar; Defensive Countermeasures; Electronic Warfare (EW) - Radio Frequency Countermeasures (RFCM); Precision Strike Package (PSP); PSP High Energy Laser (HEL); AC-130H, AC-130W, and AC-130U Recapitalization, and other SOF airborne platforms; digital terrain elevation data and electronic order of battle; digital maps; Airborne Mission Networking (AbMN); near-real-time Intelligence, Surveillance and Reconnaissance (ISR); data fusion; threat detection and avoidance; navigation, target detection, and identification technologies; weapons integration; digital broadcast capabilities; aerial refueling; survivability; and ISR payload technological improvements with size, weight, power and integration onto all SOF unmanned aircraft system (UAS) ISR platforms.

CV-22 Development:

The CV-22 is a SOF variant of the V-22 vertical medium lift, multi-mission aircraft. The CV-22 project provides long range, high speed, infiltration, exfiltration, and resupply to Special Forces teams in hostile, denied, and politically sensitive areas. This is a capability not currently provided by other existing aircraft. The funding in this project supports integration, design, development, and test to provide improved capabilities to include, but not limited to, more robust performance in situational awareness, ISR, weapons, avionics, survivability, maneuverability, mission deployment and improved reliability and maintainability of the CV platform. CV-22 SOF Common TF/TA (Silent Knight) radar program provides long-range, night/adverse weather, clandestine penetration of medium-to-high threat areas to infill, exfill, and resupply SOF forces. Provides more sustainable/capable replacement to obsolescing and tech limited terrain following/avoidance radar.

Mission Training and Preparation Systems:

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 United States Special Operations Command **Date:** May 2017

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 1160403BB / <i>Aviation Systems</i>
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The Special Operations Mission Planning and Execution (SOMPE) project funds the definition, design, development, prototyping, integration, and testing of SOMPE systems to support mission planning, rehearsal, and execution requirements to meet SOF-unique mission requirements and correct deficiencies in current mission planning, rehearsal, and execution capabilities. The Mission Training and Preparation Systems (MTPS) project also includes program management, systems engineering, configuration management, architecture development, risk reduction, and trade study initiatives, as well as initiatives to assure interoperability and commonality between diverse mission planning, rehearsal, and execution systems.

AC/MC-130J:

The AC/MC-130J project funds core SOF-unique modifications to replace aging/retired AC-130H Spectre, AC-130W Stinger II, AC-130U Spooky, MC-130E Combat Talon I, MC-130P Combat Shadow, MC-130H Combat Talon II aircraft. The 8 AC-130H Spectre, 12 AC-130W Stinger II and 17 AC-130U Spooky airframes will be replaced with MC-130J aircraft modified with the PSP to achieve the AC-130J configuration. The AC-130J aircraft will provide close air support, air interdiction, and armed reconnaissance capability. The 14 MC-130E Talon I, 23 MC-130P Combat Shadow, and 20 MC-130H Talon II airframes will be replaced by MC-130J Commando II aircraft with SOF mission modifications. The MC-130J Commando II aircraft perform clandestine or low visibility, single or multi-ship low-level missions intruding politically-sensitive or hostile territories; provide air refueling for special operations helicopters and CV-22 aircraft; and airdrop of leaflets, small special operations teams, resupply bundles and combat rubber raiding craft. The Air Force will procure and field basic aircraft, common support equipment, and trainers for USSOCOM. An incremental upgrade approach will be used to incorporate SOF capabilities onto the aircraft and training systems.

Rotary Wing Aviation:

This project develops SOF-unique modifications and upgrades to SOF rotary wing aircraft that operate in increasingly hostile environments. This project also includes modifications to Aircraft Survivability Equipment (ASE) and weapons systems to counter rapidly emerging threats, improve lethality and enhance aircraft self-protection. Rotary wing aircraft supported by this project include: MH-60M, MH-47G, and A/MH-6M. These aircraft provide aviation support to SOF in worldwide contingency operations and low-intensity conflicts. They must be capable of rapid deployment, undetected penetration of hostile areas, and operating at extended ranges under adverse weather conditions to infiltrate, provide logistics for, reinforce, and extract SOF. The threat is characterized by an extensive and sophisticated ground based air defense system and an upgraded air-to-air capability targeted against helicopters.

B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	179.134	159.143	155.919	-	155.919
Current President's Budget	172.965	163.543	259.886	-	259.886
Total Adjustments	-6.169	4.400	103.967	-	103.967
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-6.169	-			
• Other	-	-	103.967	-	103.967

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 United States Special Operations Command				Date: May 2017	
Appropriation/Budget Activity 0400: Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development		R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems			
• FY 2017 REQUEST FOR ADDITIONAL APPROPRIATIONS		-	4.400	-	-
<u>Congressional Add Details (\$ in Millions, and Includes General Reductions)</u>				FY 2016	FY 2017
Project: SF100: Aviation Systems Advanced Development					
Congressional Add: C-130 SOF Common TF/TA (Silent Knight) Radar				15.200	-
Congressional Add Subtotals for Project: SF100				15.200	-
Congressional Add Totals for all Projects				15.200	-
<u>Change Summary Explanation</u>					
Funding:					
FY 2016: Decrease of -\$6.169 million is due to a transfer of funds to Small Business Innovative Research/Small Business Technology Transfer programs.					
FY 2017: Increase of \$4.400 million in Project D615, Rotary Wing Aviation is due to an FY 2017 Request for Additional Appropriations to continue research, development, test and evaluation of new and modified detection and defeat countermeasures systems to improve aircraft survivability capabilities and address emerging threats to SOF rotary wing aircraft.					
FY 2018: Increase of \$103.967 million is to complete flight testing efforts for A/MH-6M aircraft Block 3.0 upgrades (\$11.839 million); research, develop and evaluate new and modified detection and defeat countermeasure systems and improve SOF rotary wing aircraft survivability (\$13.700 million); development, integration and test to provide EW capability against RF threats on AC/MC-130J aircraft (\$15.009 million); prepare for testing of the AbMN capability of near-real-time intelligence reporting to the SOF MC-130J fleet (\$0.692 million); provides for risk reduction testing of the PSP HEL weapon onto AC-130J aircraft (\$15.650 million); systems engineering, analysis, development, and enhancement of the baseline PSP integration and test on SOF platforms (\$3.000 million); supports Engineering and Manufacturing Development, qualification, and operational flight testing of a SOF Common TF/TA (Silent Knight) radar on the MC-130J (\$44.077 million).					
Schedule: SOF Common TF/TA (Silent Knight) radar Initial Operational Test and Evaluation has been delayed until 2nd Quarter FY 2017, after an interoperability assessment revealed shortcomings in flight suitability and effectiveness. Another software version must be developed to address these shortcomings. EC-130J SOF-Unique 7.0/8.1 development slip was due to a delay in the 7.0/8.1 Air Force modification contract. C-130 SOF Common TF/TA (Silent Knight) radar trial kit installs were delayed due to subcontractor negotiations and resulted in a slip to contract award. No change in development start.					
Technical: None.					

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command										Date: May 2017		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems				Project (Number/Name) SF100 / Aviation Systems Advanced Development			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
SF100: Aviation Systems Advanced Development	603.132	106.358	91.659	175.543	-	175.543	105.713	44.226	24.273	15.860	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project provides for the investigation, evaluation, development, demonstration, and integration of current and maturing technologies for Special Operations Forces (SOF)-unique aviation and training requirements. Timely application of SOF-unique technology is critical and necessary to meet requirements in such areas as: SOF specific avionics; low probability of intercept/low probability of detection (LPI/LPD), terrain following/terrain avoidance (TF/TA) radar; Defensive Countermeasures (DCM) which includes Electronic Warfare – Radio Frequency Countermeasures (EW-RFCM); Precision Strike Package (PSP); AC-130H, AC-130W, and AC-130U recapitalization, and other SOF airborne platforms; digital terrain elevation data and electronic order of battle; digital maps; Airborne Mission Networking (AbMN); near-real-time intelligence to include data fusion, threat detection and avoidance; navigation, target detection and identification technologies; digital broadcast capability; aerial refueling; Survivability; and Intelligence, Surveillance, and Reconnaissance (ISR) payload technological improvements with size, weight, power and integration onto all SOF UAS ISR platforms.

- EC-130J Upgrades provides for integration of SOF-unique implementation of the C-130J block cycle upgrade as installed on the EC-130J Commando Solo aircraft and development of digital broadcast capabilities.
- EC-130J Commando Solo supports development, integration and testing of digital broadcast capabilities on the EC-130J Commando Solo aircraft.
- EW-RFCM supports development, integration and test activities to provide EW capability against RF threats for SOF AC/MC-130J aircraft. The DCM suite is an integrated package of existing and future aircraft defensive systems which provides situational awareness and threat response processing; this includes the RFCM system, and future defensive systems. RFCM program provides SOF-unique aircraft defensive capabilities required for SOF missions.
- PSP for SOF supports systems engineering, analysis, development, and enhancement of the baseline PSP and integration, installation, and test on host MC-130J aircraft provided by the U.S. Air Force for the AC-130H, AC-130W and AC-130U recapitalization, as well as current SOF C-130s, AC-130Js and AC-130Ws, and other SOF platforms. Missions for the AC-130 aircraft include, but are not limited to, Close Air Support (CAS), Air Interdiction, and Armed Reconnaissance. PSP is modular, scalable, and platform neutral.
- PSP High Energy Laser (HEL) supports demonstration of HEL weapon onto AC-130 platforms. HEL efforts include system design and evaluation of mature laser, beam director, power, and thermal subsystems. The HEL components will be designed for modular upgrades and integrated with the PSP system.
- C-130 SOF Common TF/TA (Silent Knight) Radar supports integration and test of a TF/TA radar and on-board processor to provide a multi-mode terrain following capability on MC-130J aircraft. Crew systems integration efforts include modifications to aircraft controls and displays to automate TF/TA flight management and reduce

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command			Date: May 2017			
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems	Project (Number/Name) SF100 / Aviation Systems Advanced Development				
pilot, copilot and Combat Systems Officer workload during missions previously performed by five aircrew members on legacy C-130 tankers and penetrators. This project received a congressional add in FY 2016.						
• SOF Common TF/TA (Silent Knight) Radar supports Engineering and Manufacturing Development (EMD), qualification, and operational flight testing of a SOF common TF/TA LPI/LPD radar to defeat advanced passive detection threats while maintaining ability to fly safe TF. This radar is targeted for use on MH-47G heavy assault helicopters, MH-60M medium assault helicopters, MC-130J Commando II and CV-22 Osprey aircraft.						
• ISR Payload Sensor Technology supports development, integration, and testing of sensor miniaturization efforts to adapt large (Group 4-5) unmanned aircraft system (UAS) ISR capabilities on all SOF UAS ISR platforms.						
B. Accomplishments/Planned Programs (\$ in Millions)						
		FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Title: EC-130J Upgrades		-	1.144	-	-	-
FY 2017 Plans: Continue development and testing of trial kit installation of C-130J block cycle upgrade.						
Title: EC-130J Commando Solo		2.293	-	-	-	-
FY 2016 Accomplishments: Completed integration and testing of digital broadcast capabilities on the EC-130J Commando Solo aircraft.						
Title: EW – RFCM		47.708	39.759	57.248	-	57.248
FY 2016 Accomplishments: Awarded two competitive EMD contracts for development. Completed preliminary design reviews, critical technology demonstrations, and critical design reviews for both candidate solutions to demonstrate technical maturity for EW capability against RF threats for SOF AC/MC-130J aircraft.						
FY 2017 Plans: Down selected to the best overall RF countermeasure system to support AC/MC-130J aircraft. Continue development to provide EW capability against RF threats for SOF AC/MC-130J aircraft.						
FY 2018 Base Plans: Continues development, integration and testing to provide EW capability against RF threats for SOF AC/MC-130J aircraft. Completes contactor hardware/software verification testing and begins government developmental ground and flight test activities.						
Title: PSP for SOF		14.095	10.294	13.512	-	13.512
FY 2016 Accomplishments:						

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command			Date: May 2017			
Appropriation/Budget Activity 0400 / 7		R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems		Project (Number/Name) SF100 / Aviation Systems Advanced Development		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Continued development, integration, test, and system improvement of the PSP on SOF C-130s and other SOF aircraft. FY 2017 Plans: Continue development, integration, test, and system improvement of the PSP on SOF C-130s and other SOF aircraft. FY 2018 Base Plans: Continues development, integration, test, and system improvement of the PSP on SOF C-130s and other SOF aircraft.						
Title: PSP High Energy Laser (HEL) FY 2018 Base Plans: Begins development of system architecture, design trades, interface control documentation, and risk reduction for AC-130J aircraft.		-	-	15.650	-	15.650
Title: C-130 SOF Common TF/TA (Silent Knight) Radar FY 2016 Accomplishments: Continued contracting efforts to integrate and test the SOF Common TF/TA (Silent Knight) radar system on MC-130J development testing aircraft and develop modifications to aircraft controls and displays to reduce aircrew workload. This included integrating the TF/TA radar system with the MC-130J Increment 3 special mission processors. FY 2017 Plans: Continue SOF Common TF/TA (Silent Knight) radar and aircraft control and display integration efforts. Prepare for flight test. FY 2018 Base Plans: Continues SOF Common TF/TA (Silent Knight) radar and aircraft control and display integration efforts. Installs TF radar system kits on two MC-130Js and begins MC-130J TF/TA developmental flight test. Begins training system development. Begins developing software for safety critical capabilities.		23.928	38.905	87.530	-	87.530
Title: SOF Common TF/TA (Silent Knight) Radar FY 2016 Accomplishments:		1.846	-	-	-	-

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command				Date: May 2017	
Appropriation/Budget Activity 0400 / 7		R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems		Project (Number/Name) SF100 / Aviation Systems Advanced Development	

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Continued qualification flight testing on the MH-60M and MH-47G assault helicopters.					
Title: ISR Payload FY 2016 Accomplishments: Began development, integration, and testing of sensor miniaturization effort to place large ISR platform capabilities, such as Group 4-5 UASs and fixed wing systems onto all SOF ISR platforms (e.g. such as Group 2-3 UASs). FY 2017 Plans: Continue spiral development to increase the smaller SOF ISR platforms' capabilities through incremental development, integration, and testing. FY 2018 Base Plans: Continues spiral development to increase the smaller SOF ISR platforms' capabilities through incremental development, integration, and testing.	1.288	1.557	1.603	-	1.603
Accomplishments/Planned Programs Subtotals	91.158	91.659	175.543	-	175.543
	FY 2016	FY 2017			
Congressional Add: C-130 SOF Common TF/TA (Silent Knight) Radar FY 2016 Accomplishments: Began contracting efforts to integrate and test the SOF Common TF/TA (Silent Knight) radar system on MC-130J development testing aircraft and develop modifications to aircraft controls and displays to reduce aircrew workload. This included integrating the TF/TA radar with the MC-130J Increment 3 special mission processors.	15.200	-			
Congressional Adds Subtotals	15.200	-			

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
• PROC/5000C13000: C-130 Modifications	25.940	32.970	28.059	3.750	31.809	24.696	20.739	20.632	16.307	Continuing	Continuing
• PROC/2012C130J: AC/MC-130J	49.669	80.048	179.934	0.000	179.934	182.288	203.006	192.047	188.916	Continuing	Continuing
• PROC/1202PSP: Precision Strike Package	217.779	243.622	229.728	-	229.728	236.937	240.043	244.477	203.249	Continuing	Continuing

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command			Date: May 2017
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems	Project (Number/Name) SF100 / Aviation Systems Advanced Development	

C. Other Program Funding Summary (\$ in Millions)

Line Item	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
• PROC0201RWUPGR: <i>Rotary Wing Upgrades and Sustainment</i>	124.520	154.396	158.988	-	158.988	146.705	138.578	143.338	147.415	Continuing	Continuing

Remarks

D. Acquisition Strategy

- EC-130J Upgrades: Operational Flight Program Block Cycle is being developed by the Air Force program office using existing development and production contracts.
- EC-130J Commando SOLO: Digital broadcast capabilities are being developed through an incremental acquisition strategy to incorporate and test readily available equipment into the EC-130J aircraft.
- EW – RFCM: Awarded competitive EMD contract for development. Down selected to the best overall solution to integrate and test an RF Countermeasures System on AC/MC-130J aircraft.
- PSP for SOF: Incremental acquisition strategy to integrate and test the PSP and capability enhancements on donor MC-130J aircraft provided by the U.S. Air Force and other SOF aircraft. Multiple contract awards.
- PSP HEL: AC-130 HEL program utilizes Naval Surface Warfare Center Dahlgren Division as the government integrator of HEL components. HEL system components purchased under Defense Ordinance Technology Consortium broad area announcement using incremental Cost Plus Fixed Fee contracts and cost sharing agreements.
- C-130 SOF Common TF/TA (Silent Knight) Radar: Awarded delivery order on Cost Plus Incentive Fee contract to integrate and test the SOF Common TF/TA (Silent Knight) radar on MC-130J aircraft and develop modifications to aircraft displays and controls. Government developmental test and evaluation, FY 2018 - FY 2020; Operational Test and Evaluation, FY 2021 with Initial Operational Capability, Q4FY2021.
- SOF Common TF/TA (Silent Knight) Radar: Competitive EMD contract was awarded to Raytheon in FY 2007 for radar B Kit design, development, and testing. Subsequent MH-47G and MH-60M A Kit design, integration, and test efforts awarded to Lockheed Martin (SOFSA). Low Rate Initial Production Contract II was awarded to Raytheon in May 2016. Follow-on platform A Kit aircraft install kits will be awarded in FY 2018 - FY 2019. MH-47G and MH-60M A Kit production and installation will be completed at the SOFSA. A follow-on Full Rate Production Firm-Fixed-Price contract following completion of operational testing.
- ISR Payload Sensor Technology: Effort is being executed via a spiral development, integration and testing acquisition strategy based on leveraging existing sensor technology. The focus will be on reducing the size, weight, power and cost of state of the art ISR sensors fielded on larger ISR platforms, such as Group 4-5 unmanned aircraft systems (UAS), in order to make them usable by smaller SOF ISR platforms, such as Group 2-3 UAS. This development will include the integration of the ISR capability with the platform's C2 and Communications systems as appropriate.

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command		Date: May 2017
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems	Project (Number/Name) SF100 / Aviation Systems Advanced Development

E. Performance Metrics
N/A

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Exhibit R-3, RDT&E Project Cost Analysis: FY 2018 United States Special Operations Command												Date: May 2017			
Appropriation/Budget Activity 0400 / 7						R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems				Project (Number/Name) SF100 / Aviation Systems Advanced Development					
Product Development (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
EC-130J Upgrades	C/CPIF	Lockheed Martin : Marietta, GA	5.811	-		1.144	Aug 2017	-		-		-	0.000	6.955	-
EC-130J Commando Solo	C/CPFF	Johns Hopkins University APL : Baltimore, MD	1.366	2.030	Feb 2016	-		-		-		-	0.000	3.396	-
Electronic Warfare - Radio Frequency Countermeasures (EW-RFCM)	C/Various	Robins AFB : Warner Robins, GA	15.932	39.993	Nov 2015	27.009	Jan 2017	41.133	Jan 2018	-		41.133	Continuing	Continuing	-
Precision Strike Package (PSP) for SOF	TBD	Various : Various	90.399	10.782	Jan 2016	8.807	Jan 2017	11.607	Jan 2018	-		11.607	Continuing	Continuing	-
PSP High Energy Laser (HEL)	C/CPFF	Naval Surface Warfare Center : Dahlgren, VA	-	-		-		15.650	Feb 2018	-		15.650	Continuing	Continuing	-
C-130 SOF Common TF/TA (Silent Knight) Radar	C/CPIF	Lockheed Martin Aero : Marietta, GA	60.699	15.800	Apr 2016	28.609	Jan 2017	71.821	Jan 2018	-		71.821	Continuing	Continuing	-
C-130 SOF Common TF/TA (Silent Knight) Radar (Congressional Add)	C/CPIF	Lockheed Martin Aero : Marietta, GA	-	15.200	Apr 2016	-		-		-		-	0.000	15.200	-
Intelligence, Surveillance, and Reconnaissance Payload	TBD	Various : Various	-	1.288	Mar 2016	1.557	Mar 2017	1.603	Mar 2018	-		1.603	Continuing	Continuing	-
Prior Year Funding - Completed Efforts	Various	Various : Various	197.421	-		-		-		-		-	0.000	197.421	-
Subtotal			371.628	85.093		67.126		141.814		-		141.814	-	-	-
Support (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
C-130 SOF Common TF/TA (Silent Knight) Radar	C/CPIF	Various : Various	4.556	2.393	Apr 2016	4.788	Dec 2016	7.305	Dec 2017	-		7.305	Continuing	Continuing	-

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Exhibit R-3, RDT&E Project Cost Analysis: FY 2018 United States Special Operations Command												Date: May 2017			
Appropriation/Budget Activity 0400 / 7						R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems				Project (Number/Name) SF100 / Aviation Systems Advanced Development					
Support (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
EW-RFCM	C/Various	Robins AFB : Warner Robins, GA	10.614	3.550	Nov 2015	3.950	Jan 2017	3.820	Jan 2018	-		3.820	Continuing	Continuing	-
Prior Year Funding - Completed Efforts	Various	Various : Various	28.802	-		-		-		-		-	0.000	28.802	-
Subtotal			43.972	5.943		8.738		11.125		-		11.125	-	-	-
Test and Evaluation (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
EW-RFCM	C/Various	Robins AFB : Warner Robins, GA	-	4.165	Nov 2015	8.800	Jan 2017	12.295	Jan 2018	-		12.295	Continuing	Continuing	-
EC-130J Commando Solo - EMI/EMC	MIPR	Naval Weapons Center, China Lake (NAWCWD) : Ridgecrest, CA	-	0.107	Feb 2016	-		-		-		-	Continuing	Continuing	-
Ec-130J Commando Solo - DT/OT&E Test	C/CPFF	Johns Hopkins University APL : Baltimore, MD	-	0.156	Apr 2017	-		-		-		-	Continuing	Continuing	-
PSP for SOF	C/Various	Various : Various	15.427	3.313	Jan 2016	1.487	Dec 2016	1.905	Dec 2017	-		1.905	Continuing	Continuing	-
C-130 SOF Common TF/TA (Silent Knight) Radar	C/CPIF	Various : Various	9.459	3.972	Apr 2016	3.645	Dec 2016	6.441	Dec 2017	-		6.441	Continuing	Continuing	-
SOF Common TF/TA (Silent Knight) Radar	C/CPIF	Various : Various	117.719	1.846	Jan 2016	-		-		-		-	0.000	119.565	-
Prior Year Funding - Completed Efforts	Various	Various : Various	8.640	-		-		-		-		-	0.000	8.640	-
Subtotal			151.245	13.559		13.932		20.641		-		20.641	-	-	-

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Exhibit R-3, RDT&E Project Cost Analysis: FY 2018 United States Special Operations Command												Date: May 2017			
Appropriation/Budget Activity 0400 / 7						R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems				Project (Number/Name) SF100 / Aviation Systems Advanced Development					
Management Services (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
C-130 SOF Common TF/TA (Silent Knight) Radar	C/CPIF	Various : Various	5.271	1.763	Dec 2015	1.863	Dec 2016	1.963	Dec 2017	-		1.963	Continuing	Continuing	-
Prior Year Funding - Completed Efforts	Various	Various : Various	31.016	-		-		-		-		-	0.000	31.016	-
Subtotal			36.287	1.763		1.863		1.963		-		1.963	-	-	-
			Prior Years	FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			603.132	106.358		91.659		175.543		-		175.543	-	-	-
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: FY 2018 United States Special Operations Command

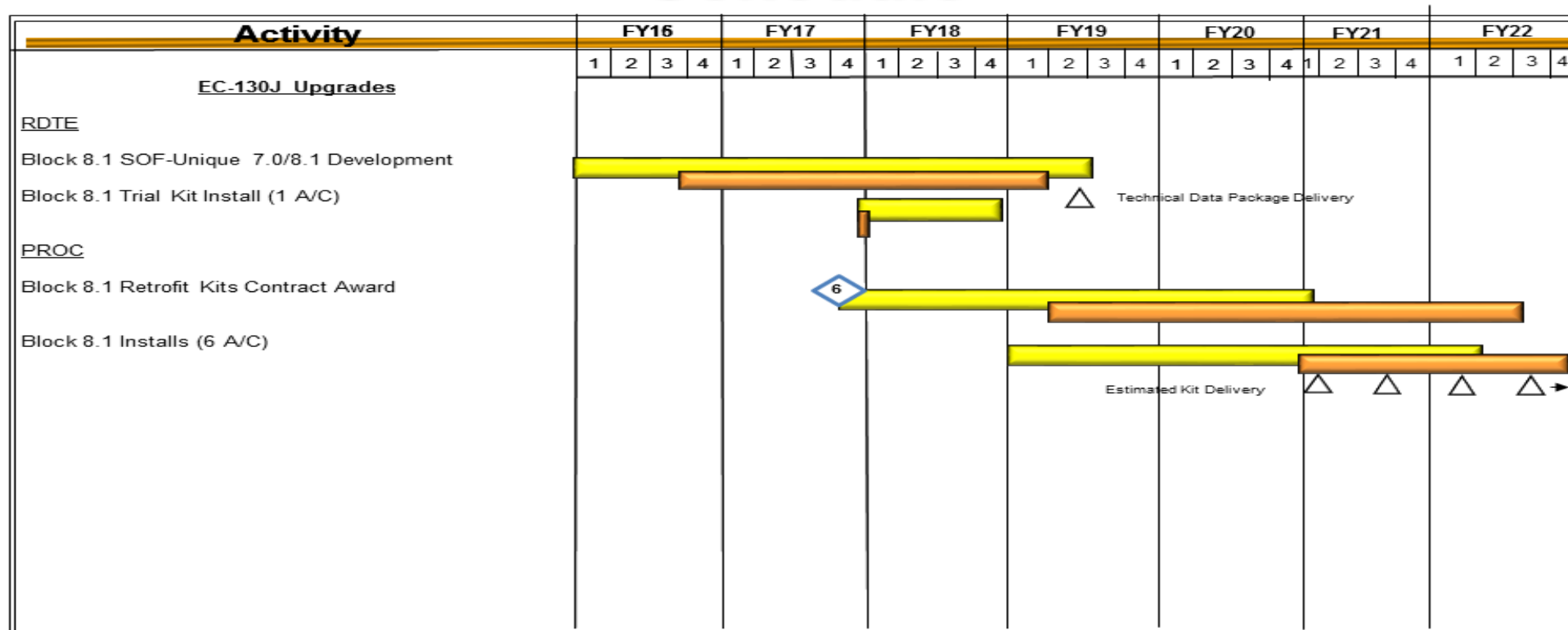
Date: May 2017






Appropriation/Budget Activity
0400 / 7

R-1 Program Element (Number/Name)
PE 1160403BB / Aviation Systems

Project (Number/Name)
SF100 / Aviation Systems Advanced
Development

EC-130J Upgrade Schedule



 Article Award
  Article Delivery
  RDT&E
  Procurement
  Previously Reported

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Exhibit R-4, RDT&E Schedule Profile: FY 2018 United States Special Operations Command

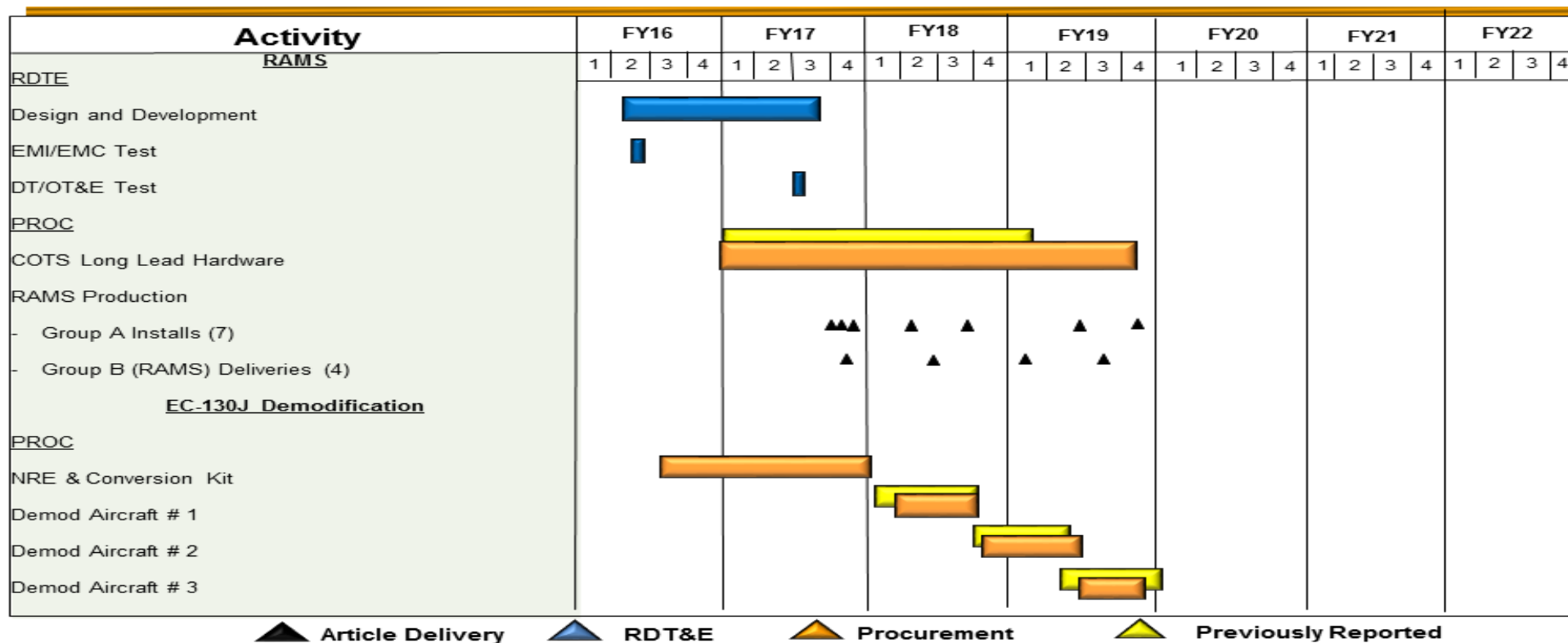
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Appropriation/Budget Activity
0400 / 7

R-1 Program Element (Number/Name)
PE 1160403BB / Aviation Systems

Project (Number/Name)
SF100 / Aviation Systems Advanced
Development

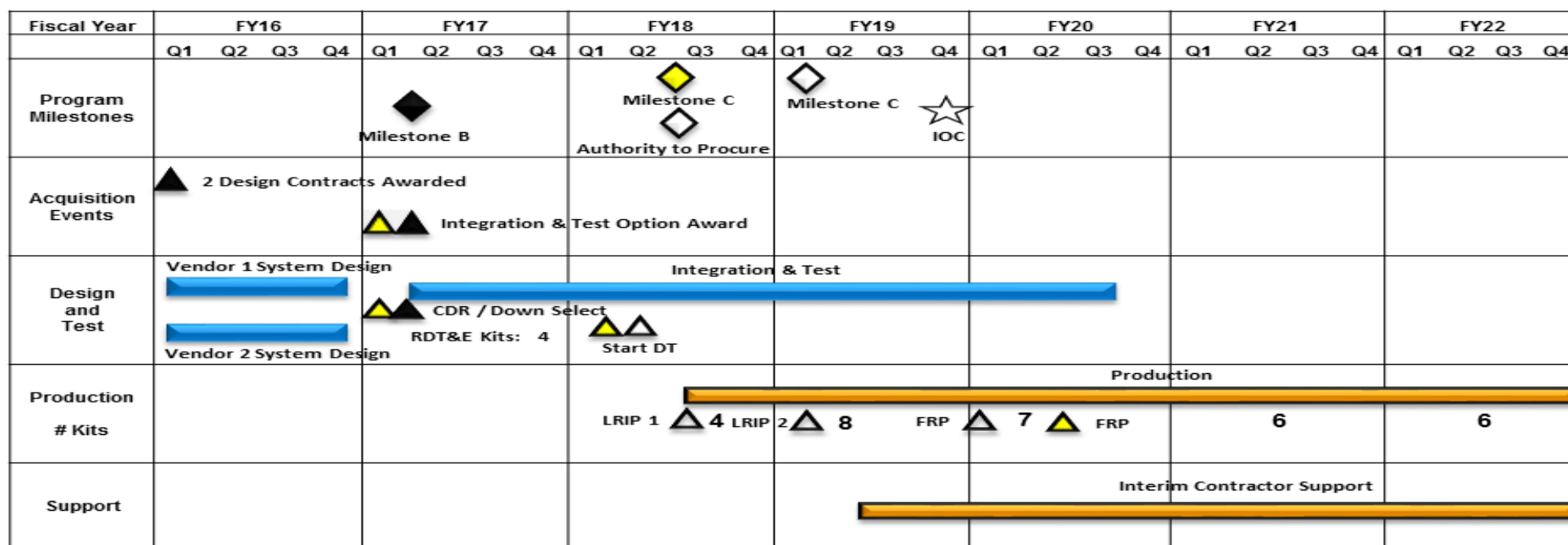
EC-130J CSOLO RAMS and De-Mod Schedule



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Exhibit R-4, RDT&E Schedule Profile: FY 2018 United States Special Operations Command			Date: May 2017
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems	Project (Number/Name) SF100 / Aviation Systems Advanced Development	

EW RFCM Schedule



 Previously Reported

 RDT&E

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Exhibit R-4, RDT&E Schedule Profile: FY 2018 United States Special Operations Command

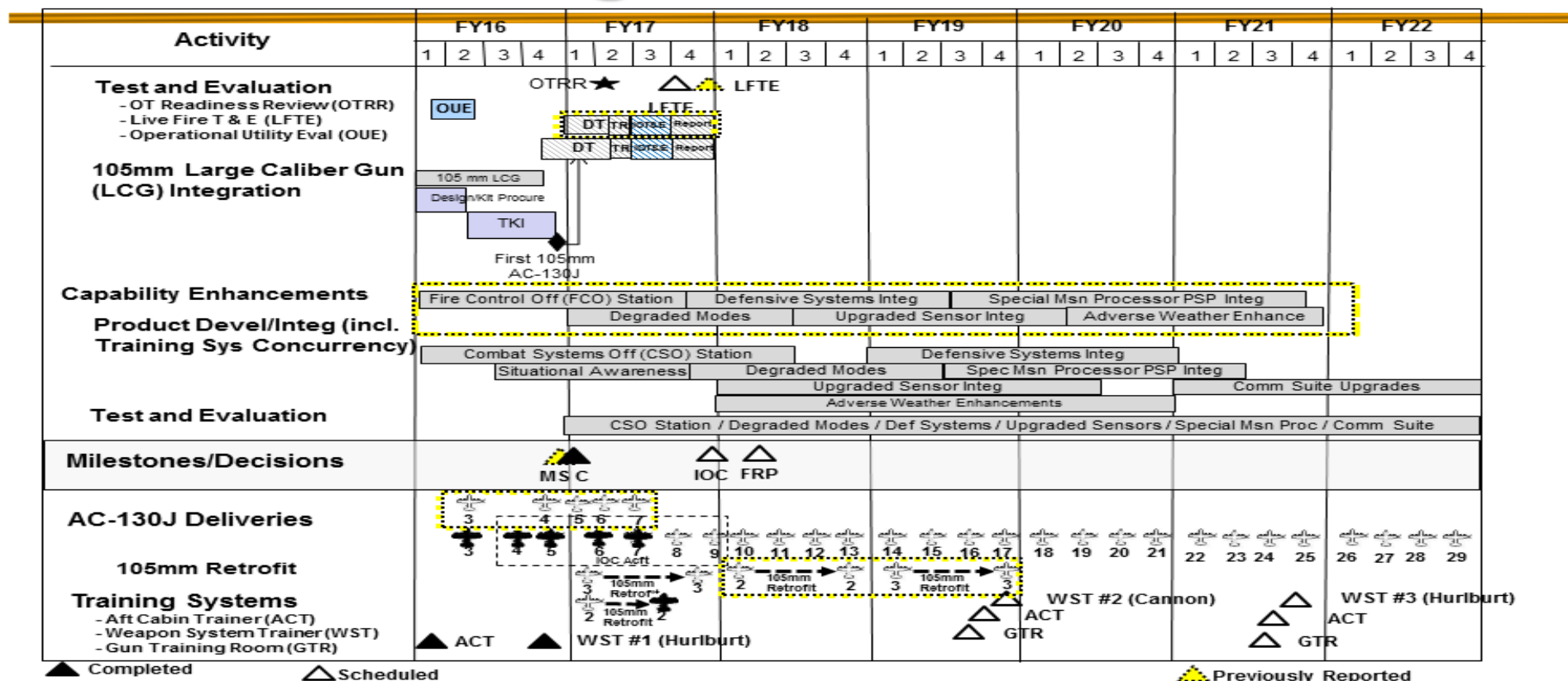
Date: May 2017

Appropriation/Budget Activity
0400 / 7

R-1 Program Element (Number/Name)
PE 1160403BB / Aviation Systems

Project (Number/Name)
SF100 / Aviation Systems Advanced
Development

AC-130J/PSP Integrated Schedule



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Exhibit R-4, RDT&E Schedule Profile: FY 2018 United States Special Operations Command

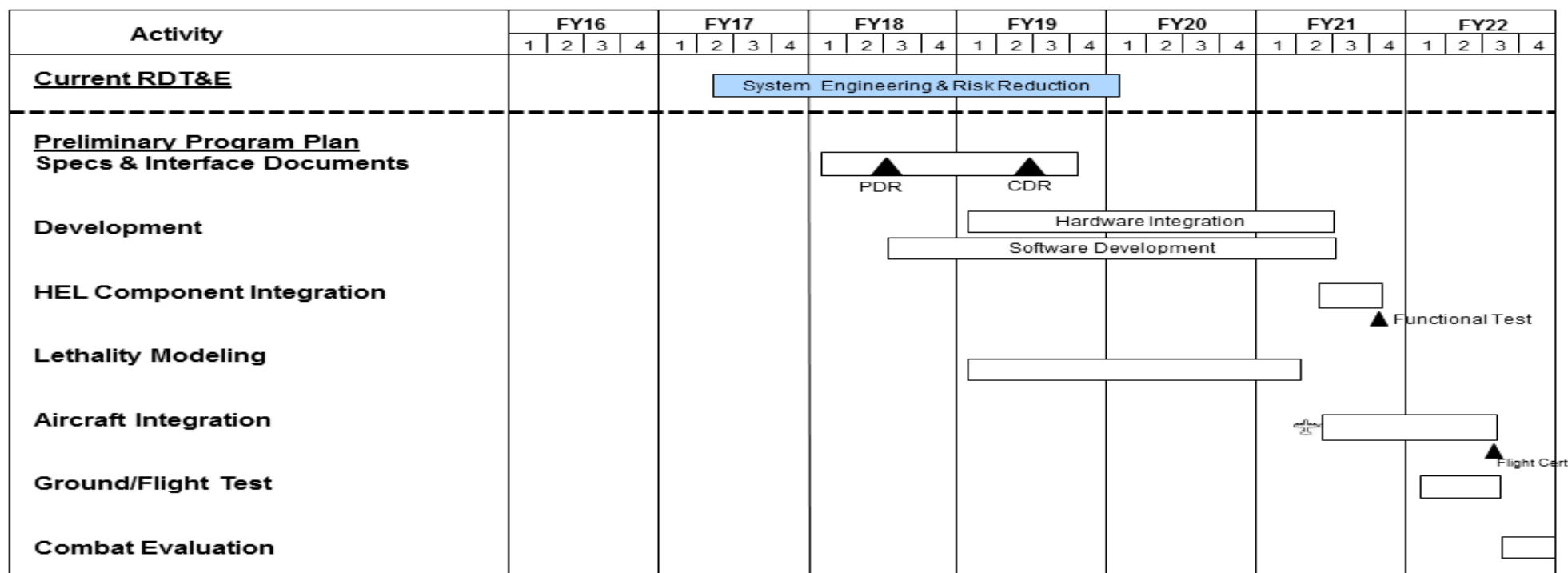
Date: May 2017

Appropriation/Budget Activity
0400 / 7

R-1 Program Element (Number/Name)
PE 1160403BB / Aviation Systems

Project (Number/Name)
SF100 / Aviation Systems Advanced Development

AC-130 High Energy Laser Schedule*



* Subject to change pending OSD (JCTD) FY17 funding request

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Exhibit R-4, RDT&E Schedule Profile: FY 2018 United States Special Operations Command

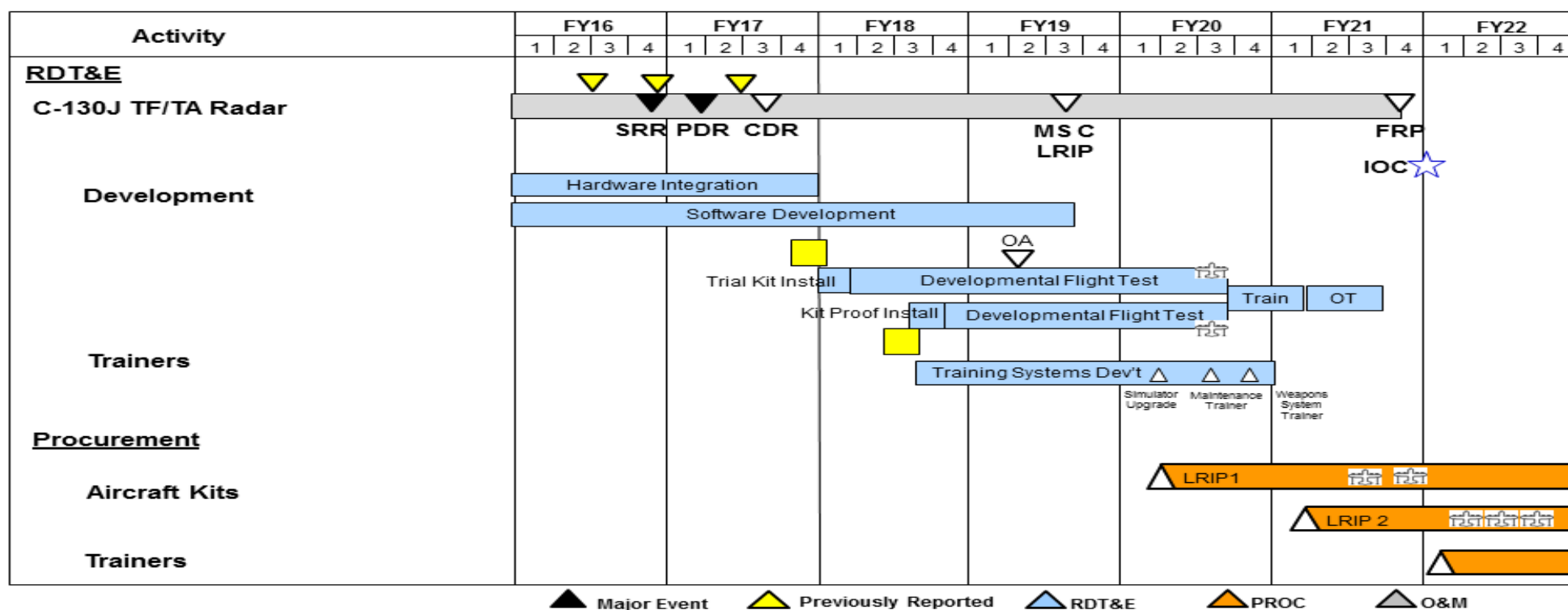
Date: May 2017

Appropriation/Budget Activity	0400 / 7
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R-1 Program Element (Number/Name)
PE 1160403BB / *Aviation Systems*

Project (Number/Name)	SF100 / <i>Aviation Systems Advanced Development</i>
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C-130 SOF Common TF/TA Radar Schedule



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Exhibit R-4, RDT&E Schedule Profile: FY 2018 United States Special Operations Command

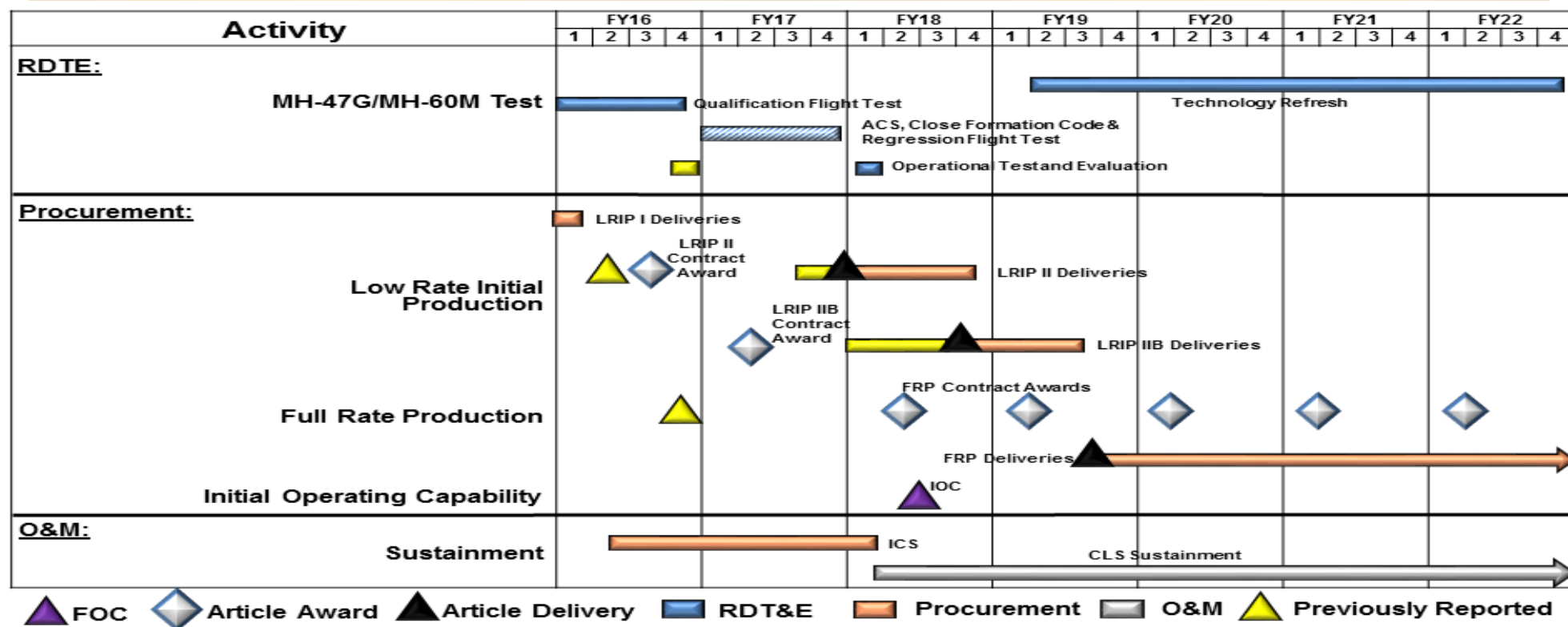
Date: May 2017

Appropriation/Budget Activity
0400 / 7

R-1 Program Element (Number/Name)
PE 1160403BB / Aviation Systems

Project (Number/Name)
SF100 / Aviation Systems Advanced
Development

SOF Common TF/TA (Silent Knight) Radar Schedule



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Exhibit R-4, RDT&E Schedule Profile: FY 2018 United States Special Operations Command

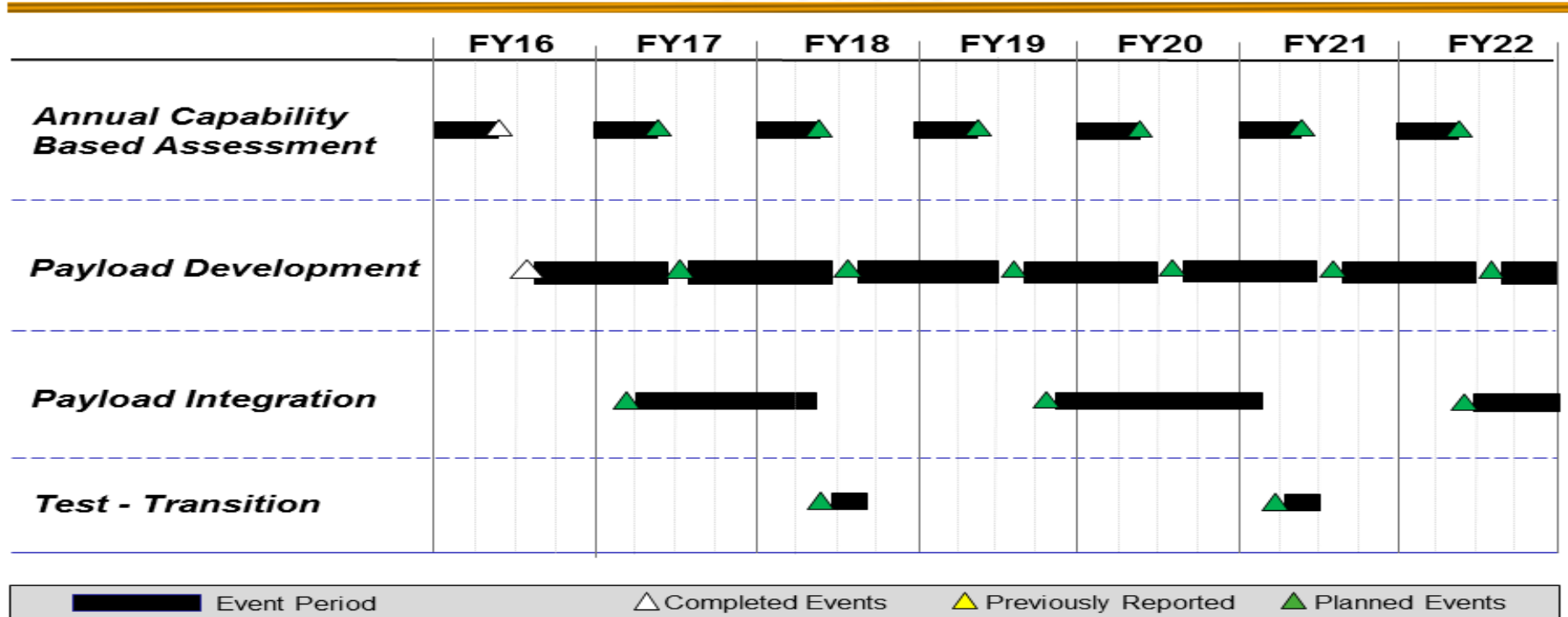
Date: May 2017

Appropriation/Budget Activity
0400 / 7

R-1 Program Element (Number/Name)
PE 1160403BB / Aviation Systems

Project (Number/Name)
SF100 / Aviation Systems Advanced
Development

Intelligence, Surveillance, and Reconnaissance Payload Sub-Project Schedule



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Exhibit R-4A, RDT&E Schedule Details: FY 2018 United States Special Operations Command			Date: May 2017
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160403BB / <i>Aviation Systems</i>	Project (Number/Name) SF100 / <i>Aviation Systems Advanced Development</i>	

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>EC-130J Upgrades</i>				
Development and Testing	3	2016	2	2019
<i>EC-130J Commando Solo</i>				
Development and Design	2	2016	3	2017
EMI/EMC and DT/OT&E Testing	2	2016	3	2017
<i>Electronic Warfare - Radio Frequency Countermeasures (EW-RFCM)</i>				
Vendor 1 and 2 System Design	1	2016	4	2016
Integration and Testing	2	2017	3	2020
<i>Precision Strike Package (PSP) for SOF</i>				
PSP for SOF Development, Integration, and Testing	2	2016	4	2022
<i>PSP High Energy Laser (HEL)</i>				
PSP HEL Development	2	2018	3	2021
<i>C-130 SOF Common Terrain Following/Terrain Avoidance (TF/TA) (Silent Knight) Radar</i>				
Software Development	1	2016	3	2019
Development/Flight Testing	2	2018	3	2020
Operational Testing	2	2021	3	2021
Training System Development	3	2018	1	2021
<i>SOF Common (TF/TA) (Silent Knight) Radar</i>				
Qualification Testing	1	2016	4	2016
Operational Testing	3	2017	3	2017
<i>Intelligence, Surveillance, and Reconnaissance (ISR) Payload</i>				

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Exhibit R-4A, RDT&E Schedule Details: FY 2018 United States Special Operations Command			Date: May 2017		
Appropriation/Budget Activity 0400 / 7		R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems		Project (Number/Name) SF100 / Aviation Systems Advanced Development	
		Start		End	
Events by Sub Project		Quarter	Year	Quarter	Year
Payload Development		3	2016	4	2022
Payload Integration (Phase 1)		1	2017	2	2018
Payload Integration (Phase 2)		4	2019	1	2021
Payload Testing (Phase 1)		2	2018	3	2018
Payload Testing (Phase 2)		1	2021	2	2021

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command										Date: May 2017		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems				Project (Number/Name) SF200 / CV-22			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
SF200: CV-22	2.993	0.000	15.590	14.259	-	14.259	21.635	27.961	8.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
Project MDAP/MAIS Code: 212												

A. Mission Description and Budget Item Justification

The CV-22 is a SOF variant of the V-22 vertical medium lift, multi-mission aircraft. The CV-22 project provides long range, high speed, infiltration, exfiltration, and resupply to Special Forces teams in hostile, denied, and politically sensitive areas. This is a capability not currently provided by other existing aircraft. The funding in this program supports integration, design, development, and test to provide improved capabilities to include, but not limited to, more robust performance in situational awareness, ISR, weapons, avionics, survivability, maneuverability, mission deployment and improved reliability and maintainability of the CV platform. CV-22 SOF Common TF/TA (Silent Knight) radar program provides long-range, night/adverse weather, clandestine penetration of medium-to-high threat areas to infill, exfill, and resupply SOF forces. Provides more sustainable/capable replacement to obsolescing and tech limited terrain following/avoidance radar.

- Block 20: Design, integrate, test, and validate enhancements required to meet SOF-unique mission requirements and correct deficiencies identified in previous testing. This incremental development will provide improved capabilities to include, but not limited to, robust performance in situational awareness, weapons, avionics, survivability, maneuverability, mission deployment, improved reliability and maintainability of the CV platform.

- CV-22 SOF Common TF/TA (Silent Knight) Radar: Provides long-range, night/adverse weather, clandestine penetration of medium-to-high threat areas to infill, exfill, and resupply SOF forces. Provides more sustainable/capable radar to replace obsolescing and tech limited APQ-186 terrain following/avoidance radar.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Title: SOF Common TF/TA (Silent Knight) Radar	-	15.590	14.259	-	14.259
FY 2017 Plans: Conduct System Readiness Review. Begin integration/design of TF/TA radar replacement using SOF Common TF/TA (Silent Knight) Radar.					
FY 2018 Base Plans: Continues integration/testing of SOF Common TF/TA (Silent Knight) Radar.					
Accomplishments/Planned Programs Subtotals	-	15.590	14.259	-	14.259

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command	Date: May 2017
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Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160403BB / <i>Aviation Systems</i>	Project (Number/Name) SF200 / CV-22
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C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u> <u>Base</u>	<u>FY 2018</u> <u>OCO</u>	<u>FY 2018</u> <u>Total</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• PROC/1000CV22: <i>CV-22 SOF Modification</i>	33.582	24.708	42.178	-	42.178	22.724	27.736	31.563	47.210	Continuing	Continuing
• PROC/V022A0: <i>Aircraft Procurement CV-22 (MYP)</i>	64.500	-	-	-	-	-	-	-	-	0.000	4,318.234
• RDT&E1/0401318F: <i>RDT&E, USAF</i>	27.776	16.702	17.455	-	17.455	16.634	14.724	14.984	15.254	64.350	225.577
• RDT&E/0604262N: <i>V-22 RDT&E, N BA-05</i>	76.366	174.423	173.742	-	173.742	137.519	167.116	94.629	118.777	184.398	10,252.729

Remarks

D. Acquisition Strategy

The SOF Common TF/TA (Silent Knight) radar was developed by USSOCOM to replace the existing, obsolescing APQ-186 TF/TA multimode radar on the CV-22. The acquisition strategy for the CV-22 SKR program is to procure APQ-187 radar units and software modifications through the USSOCOM SKR Program Management Office. Contracts will be awarded to integrate SKR into the V-22 platform and buy aircraft modification kits, using a mixture of both sole source and competitive contracts.

E. Performance Metrics

N/A

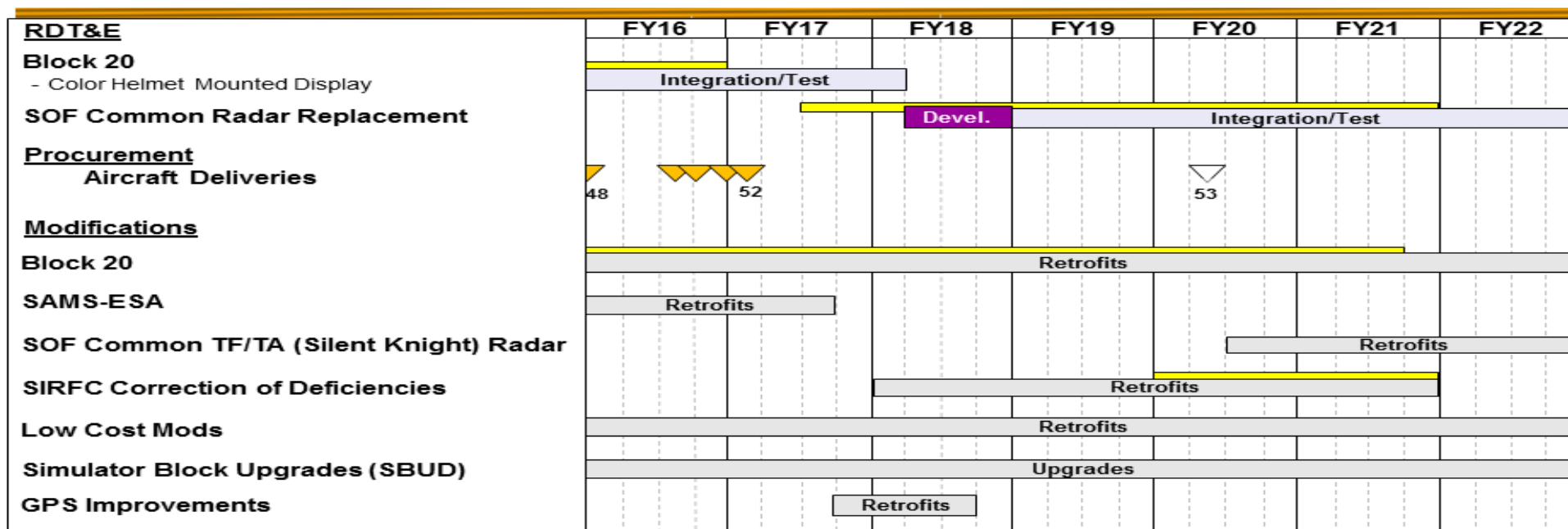
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Exhibit R-3, RDT&E Project Cost Analysis: FY 2018 United States Special Operations Command												Date: May 2017			
Appropriation/Budget Activity 0400 / 7						R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems				Project (Number/Name) SF200 / CV-22					
Product Development (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
SOF Common TF/TA (Silent Knight) Radar	TBD	Various : Various	-	-		15.590	Apr 2017	12.720	Jan 2018	-		12.720	Continuing	Continuing	-
Block 20	Various	Various : Various	1.057	-		-		-		-		-	0.000	1.057	-
Subtotal			1.057	-		15.590		12.720		-		12.720	-	-	-
Test and Evaluation (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
SOF Common TF/TA (Silent Knight) Radar	TBD	Various : Various	-	-		-		1.539	Jan 2018	-		1.539	Continuing	Continuing	-
Block 20 Flight Test and Evaluation	Various	Various : Various	1.936	-		-		-		-		-	0.000	1.936	-
Subtotal			1.936	-		-		1.539		-		1.539	-	-	-
			Prior Years	FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			2.993	-		15.590		14.259		-		14.259	-	-	-
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: FY 2018 United States Special Operations Command			Date: May 2017
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems	Project (Number/Name) SF200 / CV-22	

CV-22 Schedule



Production / Fielding
Previously Reported

Design / Development
Key Events

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Exhibit R-4A, RDT&E Schedule Details: FY 2018 United States Special Operations Command	Date: May 2017
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Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160403BB / <i>Aviation Systems</i>	Project (Number/Name) SF200 / CV-22
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Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
CV-22				
Block 20 Development/Test	1	2016	3	2017
Design, Integration and Test SOF Common TF/TA (Silent Knight) Radar	2	2018	4	2022

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command										Date: May 2017		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems				Project (Number/Name) S750 / Mission Training and Preparation Systems			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
S750: Mission Training and Preparation Systems	12.837	6.810	7.890	8.181	-	8.181	8.252	8.309	9.408	9.596	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project funds the definition, design, development, prototyping, integration, and testing of Mission Training and Preparation Systems (MTPS) to support training, avoid obsolescence, and maintain simulator concurrency with weapon system configurations; support mission planning and rehearsal systems enhancements required to meet Special Operations Force (SOF)-unique mission requirements and correct deficiencies identified in previous testing; and support mission planning and rehearsal capabilities in current MTPS. The MTPS project also includes program management, systems engineering, configuration management, architecture development, risk reduction, and trade study initiatives, as well as initiatives to assure interoperability and commonality between diverse SOF training systems.

Special Operations Mission Planning and Execution (SOMPE) develops, integrates, tests, and validates software enhancements required to meet SOF-unique requirements for, and correct deficiencies to, mission planning, preview, and execution software tools to support all phases of SOF operations from deliberate to time-critical. The SOMPE project automates time-sensitive planning activities and provides enhanced situational awareness during mission execution. SOMPE provides the interoperable environment for SOF adaptive planning to integrate global operations including, but not limited to, precision strike software, digital navigation, and unmanned aerial systems command and control. This project also provides the integration of SOMPE with multi-dimensional visualization systems, providing immersive mission rehearsal in minimal timeframes from the SOMPE mission plan. SOMPE is embedded in the USSOCOM Headquarters, Theater Special Operations Commands, Joint Special Operations Task Forces, Joint Special Operations Aviation Components, SOF warfighters, and SOF warfighter platforms.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Title: SOMPE	6.810	7.890	8.181	-	8.181
FY 2016 Accomplishments: Continued development of software applications to address SOF-unique aviation, ground and maritime mission planning requirements, data transfer software from mission planning systems to SOF helicopters, airplanes, and simulator/rehearsal systems, and automated performance models and performance prediction software. Continued updating of mission planning, data transfer and performance software. Continued development of software applications for smaller mobile computer devices (tablets, smart phones, etc).					
FY 2017 Plans: Continue development of software applications to address SOF-unique aviation, ground and maritime mission planning requirements, data transfer software from mission planning systems to SOF helicopters, airplanes, and simulator/rehearsal systems, and automated performance models and performance prediction software.					

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command				Date: May 2017		
Appropriation/Budget Activity 0400 / 7		R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems		Project (Number/Name) S750 / Mission Training and Preparation Systems		
B. Accomplishments/Planned Programs (\$ in Millions)						
		FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Continue updating of mission planning, data transfer and performance software. Continue development of software applications for smaller mobile computer devices (tablets, smart phones, etc).						
<i>FY 2018 Base Plans:</i> Continues development of software applications to address SOF-unique aviation, ground and maritime mission planning requirements, data transfer software from mission planning systems to SOF helicopters, airplanes, and simulator/rehearsal systems, and automated performance models and performance prediction software. Continues updating of mission planning, data transfer and performance software. Continues development of software applications for smaller mobile computer devices (tablets, smart phones, etc).						
Accomplishments/Planned Programs Subtotals		6.810	7.890	8.181	-	8.181
C. Other Program Funding Summary (\$ in Millions) N/A						
Remarks						
D. Acquisition Strategy SOMPE comprises multiple mission planning software development contracts awarded to developers for each project effort. Acquisition strategies depend on the type of development effort. For minor software development projects, contracts may be awarded as sole source acquisitions from existing contract vehicles. For major software development projects, contracts may be awarded as limited or full and open competition acquisitions. Individual acquisition strategies are developed as the scope of software development projects are identified and defined.						
E. Performance Metrics N/A						

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command										Date: May 2017		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems				Project (Number/Name) S875 / AC/MC-130J			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
S875: AC/MC-130J	22.763	7.143	7.964	9.351	-	9.351	17.236	24.127	53.408	54.908	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The AC/MC-130J project funds core Special Operations Forces (SOF)-unique modifications to replace aging/retired MC-130E Combat Talon I, MC-130P Combat Shadow, MC-130H Combat Talon II, AC-130H Spectre, AC-130W Stinger II, and AC-130U Spooky aircraft. The 8 AC-130H Spectre, 12 AC-130W Stinger II and 17 AC-130U Spooky airframes will be replaced with MC-130J aircraft modified with the Precision Strike Package (PSP) to achieve the AC-130J Gunship configuration. The AC-130J aircraft perform close air support (CAS), air interdiction, and armed reconnaissance missions. The MC-130J aircraft perform clandestine or low visibility, single- or multi-ship low-level missions intruding politically-sensitive or hostile territories; provide air refueling for special operations helicopters and CV-22 aircraft; and airdrop leaflets, small special operations teams, resupply bundles and combat rubber raiding craft. Additional capabilities include low-level navigation and in-flight refueling. The Air Force will procure and field basic aircraft, common support equipment, and trainers for USSOCOM. An incremental upgrade approach will be used to incorporate SOF capabilities onto the aircraft and training systems.

Aviation Systems funds develop, integrate, and test aircraft enhancements to meet SOF-unique mission requirements. Enhancements include, but are not limited to, SOF communications, mission processors, aircraft performance enhancements, Airborne Mission Networking (AbMN), electronic warfare and survivability systems, and other SOF mission kits. Provides PSP aircraft infrastructure development.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Title: MC-130J Airborne Mission Networking (AbMN)	6.588	7.556	8.927	-	8.927
FY 2016 Accomplishments: Achieved Milestone B (Engineering and Manufacturing Development) approval to develop hardware and software and flight test an airborne mission system on the MC-130J. Awarded contract for aircraft antenna co-site analysis, system processor study, and initial software development.					
FY 2017 Plans: Complete aircraft antenna co-site analysis, system processor study, and initial software development. Design and integrate Group A and B hardware, complete software development, and conduct hardware and software testing in the systems integration laboratory.					
FY 2018 Base Plans: Completes Trial Kit Installation and prepares for ground and flight testing.					
Title: AC-130J	0.555	0.408	0.424	-	0.424
FY 2016 Accomplishments:					

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command			Date: May 2017		
Appropriation/Budget Activity 0400 / 7		R-1 Program Element (Number/Name) PE 1160403BB / <i>Aviation Systems</i>		Project (Number/Name) S875 / <i>AC/MC-130J</i>	

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Continued development and tested aircraft modification designs for PSP kit installation.					
<i>FY 2017 Plans:</i> Continue development and test aircraft modification design for PSP kit installation.					
<i>FY 2018 Base Plans:</i> Continues development and tests aircraft modification designs for PSP kit installation.					
Accomplishments/Planned Programs Subtotals	7.143	7.964	9.351	-	9.351

C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018 Base</u>	<u>FY 2018 OCO</u>	<u>FY 2018 Total</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• PROC/2012C130J: <i>AC/MC-130J</i>	46.669	80.048	179.934	-	179.934	182.288	203.006	192.047	188.916	Continuing	Continuing
• PROC/1202PSP: <i>Precision Strike Package</i>	217.779	243.622	229.728	-	229.728	236.937	240.043	244.477	203.249	Continuing	Continuing

Remarks

D. Acquisition Strategy

MC-130J AbMN: Award sole source Firm-Fixed Price contract to develop a battlespace information exchange system for the MC-130J consisting of Government/Commercial-off-the-shelf communications and computing hardware and Government/developmental software. This approach leverages portions of the AC-130J gunship infrastructure design applicable to the MC-130J. After completing developmental and operational flight testing, award a competitive Firm-Fixed Price contract for production, aircraft integration, and fielding.

The basic AC-130J aircraft will be acquired under the U.S. Air Force HC/MC-130J Recapitalization procurement program. USSOCOM will fund development, integration, and testing of capability enhancements for SOF-unique mission equipment using an incremental acquisition strategy. Multiple contract awards.

E. Performance Metrics

N/A

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command										Date: May 2017		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems				Project (Number/Name) D615 / Rotary Wing Aviation			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
D615: Rotary Wing Aviation	88.745	52.654	40.440	52.552	-	52.552	24.770	19.534	13.872	14.150	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project develops/upgrades Special Operation Forces (SOF) rotary wing aircraft systems that operate in increasingly hostile environments. This project includes modifications to Aircraft Survivability Equipment (ASE) and weapons systems to counter rapidly merging threats, improved lethality and enhanced aircraft self-protection. Rotary wing aircraft supported by this project include: A/MH-6M, MH-60M, and MH-47G. These aircraft provide aviation support to SOF in world-wide contingency operations and low-intensity conflicts and they must be capable of rapid deployment, undetected penetration of hostile areas, and operating at extended ranges under adverse weather conditions to infiltrate, provide logistics for, reinforce, and extract SOF. The threat is characterized by an extensive and sophisticated ground based air defense system and an upgraded air-to-air capability targeted against helicopters. Sub-projects include:

- A/MH-6M Block 3.0 Upgrade is necessary to restore structural, performance, and safety margins for the aircrews. An airframe structural modification and/or airframe replacement will address recurring structural failures due to high intensity, high gross weight operations, and a decade of battle damage. A main/tail rotor drive train and engine control improvement efforts will reduce airframe loads and restore sufficient safety and performance margins. An avionics upgrade will replace obsolescent components to the extent possible and provide improved battlefield situational awareness to the aircrews and customers necessary to support time sensitive mission requirements. This upgrade is critical in keeping the A/MH-6M aircraft operational through FY 2020 and beyond or until a suitable replacement aircraft is available. The non-recurring effort supports development, fabrication of test hardware, qualification of components and systems, and data items to support issuance of Government airworthiness releases for structural and software modifications.
- MH-60M Modification and Upgrades develops technologies to improve safety of the MH-60 and decrease operational costs. Efforts include, but are not limited to, DOD MH-60 engineering changes, product improvements to SOF unique equipment and munitions during testing. This sub-project also includes modifications to ASE and weapons systems to counter rapidly emerging threats, improve lethality and enhance aircraft self-protection.
- MH-60M Block Upgrades provides the development, integration, and qualification efforts on the MH-60 helicopter to include flight test support, engineering analysis, documentation, and airworthiness substantiation.
- Degraded Visual Environment (DVE) solution will fuse information from currently fielded aircraft sensors with emerging technology to display real-time reference points, obstacles, and landing zone information to the aircrew. The DVE solution will provide MH-47/60 aircrews with visual cues for obstacle avoidance and aircraft control during all phases of flight and significantly increase crew and passenger survivability in Degraded Visual Environments. This program addresses SOF-unique requirements for rapid fielding and weight limitations, capitalizes on the unique skills of the SOF aviator while integrating with SOF-unique avionics, and leverages existing sensors on SOF aircraft to the maximum extent possible.
- Future Vertical Lift (FVL) program provides for the long-term replacement of an aging fleet of aircraft and provides a significant increase in range, speed, payload, survivability, reliability, and maintainability of vertical lift aircraft to meet emerging mission requirements. USSOCOM will participate in the service-common development

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command		Date: May 2017
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160403BB / <i>Aviation Systems</i>	Project (Number/Name) D615 / <i>Rotary Wing Aviation</i>
<p>of a joint future vertical lift aircraft by injecting USSOCOM requirements and equities into the initial development and design efforts to minimize SOF-unique modifications to the common aircraft.</p> <ul style="list-style-type: none"> • Infrared Countermeasure (IRCM) program provides a low Size, Weight, and Power (SWaP) capability suitable for the A/MH-6 Mission Enhanced Little Bird with potential use on the MH-60 and MH-47 aircraft. The IRCM program will integrate and test a complete lightweight IRCM system to include a missile warning system and countermeasure capability and infrared suppressor. The A/MH-6 is the only tactical aircraft in the SOF inventory without protection from infrared guided and other advanced Man Portable Air Defense missiles. • MH-47 Modifications and Upgrades program develops technologies to improve performance and safety of the MH-47G and decrease operational costs. Efforts include, but are not limited to, the Active Parallel Actuator System (APAS) and Engine Barrier Filter. This sub-project also includes modifications to ASE and weapons systems to counter rapidly emerging threats and enhance aircraft self-protection. • Mission Processor Upgrade (MPU) program provides for non-recurring engineering (NRE), systems engineering/testing, and future aircraft architecture studies that support the replacement and upgrade of the current mission and video processors for all Army Special Operations Aviation (ARSOA). Upgrading all internal processors increases the processing power to support critical functionality and emerging technologies that will be integrated into the Common Avionics Architecture System. This MPU provides the processing and memory resources required to incorporate the following functions into the General Purpose Processing Unit: (1) Global Air Traffic Management replaces ground-based navigation aids with a capability that meets the international requirement that all aircraft be compliant with digital and space-based navigation systems; (2) Situational Awareness for Safe Aircraft Recovery provides passive survivability for flight operations in all weather conditions by providing three-dimensional displays with flight path guidance to increase battle space awareness in zero-visibility conditions; (3) Cognitive Decision Aiding System fuses information on threat, route, weather, terrain, and friendly forces instantaneously adjusting an aircraft's route to protect the flight crew in hazardous weather, low levels, and night conditions. • Next Generation Forward Looking Infrared (NGFLIR) program improves targeting, tracking, and aircrew situational awareness on ARSOA platforms. This program mitigates obsolescence and increases functionality on the light and heavy assault platforms within the ARSOA fleet. • The Aircraft Survivability Equipment (ASE) Upgrades program develops, integrates, and tests critical active and passive SOF-unique aircraft survivability equipment to counter the acknowledged high proliferation of advanced Surface-to-Air (SA) threat systems for the A/MH-6, MH-60, and MH-47. Additionally, these threat systems are technically evolving at an unprecedented rate, requiring rapid counter system development and immediate spiraled improvements that will reduce the probability of successful engagement, increase the probability of detecting and countering threat systems, and improve the aircraft's ability to continue operating after sustained battle damage. This program includes development and testing of both new systems and pre-planned product improvements/upgrades of fielded survivability equipment, flares, and associated qualification testing. • Secure Real Time Video (SRTV) ensures that while en route to an objective, SOF aircrews and operators have access to the latest data collected on the objective enabling them to maintain situational awareness and improve survivability. This project will integrate and test software and hardware improvements to provide SOF helicopters with access to rapidly evolving, real-time full motion video intelligence. 		

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command			Date: May 2017			
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems	Project (Number/Name) D615 / Rotary Wing Aviation				
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Title: A/MH-6M Block 3.0 Upgrade FY 2016 Accomplishments: Continued system level qualification of improved rotor system, avionics upgrade software development, qualifications and initiated Airworthiness and Flight Characteristics testing efforts. FY 2017 Plans: Continue avionics software qualification and Airworthiness and Flight Characteristics testing efforts. FY 2018 Base Plans: Completes software qualification, Airworthiness and Flight Characteristics testing efforts.		20.254	12.890	13.384	-	13.384
Title: MH-60M Modifications and Upgrades FY 2017 Plans: Begin integration and testing of technologies to improve safety and decrease operational costs to include aircraft survivability equipment, weapons systems improvement and munitions during testing. FY 2018 Base Plans: Continues integration and testing of technologies to improve safety and decrease operational costs to include aircraft survivability equipment, weapons systems improvement and munitions during testing.		-	0.677	3.479	-	3.479
Title: MH-60M Block Upgrades FY 2016 Accomplishments: Completed integration and flight qualification for the MH-60M Block Upgrades.		7.152	-	-	-	-
Title: DVE FY 2016 Accomplishments: Continued development and integration of the selected DVE technical solution. FY 2017 Plans: Complete the development and integration of the DVE technical solution.		8.965	9.462	-	-	-
Title: FVL FY 2016 Accomplishments: Continued participation in providing guidance and infrastructure necessary for FVL to implement a mission systems architecture that enables the integration of SOF capabilities into the aircraft. FY 2017 Plans:		0.029	0.938	1.123	-	1.123

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command			Date: May 2017			
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems	Project (Number/Name) D615 / Rotary Wing Aviation				
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Continue participation in providing guidance and infrastructure necessary for FVL to implement a mission systems architecture that enables the integration of SOF capabilities into the aircraft. FY 2018 Base Plans: Continues to participate in providing guidance and infrastructure necessary for FVL to implement a mission systems architecture that enables the integration of SOF capabilities into the aircraft.						
Title: IRCM FY 2016 Accomplishments: Continued development, integration, and qualification testing of missile warning and lightweight IRCM systems for the A/MH-6 aircraft. FY 2017 Plans: Continue qualification testing of missile warning and lightweight IRCM systems for the A/MH-6 aircraft. FY 2018 Base Plans: Continues qualification testing of missile warning and lightweight IRCM systems for the A/MH-6 aircraft.		4.940	6.898	2.277	-	2.277
Title: MH-47 Modifications and Upgrades FY 2016 Accomplishments: Continued development of APAS and the Engine Barrier Filter for MH-47G. FY 2017 Plans: Continue APAS development and completes the development of the Engine Barrier Filter for MH-47G. FY 2018 Base Plans: Continues APAS development, including integration with MH-47G subsystems.		11.053	8.501	10.721	-	10.721
Title: MPU FY 2016 Accomplishments: Began development of replacement mission and video processors for the ARSOA platforms. FY 2017 Plans: Continue testing of replacement mission and video processors for the ARSOA platforms. FY 2018 Base Plans:		0.232	1.074	5.087	-	5.087

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command				Date: May 2017	
Appropriation/Budget Activity 0400 / 7		R-1 Program Element (Number/Name) PE 1160403BB / <i>Aviation Systems</i>		Project (Number/Name) D615 / <i>Rotary Wing Aviation</i>	

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Continues testing of replacement mission and video processors for ARSOA platforms and begin exploration of the next generation ARSOA cockpit.					
Title: NGFLIR FY 2016 Accomplishments: Completed integration and testing of a life-cycle replacement for the Q2V2 Electro-Optical Sensor Systems (EOSS) on the MH-60M Defensive Armed Penetrator (DAP).	0.029	-	-	-	-
Title: ASE Upgrades FY 2018 Base Plans: Begins development of new systems, pre-planned product improvements/upgrades of fielded survivability equipment, and continued development of flare countermeasures.	-	-	15.889	-	15.889
Title: SRTV FY 2018 Base Plans: Begins development of lighter, smaller, and more capable Full Motion Video Transceiver.	-	-	0.592	-	0.592
Accomplishments/Planned Programs Subtotals	52.654	40.440	52.552	-	52.552

C. Other Program Funding Summary (\$ in Millions)

Line Item	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
• PROC/0201RWUPGR: <i>Rotary Wing Upgrades and Sustainment</i>	124.520	154.396	158.988	-	158.988	146.705	138.578	143.338	147.415	Continuing	Continuing
• 0201MH60: <i>MH-60 Blackhawk</i>	-	18.600	-	-	-	-	-	-	-	925.813	925.813
• 0601MH47: <i>MH-47 Chinook</i>	-	25.022	87.345	10.270	97.615	131.033	174.617	175.266	178.771	Continuing	Continuing

Remarks

D. Acquisition Strategy

• A/MH-6M Block 3.0 Upgrade comprises three major efforts: airframe/rotors, engine control, and cockpit. The airframe/rotors development effort will be a sole-source contract to Boeing, owner of the technical data associated with the A/MH-6 airframe. The engine control work will be performed by Rolls-Royce and Triumph Electronic Control Systems under sole-source contract to Rolls Royce. The cockpit avionics architecture will be developed by Rockwell-Collins. Any new hardware components will be Non Developmental Item (NDI)/Commercial-Off-The-Shelf (COTS) to the extent possible and will be competitively selected. Airframe modification and integration work will be conducted at the Special Operations Forces Support Activity (SOFSa) by the incumbent contractor.

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command		Date: May 2017
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160403BB / <i>Aviation Systems</i>	Project (Number/Name) D615 / <i>Rotary Wing Aviation</i>
<ul style="list-style-type: none"> • MH-60M Modifications and Upgrades supports systems integration and qualification efforts on the prototype MH-60M helicopter. This includes, but is not limited to, government and contractor flight test support, engineering analysis, documentation, and airworthiness substantiation. Airframe modification and integration work will be conducted at SOFSA by the incumbent contractor. • MH-60M Block Upgrades are accomplished for 72 MH-60M base aircraft with various contractors and acquisition vehicles. The SOFSA executes SOF-unique upgrade modifications onto the MH-60M base aircraft. • DVE integrates and qualifies a solution to address a safety of flight issue while flying in degraded visual environments. A competitive source selection process was conducted for the DVE solution which will procure, integrate, and install components to provide real-time “see through” imagery and heads up display of visual cues for obstacle avoidance and landing zone information during all phases of flight. • FVL is the SOF aviation participation in the Joint FVL effort to develop the next generation of vertical takeoff and landing aircraft and establishes the foundation for the transformation of DOD vertical lift aviation capabilities over the next forty years. • IRCM integrates a mission configurable Missile Warning System and IRCM capability at a weight suitable for the A/MH-6 aircraft. Procurement of systems for integration and test will leverage Naval Research Lab IRCM development efforts and contracts. The Government will integrate the systems onto the A/MH-6 utilizing existing aircraft modification contracts. • MH-47 Modifications and Upgrades will develop technologies to improve performance and safety of the MH-47G and decrease operational costs. Efforts include the APAS and Engine Barrier Filter. The upgrades and modifications mostly consist of Government executed integration, testing, and qualification efforts with some analytical engineering services to be completed. • MPU - Data Concentrator Unit (DCU) Modernization NRE will be used to improve analog-to-digital signal processing and reliability, as well as reduce weight. The DCU efforts will be sole-source to Sanmina SCI Corporation, the original equipment manufacturer (OEM) for the DCU. The Future Aircraft Architecture Studies will be competitively awarded. • NGFLIR utilizes the Common Sensor Payload, an existing Army program of record, as a life-cycle replacement for the Q2V2 EOSS. This effort mainly consists of upgrading the camera from Standard Definition to High Definition utilizing existing Army contracts with the OEM. SOF-unique integration on the MH-60M DAP platforms will be accomplished through existing aircraft modification contracts. • The ASE Upgrades program develops and tests both new systems and pre-planned product improvements/upgrades of fielded survivability equipment and flares. For new systems, other services’ development and testing contracts are leveraged to the maximum extent possible. Upgrades of fielded equipment are typically accomplished by the original equipment manufacturer. 		

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command		Date: May 2017
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems	Project (Number/Name) D615 / Rotary Wing Aviation
<ul style="list-style-type: none">The SRTV project integrates and tests software and hardware improvements to provide SOF helicopters with access to rapidly evolving, real-time full motion video intelligence. A variety of contracting methods will be used for acquiring test assets, accomplishing SOF-unique modifications and testing to include use of other services' contracts, competition, sole source awards, and directed efforts of government organizations.		
E. Performance Metrics N/A		

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Exhibit R-3, RDT&E Project Cost Analysis: FY 2018 United States Special Operations Command **Date:** May 2017

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems	Project (Number/Name) D615 / Rotary Wing Aviation
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Product Development (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
A/MH-6M Block 3.0 Upgrades	C/Various	PM MELB : Fort Eustis, VA	31.808	20.254	Nov 2015	-		-		-		-	0.000	52.062	-
Degraded Visual Environment (DVE)	C/Various	PM TAPO : Fort Eustis, VA	28.336	8.965	Nov 2015	9.462	Dec 2016	-		-		-	0.000	46.763	-
Infrared Countermeasure (IRCM) Integration	C/Various	PM TAPO : Fort Eustis, VA	2.586	4.940	Jun 2016	-		-		-		-	0.000	7.526	-
MH-47 Modifications and Upgrades	C/Various	PM TAPO : Fort Eustis, VA	6.773	11.053	Feb 2016	8.501	Nov 2016	10.721	Nov 2017	-		10.721	Continuing	Continuing	-
Mission Processor Upgrade (MPU)	C/Various	PM TAPO : Fort Eustis, VA	-	0.232	Jul 2016	-		-		-		-	0.000	0.232	-
Aircraft Survivability Equipment (ASE) Upgrades	C/Various	PM TAPO : Fort Eustis, VA	-	-		-		15.889	Mar 2018	-		15.889	Continuing	Continuing	-
Secure Real Time Video	C/Various	PM TAPO : Fort Eustis, VA	-	-		-		0.592	Mar 2018	-		0.592	Continuing	Continuing	-
Subtotal			69.503	45.444		17.963		27.202		-		27.202	-	-	-

Test and Evaluation (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
A/MH-6M Block 3.0 Upgrades	C/Various	PM MELB : Fort Eustis, VA	-	-		12.890	Nov 2016	13.384	Nov 2017	-		13.384	Continuing	Continuing	-
MH-60M Modification and Upgrades	C/Various	Various : Various	-	-		0.677	Jan 2017	3.479	Jun 2018	-		3.479	Continuing	Continuing	-
MH-60M Block Upgrades Flight Qualification Testing	C/Various	Various : Various	12.443	7.152	Mar 2016	-		-		-		-	0.000	19.595	-
IRCM Testing	C/Various	PM TAPO : Fort Eustis, VA	-	-		6.898	Jan 2017	2.277	Jan 2018	-		2.277	Continuing	Continuing	-
MPU	C/Various	PM TAPO : Fort Eustis, VA	-	-		1.074	Apr 2017	5.087	Apr 2018	-		5.087	Continuing	Continuing	-
Next Generation Forward Looking Infrared	C/Various	PM TAPO : Fort Eustis, VA	2.570	0.029	Aug 2016	-		-		-		-	0.000	2.599	-

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Remarks	

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Exhibit R-4, RDT&E Schedule Profile: FY 2018 United States Special Operations Command

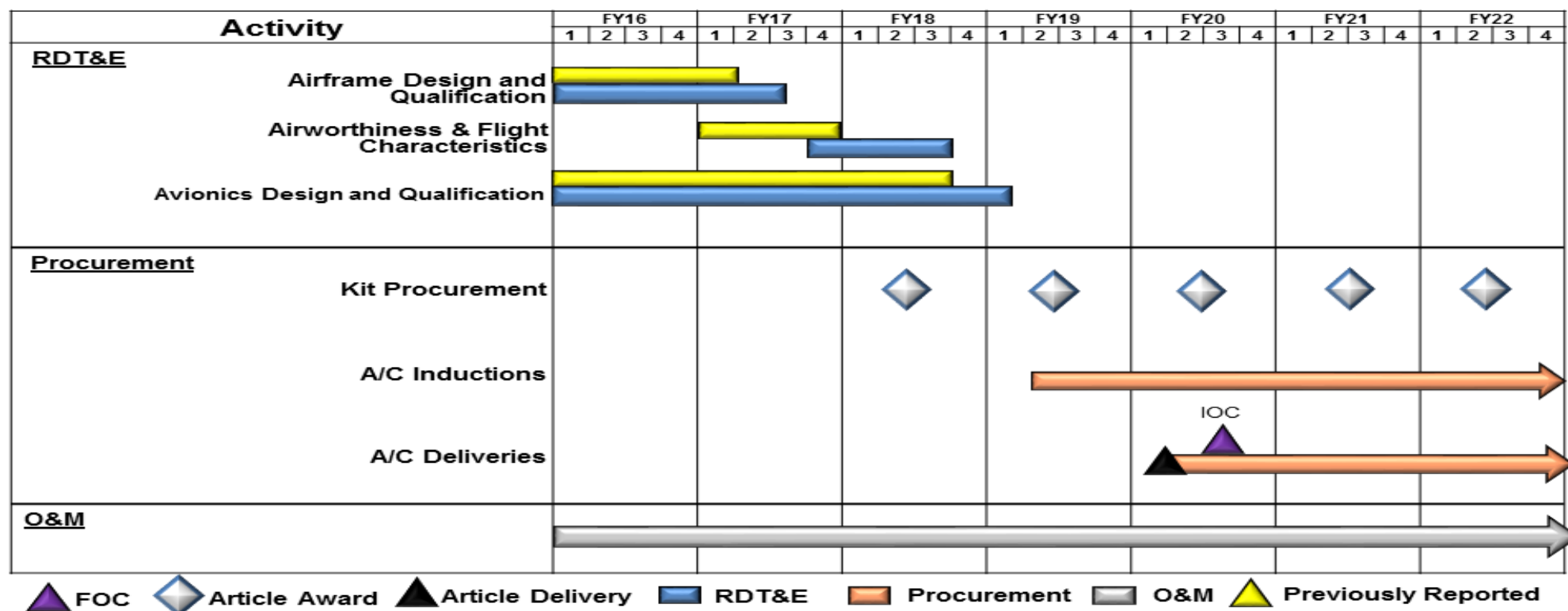
Date: May 2017

Appropriation/Budget Activity
0400 / 7

R-1 Program Element (Number/Name)
PE 1160403BB / Aviation Systems

Project (Number/Name)
D615 / Rotary Wing Aviation

A/MH-6 Block 3.0 Upgrade Schedule



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Exhibit R-4, RDT&E Schedule Profile: FY 2018 United States Special Operations Command

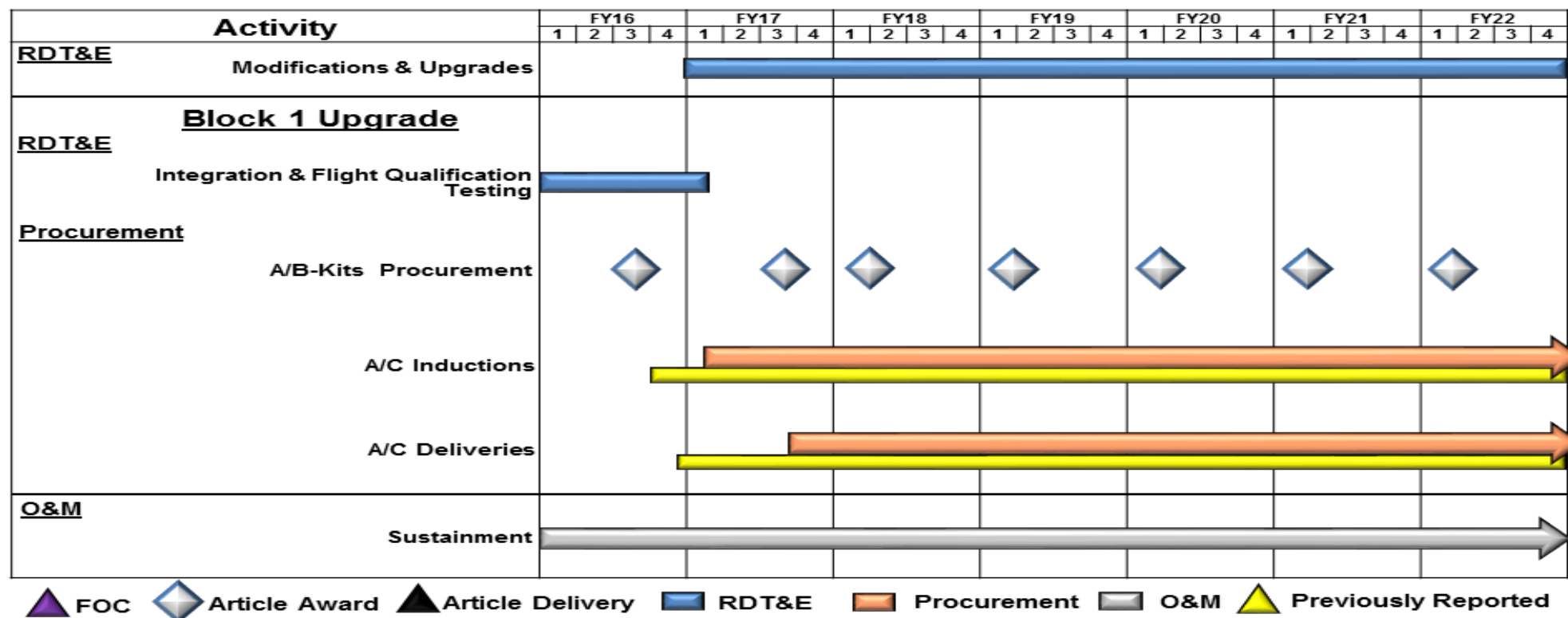
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Appropriation/Budget Activity
0400 / 7

R-1 Program Element (Number/Name)
PE 1160403BB / Aviation Systems

Project (Number/Name)
D615 / Rotary Wing Aviation

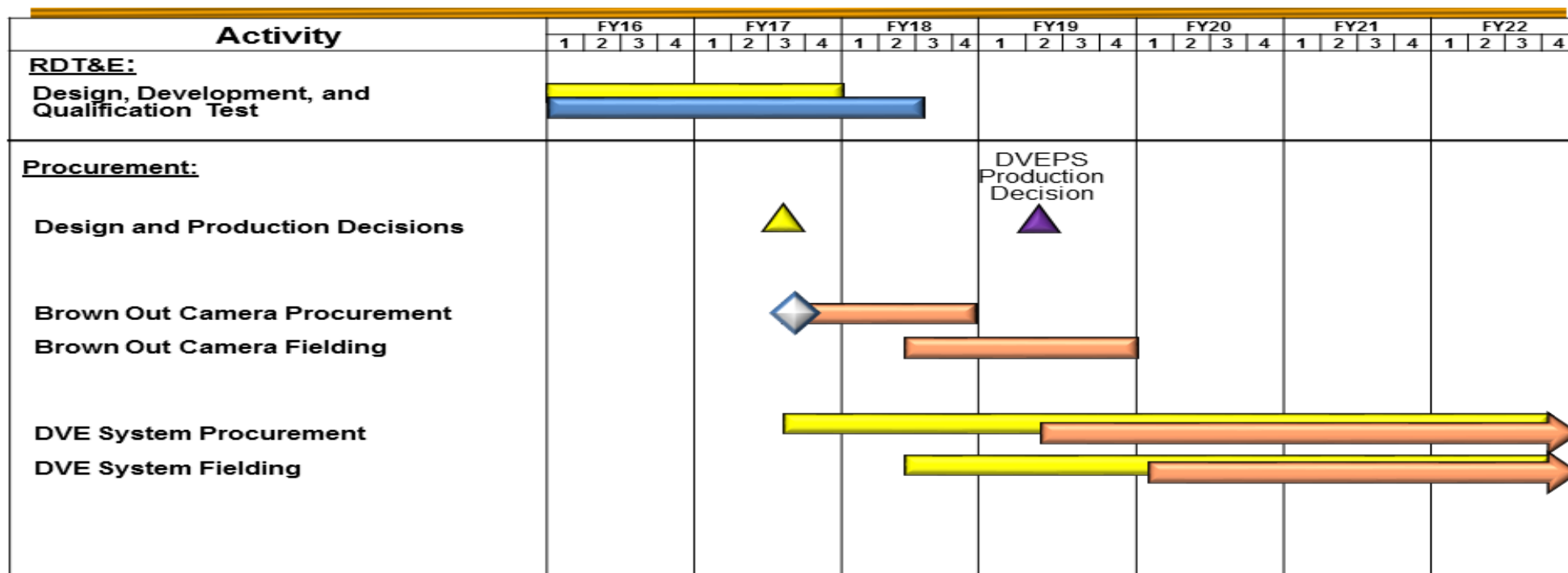
MH-60M Mods & Block Upgrades Schedule



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Exhibit R-4, RDT&E Schedule Profile: FY 2018 United States Special Operations Command			Date: May 2017
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems	Project (Number/Name) D615 / Rotary Wing Aviation	

Degraded Visual Environment Schedule



 FOC
  Article Award
  Article Delivery
  RDT&E
  Procurement
  O&M
  Previously Reported

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Exhibit R-4, RDT&E Schedule Profile: FY 2018 United States Special Operations Command			Date: May 2017
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160403BB / <i>Aviation Systems</i>	Project (Number/Name) D615 / <i>Rotary Wing Aviation</i>	





Future Vertical Lift Schedule

Activity	FY16				FY17				FY18				FY19				FY20				FY21				FY22			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
SOF-P Analysis of Alternatives Analysis/Requirements Development (RDT&E)																												

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Exhibit R-4, RDT&E Schedule Profile: FY 2018 United States Special Operations Command			Date: May 2017
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160403BB / Aviation Systems	Project (Number/Name) D615 / Rotary Wing Aviation	

MH-47 Mods & Block Upgrades Schedule

	FY16				FY17				FY18				FY19				FY20				FY21				FY22			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
<u>RDT&E</u>																												
Development of Mods & Upgrades																												
<u>Procurement</u>																												
Block Upgrades A&B-Kit Purchase																												
Block Upgrades Aircraft Delivery																												

 FOC
  Article Award
  Article Delivery
  RDT&E
  Procurement
  O&M
  Previously Reported

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Exhibit R-4, RDT&E Schedule Profile: FY 2018 United States Special Operations Command

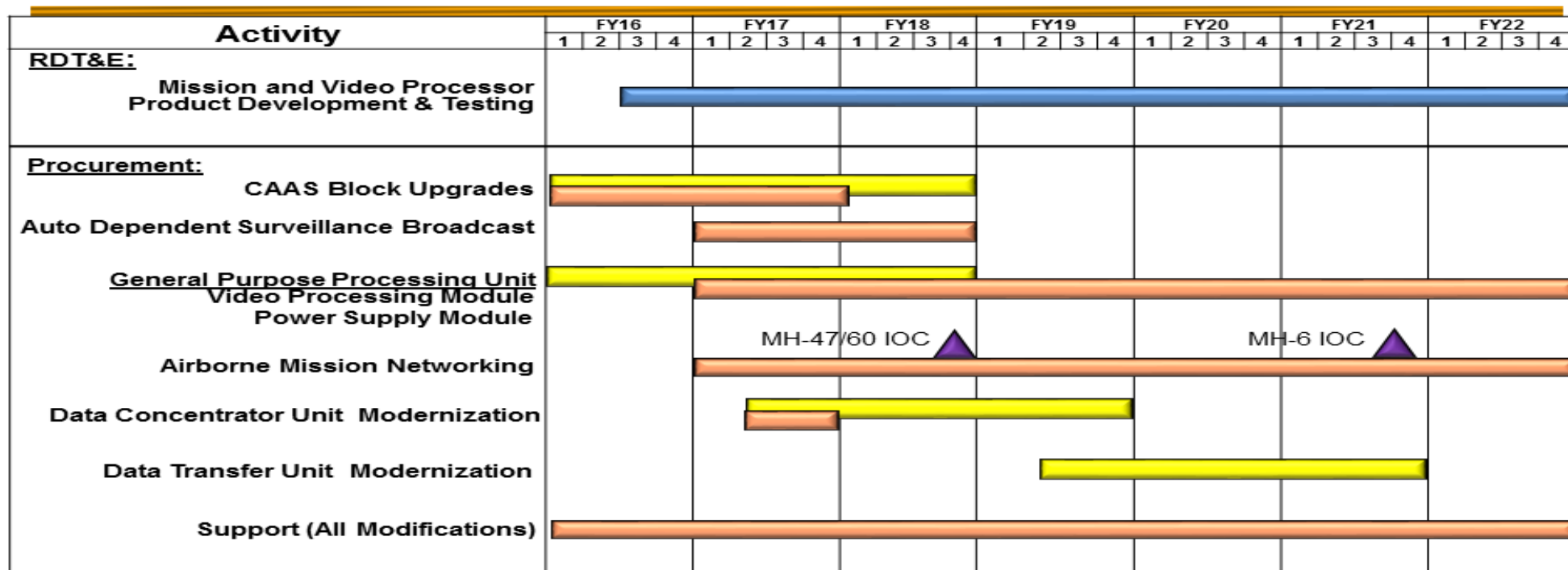
Date: May 2017







Appropriation/Budget Activity
0400 / 7

R-1 Program Element (Number/Name)
PE 1160403BB / Aviation Systems

Project (Number/Name)
D615 / Rotary Wing Aviation

Mission Processor Upgrades Schedule



 FOC
  Article Award
  Article Delivery
  RDT&E
  Procurement
  O&M
  Previously Reported

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Exhibit R-4, RDT&E Schedule Profile: FY 2018 United States Special Operations Command

Date: May 2017

Appropriation/Budget Activity
0400 / 7

R-1 Program Element (Number/Name)
PE 1160403BB / *Aviation Systems*

Project (Number/Name)
D615 / *Rotary Wing Aviation*

Next Generation FLIR Schedule

Activity	FY16				FY17				FY18				FY19				FY20				FY21				FY22			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
<u>RDT&E:</u>																												
Aircraft / Common Sensor Payload (CSP) Integration & Test																												
<u>Procurement:</u>																												
CSP Modification																												
CSP Procurement and Installation																												

 FOC
  Article Award
  Article Delivery
  RDT&E
  Procurement
  O&M
  Previously Reported

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Exhibit R-4, RDT&E Schedule Profile: FY 2018 United States Special Operations Command

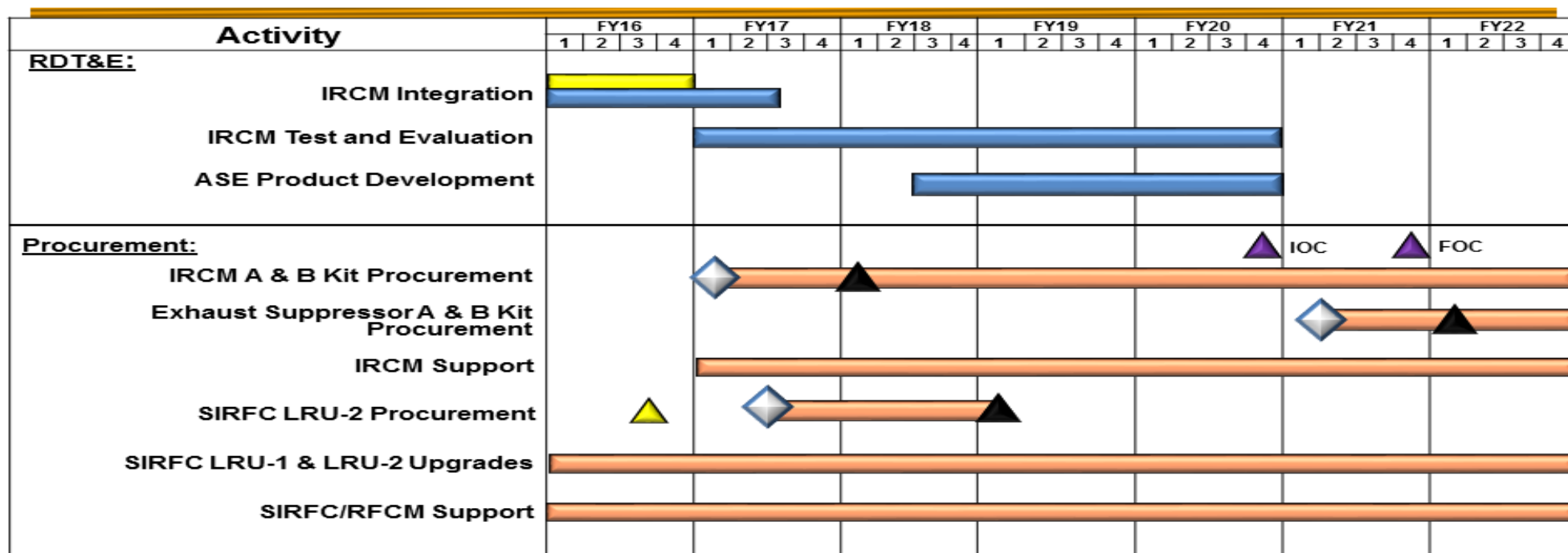
Date: May 2017

Appropriation/Budget Activity
0400 / 7

R-1 Program Element (Number/Name)
PE 1160403BB / Aviation Systems

Project (Number/Name)
D615 / Rotary Wing Aviation

Aircraft Survivability Equipment Schedule



 FOC
  Article Award
  Article Delivery
  RDT&E
  Procurement
  O&M
  Previously Reported

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Exhibit R-4, RDT&E Schedule Profile: FY 2018 United States Special Operations Command			Date: May 2017
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160403BB / <i>Aviation Systems</i>	Project (Number/Name) D615 / <i>Rotary Wing Aviation</i>	

Secure Real Time Video Schedule

Activity	FY16				FY17				FY18				FY19				FY20				FY21				FY22			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
<u>RDT&E</u> Development of Next Gen SRTV																												
<u>Procurement</u> SRTV Component Procurement																												
Installations																												
Procure Next Gen SRTV																												

▲ Previously Reported

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Exhibit R-4A, RDT&E Schedule Details: FY 2018 United States Special Operations Command

Date: May 2017

Appropriation/Budget Activity

0400 / 7

R-1 Program Element (Number/Name)

PE 1160403BB / Aviation Systems

Project (Number/Name)

D615 / Rotary Wing Aviation

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
A/MH-6M Block 3.0				
Airframe Design and Qualification	1	2016	3	2017
Airworthiness and Flight Characteristics	4	2017	3	2018
Avionics Design, Test, and Qualification	1	2016	1	2019
MH-60M Modifications and Block Upgrades				
Modifications and Upgrades	1	2017	4	2022
Integration and Flight Test Qualification	1	2016	4	2017
Degraded Visual Environment				
Design, Development, and Qualification	1	2016	4	2018
Future Vertical Lift				
SOF-P Analysis of Alternatives/Requirements Development	1	2016	4	2022
MH-47 Block Upgrades				
Development of Modifications and Upgrades	1	2016	4	2022
Mission Processor Upgrades				
Mission and Video Processor Development and Testing	3	2016	4	2022
Next Generation Forward Looking Infrared Radar				
Aircraft/Common Sensor Payload Integration and Testing	1	2016	3	2017
Aviation Survivability Equipment				
IRCM Integration	1	2016	3	2017
IRCM Test and Evaluation	1	2017	4	2020
ASE Product Development	1	2018	4	2020
Secure Real Time Video				
Development of Next Generation SRTV	2	2018	4	2022

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 United States Special Operations Command **Date:** May 2017

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development</i>					R-1 Program Element (Number/Name) PE 1160405BB / <i>Intelligence Systems Development</i>							
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	563.776	6.466	9.858	8.245	-	8.245	8.113	8.259	8.411	8.713	Continuing	Continuing
S400: <i>SO Intelligence Systems</i>	563.776	6.466	9.858	8.245	-	8.245	8.113	8.259	8.411	8.713	Continuing	Continuing

A. Mission Description and Budget Item Justification

This program element is part of the Military Intelligence Program (MIP) that provides for the identification, development, and testing of Special Operations Forces (SOF) intelligence equipment to identify and eliminate deficiencies in providing timely intelligence to deployed forces. Sub-projects address the primary areas of intelligence dissemination, sensor systems, tagging, tracking, and locating devices, integrated threat warning to SOF mission platforms, and tactical exploitation of national system capabilities. USSOCOM has developed an overall strategy to ensure that Command, Control, Communications, Computers, and Intelligence (C4I) systems continue to provide SOF with the required capabilities into the 21st century. USSOCOM's C4I systems comprise an integrated network of systems providing positive command and control and timely exchange of intelligence and threat warning to all organizational echelons. The C4I systems that support this new architecture employ the latest standards and technology by transitioning from separate systems to full integration with the Global Information Grid (GIG). The GIG allows SOF elements to operate with any force combination in multiple environments.

B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	6.866	7.958	7.952	-	7.952
Current President's Budget	6.466	9.858	8.245	-	8.245
Total Adjustments	-0.400	1.900	0.293	-	0.293
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other	-0.400	-	0.293	-	0.293
• FY 2017 REQUEST FOR ADDITIONAL APPROPRIATIONS	-	1.900	-	-	-

Change Summary Explanation

Funding:

FY 2016: Decrease of \$0.400 million is due to reprogramming to higher command priorities.

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 United States Special Operations Command		Date: May 2017
Appropriation/Budget Activity	R-1 Program Element (Number/Name)	
0400: Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development	PE 1160405BB / Intelligence Systems Development	
<p>FY 2017: Increase of \$1.900 million is due to an FY 2017 Request for Additional Appropriations for National Support to SOF (NSSS) program to develop and integrate Signal Intelligence Geolocation National Security Agency network and classified network cross-domain reporting system (\$1.400 million) and the NSSS program to develop, integrate and test Infrared Electronics Optical precision targeting software for electronic optical imagery (\$0.500 million).</p> <p>FY 2018: Increase of \$0.293 million is due to reprogramming to the JTWS program to provide additional test and evaluation funding.</p> <p>Schedule: None.</p> <p>Technical: None.</p>		

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command										Date: May 2017		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 1160405BB / Intelligence Systems Development				Project (Number/Name) S400 / SO Intelligence Systems			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
S400: SO Intelligence Systems	563.776	6.466	9.858	8.245	-	8.245	8.113	8.259	8.411	8.713	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This sub-project is part of the Military Intelligence Program (MIP). Provides for the identification, development, and testing of Special Operations Forces (SOF) intelligence equipment to identify and eliminate deficiencies in providing timely intelligence to deployed forces. Sub-projects address the primary areas of intelligence dissemination, sensor systems, tagging, tracking, and locating devices, integrated threat warning to SOF mission platforms, and tactical exploitation of national system capabilities. The systems developed and tested in this line item are National Systems Support to SOF (NSSS); Joint Threat Warning System (JTWS); Hostile Forces - Tagging, Tracking, and Locating (HF-TTL); Special Operations Tactical Video System/Reconnaissance, Surveillance, and Target Acquisition (TVS/RSTA); Special Operations Forces Planning, Rehearsal and Execution Preparation (SOFPREP); Integrated Survey Program (ISP); and Sensitive Site Exploitation (SSE).

U.S. Special Operations Command (USSOCOM) has developed an overall strategy to ensure that Command, Control, Communications, Computers, and Intelligence (C4I) systems continue to provide SOF with the required capabilities throughout the 21st century. USSOCOM's C4I systems comprise an integrated network of systems providing positive command and control and timely exchange of intelligence and threat warning to all organizational echelons. The C4I systems that support this new architecture employ the latest standards and technology by transitioning from separate systems to full integration with the Global Information Grid (GIG). The GIG allows SOF elements to operate with any force combination in multiple environments. The intelligence programs funded in this project will meet annual emergent requirements and are grouped by the level of organizational element they support: Operational Element (Team) and Above Operational Element (Garrison).

OPERATIONAL ELEMENT (TEAM)

- NSSS. This program provides research and development and rapid prototyping as the HQ SOCOM Tactical Exploitation of National Capabilities (TENCAP) program. NSSS improves the combat effectiveness of USSOCOM, its components, and the Theater Special Operations Commands (TSOC) by leveraging National Geospatial-Intelligence (NGA) and Service development efforts to provide innovative space-based intelligence systems technologies and enhancements, products and special communications capabilities to tactical SOF units to include Geospatial Intelligence (GEOINT), Signals Intelligence (SIGINT), Special Communications, and intelligence fusion, reporting, and dissemination. NSSS efforts are characterized by rapid development, fielding and deployment, and focus on transitioning to SOCOM Programs of Records (POR). These developmental efforts usually support SOCOM's existing Military Intelligence Programs. Focus items include: Small Unmanned Aircraft System Multi-Intelligence geo-location and targeting capabilities with a Rapid Reliable Targeting system that supports NGA CAT1 level targeting, enhanced GEOINT processing capabilities by fusing Light Detection and Ranging with National Technical Means (NTM) and the Enhanced Image Rendering Tool, which allows sharing of NTM Imagery with coalition forces. NSSS will also improve SIGINT capabilities by pursuing Joint Interface Control Document 4.x and follow-on compliant SIGINT capabilities, extending SOCOM's cross-domain security infrastructure by adding unclassified sensors into theater net-centric geo-location architecture, improve detection of Low-Probability of Intercept/Low Probability of Detection signals, and automate radar characterizations that enhance tactical SOF capabilities to find, fix, monitor, and target assets using NTM.

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command		Date: May 2017
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160405BB / <i>Intelligence Systems Development</i>	Project (Number/Name) S400 / <i>SO Intelligence Systems</i>
<ul style="list-style-type: none"> • JTWS. The JTWS System of Systems (SoS) enables the SOF Cryptologic Operator to collect, process, locate and exploit threat communications signals of interest in order to provide timely, relevant, and responsive intelligence, cross-cueing, and threat avoidance information directly to the SOF Commanders. The JTWS SoS is assembled in four variants: Ground SIGINT Kit; Maritime; Air; and Unmanned Aerial Systems. Each variant has additional requirements for Communications Intelligence, Electronic Intelligence, and Precision Geo-location. • HF-TTL. This program utilizes a commodity procurement strategy to provide SOF warfighters with the necessary tools to find, fix, and finish terrorist networks through the emplacement of sophisticated tags and devices that feed into an integrated architecture. HF-TTL provides Global Combatant Commanders (GCC) and SOF operators with an immediate capability to tag, track, and locate people, things, and activities. The HF-TTL program provides actionable intelligence for SOF planners. The mission sets comprise a mix of different classes of tags and their associated detection, interrogation, viewing, tracking, and communications systems that are fielded annually to SOF Components and TSOC based upon dynamic and emergent SOF operational requirements. • TVS/RSTA. This program provides SOF with critical Special Reconnaissance (SR) equipment that directly supports the planning and execution of SOF missions. This capability allows the SOF warfighter to meet SOF SR mission requirements to find, fix, finish, exploit, analyze, and disseminate information of an adversary's movement, construct, identification, location; and associated things and activities. TVS/RSTA provides GCC and SOF operators with an immediate capability to visually and electronically acquire people, things, and activities and provides actionable intelligence for SOF planners and Commanders. The program Family of Systems (FoS) consists of interoperable equipment to capture and transfer near-real-time ground-based, tactical day/night/reduced visibility, imagery, video, and electronic proximity and movement sensing, all capable of dissemination through SOF organic, global C4I, and commercial communications infrastructures. <p>ABOVE OPERATIONAL ELEMENT (GARRISON)</p> <ul style="list-style-type: none"> • SOFPREP. This program serves as the intelligence focal point for production of SOF enhanced GEOINT (maps, imagery, and terrain data) and 3D scene visualization databases. SOFPREP gathers, processes, exploits, disseminates, and manages classified high resolution 3D databases and GEOINT data in support of SOF training, mission rehearsal, and execution preparation systems. The program builds the SOF common geospatial environment and manages the authoritative database of SOF-specific GEOINT terrain data. SOFPREP is a NGA-certified co-producer in support of time-sensitive SOF specific requirements. • ISP. This program collects and produces current, detailed, tactical planning data to support military operations to counter threats against U.S. citizens, interests, and property located both domestically and overseas. ISP products are specifically tailored packages that provide operational information, as well as intelligence data for use by DOD and the U.S. Department of State to support operational planners for counter-terrorism operations, evacuations, and other rescue missions. • SSE. This program provides the capability to exploit personnel, documents, electronic data, material, and forensic evidence on sensitive sites/objectives. Biometric kits allow collection and transmission of unique, measurable biometric signatures from personnel, including live/latent fingerprints, iris patterns, and facial features. It also provides a means to verify against and enroll subjects into the DOD authoritative database, and to query that database to support hold or release decisions. Forensic kits enable on-objective linking of events to specific persons through chemical analysis, latent fingerprints, cell phones and computer data analysis, and deoxyribonucleic acid collection. Exploitation Analysis Centers provide theater-level mobile forensic capabilities for more in-depth exploitation of captured evidence. 		

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command			Date: May 2017			
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160405BB / Intelligence Systems Development	Project (Number/Name) S400 / SO Intelligence Systems				
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Title: NSSF FY 2016 Accomplishments: Continued development of SOF-required prototype capabilities, primarily through leveraging current or developing technologies and assets in the IC, while coordinating with other SOCOM and IC Programs of Record for production and operational fielding of the successful capabilities. Emphasized areas to include ISR support for Tagging, Tracking, and higher-accuracy geo-locating of hostile and friendly forces, especially in low sensor density environments. FY 2017 Plans: Continue development of SOF-required prototype capabilities, primarily through leveraging current or developing technologies and assets in the IC, while coordinating with other SOCOM and IC Programs of Record for production and operational fielding of the successful capabilities. Emphasize areas to include ISR support for Tagging, Tracking, and higher-accuracy geo-locating of hostile and friendly forces, especially in low sensor density environments. Develop and integrate a signals intelligence Geolocation National Security Agency network and classified network cross-domain reporting system. Develop, integrate and test an infrared precision targeting software variant for electronic optical imagery. FY 2018 Base Plans: Continues development of SOF-required prototype capabilities, primarily through leveraging current or developing technologies and assets in the Intelligence Community (IC), while coordinating with SOCOM and IC Programs of Record for production and operational fielding of the successful capabilities. Emphasizes areas to include ISR support for Tagging, Tracking, and higher-accuracy geo-locating of hostile and friendly forces, especially in low sensor density environments.		0.802	2.716	0.832	-	0.832
Title: JTWS FY 2016 Accomplishments: Continued development and testing of increased capabilities for JTWS variants in order to improve technologies to address emerging threats. The following test events were completed in FY2016: Three Precision Geo-location; Five Air Variant, and Four Ground SIGINT Variant. Continued development of Maritime prototype through the use of seven technology demonstrations. FY 2017 Plans:		3.717	5.233	5.335	-	5.335

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command			Date: May 2017		
Appropriation/Budget Activity 0400 / 7		R-1 Program Element (Number/Name) PE 1160405BB / Intelligence Systems Development		Project (Number/Name) S400 / SO Intelligence Systems	
B. Accomplishments/Planned Programs (\$ in Millions)					
	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Evaluate interoperability of technologies on JTWS variants as well as continue testing of the various system of systems. Continue technical evaluation of evolving technologies for all variants in order to provide additional capabilities required to address emerging threats.					
FY 2018 Base Plans: Continues evaluating interoperability of technologies on JTWS variants as well as continue testing of the various system of systems. Continues technical evaluation of evolving technologies for all variants in order to provide additional capabilities to address emerging threats.					
Title: HF-TTL					
FY 2016 Accomplishments: Continued specialized device modifications, integration and operational testing and evaluation.					
FY 2017 Plans: Continue specialized device modifications, integration and operational testing and evaluation.					
FY 2018 Base Plans: Continues specialized device modifications, integration and operational testing and evaluation.					
Title: TVS/RSTA					
FY 2016 Accomplishments: Continued integration/operational testing within the TVS/RSTA FoS for technology insertions of improved/ downsized hardware/software configuration on all systems.					
FY 2017 Plans: Continue integration/operational testing within the TVS/RSTA FoS for technology insertions of improved/ downsized hardware/software configuration on all systems, to include camera systems, Falcon 6 sensor control hardware, and related software.					
FY 2018 Base Plans: Continues integration/operational testing within the TVS/RSTA FoS for technology insertions of improved/ downsized hardware/software configuration on all systems, to include camera systems, Falcon 6 sensor control hardware, and related software.					
Title: SOFPREP					
FY 2016 Accomplishments:					

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command			Date: May 2017			
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160405BB / Intelligence Systems Development	Project (Number/Name) S400 / SO Intelligence Systems				
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Began testing and evaluation of operational prototype systems to speed production of correlated high resolution 3D terrain databases in a Graphics Processing Unit (GPU) accelerated high performance computing architecture. FY 2017 Plans: Continue testing and evaluation of operational prototype systems to speed production of correlated high resolution 3D geospatial databases in a GPU accelerated high performance computing architecture. FY 2018 Base Plans: Continues testing and evaluation of operational prototype systems to speed production of correlated high resolution 3D geospatial databases.						
Title: ISP FY 2016 Accomplishments: Continued development for the modernization of the ISP system to integrate with enterprise architecture and support the latest standards and technology. FY 2017 Plans: Continue development for the modernization of the ISP system to integrate with enterprise architecture and support the latest standards and technology. FY 2018 Base Plans: Continues development of ISP system and products to integrate with enterprise architecture and support the latest standards and technology.		0.325	0.127	0.402	-	0.402
Title: SSE FY 2016 Accomplishments: Initiated specialized device integration and operational testing and evaluation. FY 2017 Plans: Continue technical evaluation of new technologies, and when applicable, formal testing (limited user evaluations) to confirm operational effectiveness and suitability prior to fielding. FY 2018 Base Plans: Continues technical evaluation of new technologies.		0.155	0.157	0.181	-	0.181
Accomplishments/Planned Programs Subtotals		6.466	9.858	8.245	-	8.245

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command			Date: May 2017
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160405BB / Intelligence Systems Development	Project (Number/Name) S400 / SO Intelligence Systems	

C. Other Program Funding Summary (\$ in Millions)

Line Item	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
• PROC/020400INTL: <i>Intelligence Systems</i>	105.554	104.163	82.538	12.000	94.538	76.856	88.864	93.498	95.303	Continuing	Continuing

Remarks

D. Acquisition Strategy

- NSSS introduces and integrates national systems capabilities into the SOF force structure and operations. This is accomplished by partnering with existing IC POR to incorporate SOF mission requirements into current and developing technologies and assets. This leveraging of funds increases national and commercial systems awareness, demonstrates the tactical utility of national systems and commercial data, tests technologies and evaluates operational concepts in biennial Joint Staff Special Projects, and allows for the transition of promising concepts and technologies to other SOF program offices for execution.
- JTWS is a SoS leveraging commercial technologies and partnerships with other government agencies. The POR will identify Commercial Off The Shelf (COTS)/Government Off The Shelf capabilities requiring minimal modifications and only use new development when necessary. JTWS will address the continuously evolving threat environments on the Ground, Air, Maritime, and Unmanned Aircraft System variants, leverage existing partnerships with the National Security Agency and other government partners to integrate and sustain systems based on prioritized need from the Components and as emerging threats require technology modernizations. Additionally, the POR will work to find common solutions across the variants and increase interoperability in order to reduce duplication of efforts. The contracting strategy is a mixture of full and open competition for prime integrators and leveraging existing Indefinite Delivery/Indefinite Quantity (IDIQ) contracts for COTS procurement.
- HF-TTL utilizes a commodity procurement acquisition strategy to provide highly sophisticated TTL and close target audio/video devices capable of operating in various environments as needed to meet SOF operational requirements. Commercial and government agency sources will be leveraged for required certifications, device level modifications, integration, functional, and operational testing and evaluations.
- TVS/RSTA employs an evolutionary strategy to incorporate the latest state of technology within its product line to provide upgraded next-generation technology insertion of COTS systems and address the changing threat environment to meet SOF reconnaissance and surveillance mission requirements. Commercial and government agency sources will be leveraged for required certifications, system level integration, functional, and operational testing and evaluations.
- SOFPREP employs an evolutionary strategy to insert emerging technologies for processing, exploitation and dissemination capabilities tailored to SOF user-defined mission requirements. Commercial and government agency sources are leveraged for required certifications, system level integration, functional, and operational testing and evaluations.

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command		Date: May 2017
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160405BB / <i>Intelligence Systems Development</i>	Project (Number/Name) S400 / <i>SO Intelligence Systems</i>
<ul style="list-style-type: none">• ISP employs an evolutionary strategy to insert emerging technologies for collection, processing, exploitation and dissemination capabilities tailored to SOF user-defined mission requirements. Commercial and government agency sources are leveraged for required certifications, system level integration, functional, and operational testing and evaluations.• SSE uses a commodity procurement acquisition strategy to provide next-generation technologies for collection, processing, exploitation and dissemination capabilities supporting SOF exploitation mission requirements. Commercial and government agency sources are leveraged for required certifications, system level integration, functional, and operational testing and evaluations. <p>E. Performance Metrics N/A</p>		

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 United States Special Operations Command	Date: May 2017
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Appropriation/Budget Activity					R-1 Program Element (Number/Name)							
0400: Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development					PE 1160408BB / Operational Enhancements							
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	1,253.575	61.463	90.895	79.455	1.920	81.375	80.328	96.447	99.907	106.045	Continuing	Continuing
S500A: Operational Enhancements	1,253.575	61.463	90.895	79.455	1.920	81.375	80.328	96.447	99.907	106.045	Continuing	Continuing

A. Mission Description and Budget Item Justification

Details are provided under separate cover.

B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	63.008	64.895	69.973	0.000	69.973
Current President's Budget	61.463	90.895	79.455	1.920	81.375
Total Adjustments	-1.545	26.000	9.482	1.920	11.402
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	0.625	-			
• SBIR/STTR Transfer	-2.170	-			
• Other Adjustments	-	-	9.482	1.920	11.402
• FY 2017 REQUEST FOR ADDITIONAL APPROPRIATIONS	-	26.000	-	-	-

Change Summary Explanation

Funding:

FY2016: Net decrease of -\$1.545 million is due to a transfer of funds to Small Business Innovative Research/Small Business Technology Transfer program (-\$2.170 million) and a programmatic increase of \$0.625 million. Details available under separate cover.

FY2017: None.

FY2017 REQUEST FOR ADDITIONAL APPROPRIATIONS: \$26.000 million is required to address emergency warfighting readiness requirements. Details available under separate cover.

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 United States Special Operations Command		Date: May 2017
Appropriation/Budget Activity	R-1 Program Element (Number/Name)	
0400: Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development	PE 1160408BB / Operational Enhancements	
FY2018: Net increase of \$11.402 million due to increase in Overseas Contingency Operations (\$1.920 million) and a programmatic increase of \$9.482 million available under separate cover.		
Schedule: None.		
Technical: None.		

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 United States Special Operations Command	Date: May 2017
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Appropriation/Budget Activity	R-1 Program Element (Number/Name)											
0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development</i>	PE 1160431BB / <i>Warrior Systems</i>											
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	35.231	32.677	45.285	45.935	-	45.935	32.761	40.879	37.950	25.359	Continuing	Continuing
D476: <i>Military Information Support Operations</i>	5.508	6.144	4.711	4.843	-	4.843	2.848	2.883	2.922	1.808	Continuing	Continuing
S375: <i>Weapons Systems</i>	0.565	1.417	1.481	1.480	-	1.480	1.474	1.475	1.505	1.535	Continuing	Continuing
S385: <i>Soldier Protection and Survival Systems</i>	4.663	2.516	2.977	2.852	-	2.852	2.849	2.668	2.676	2.819	Continuing	Continuing
S385A: <i>Body Armor and Associated Equipment</i>	3.659	1.286	1.339	1.289	-	1.289	1.289	1.636	1.669	1.716	Continuing	Continuing
S395: <i>Visual Augmentation, Lasers and Sensor Systems</i>	1.422	2.075	1.482	1.517	-	1.517	1.546	1.575	1.602	0.000	Continuing	Continuing
S700: <i>Communications Equipment and Electronics Systems</i>	7.241	5.466	9.373	12.864	-	12.864	14.803	16.354	16.664	11.858	Continuing	Continuing
S710: <i>Tactical Systems Development</i>	1.172	0.804	2.640	2.416	-	2.416	2.523	3.031	3.083	3.145	Continuing	Continuing
S725: <i>Tactical Radio Systems</i>	6.882	2.036	3.884	13.183	-	13.183	4.892	10.719	7.280	1.918	Continuing	Continuing
S800: <i>Munitions Advanced Development</i>	4.119	10.933	17.398	5.491	-	5.491	0.537	0.538	0.549	0.560	Continuing	Continuing

A. Mission Description and Budget Item Justification

This program element provides for development, testing and integration of specialized equipment in the areas of automation, communication, radio, weapon, soldier protection and survival, visual augmentation, lasers and sensors, munition and Military Information Support Operations (MISO) systems. Warrior Systems specialized equipment will permit small, highly trained forces to conduct required operations across the entire spectrum of conflict. SOF must infiltrate by land, sea, and air to conduct unconventional warfare, direct action, or deep reconnaissance operations in denied areas against insurgent units, terrorists, or highly sophisticated threat forces. The requirement to operate in denied areas controlled by a sophisticated threat mandates that SOF systems remain technologically superior to threat forces to ensure mission success. The efforts within this PE improve SOF warfighting capabilities by continuing efforts to develop smaller, lighter, more efficient and more robust capabilities. The SOF mission mandates that SOF systems remain technologically superior to any threat to provide a maximum degree of survivability while, generally, being conducted in harsh environments for unspecified periods and in locations requiring small unit autonomy. Communications efforts will maintain a Command, Control, and Communications (C3) link between SOF Commanders and SOF Teams, and provide interoperability with all Services, various agencies of the U.S. Government, Air Traffic Control, commercial agencies and allied foreign forces. Efforts relating to soldier protection and survival requirements will improve survivability

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 United States Special Operations Command		Date: May 2017
Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development</i>		R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>
<p>and mobility of SOF while conducting varied missions. Specialized visual augmentation, lasers and sensors will permit small, highly trained forces to conduct required operations across the entire spectrum of conflict. Munition efforts include advanced engineering operational system development and qualification efforts related to SOF-peculiar munitions and equipment. Additionally, MISO efforts include planned operations to convey selected information and indicators to foreign audiences to influence their emotions, motives, objective reasoning, and ultimately, the behavior of foreign governments, organizations, groups and individuals.</p> <p>MISO: This project provides for the development, test and integration of MISO equipment. MISO are planned operations to convey selected information and indicators to foreign audiences to influence their emotions, motives, objective reasoning, and ultimately, the behavior of foreign governments, organizations, groups, and individuals. This project funds transformational systems and equipment to conduct the seven phase MISO process (planning, targeting audience analysis, series development, product development and design, approval, production/distribution/dissemination, and measures of effectiveness) in support of combatant commanders.</p> <p>Weapons Systems: This project provides for next generation system development and pre-planned product improvements (P3I), testing, and integration of specialized weapon systems and weapon accessories to meet the unique requirements of SOF. Efforts include muzzle brakes and suppressors, and P3I for assault, sniper, and crew served weapons leveraging the latest technological advances to achieve overmatch capability against emerging threats.</p> <p>Soldier Protection and Survival Systems: This project provides for development, testing, and integration of specialized equipment to meet the unique soldier protection and survival requirements of SOF. Specialized equipment will improve survivability and mobility of SOF while conducting varied missions. Current efforts include, but are not limited to counter-improvised explosive device system development and testing to meet continually emerging Counter RC-IED threats.</p> <p>Body Armor and Associated Equipment: This project provides specialized equipment with ballistic protection to meet the unique soldier protection and survival requirements of SOF. Specialized ballistic equipment improves survivability and load bearing equipment impacting the mobility of SOF while conducting varied missions. This project enhances the SOF Personal Equipment Advanced Requirements program by providing for the research, development, and testing of body armor plates, soft armor, helmets, eye protection, and other personal protective equipment to meet current ballistic threats that exist on the battlefield.</p> <p>Visual Augmentation, Lasers and Sensor Systems: This project provides for development, testing, and integration of specialized visual augmentation, laser and sensor systems equipment to meet the unique requirements of SOF. Programs in this area include binocular/monocular devices and visual augmentation to include next generation laser designation and geo-location systems.</p> <p>Communications Equipment and Electronics Systems: This project provides for communication systems to meet emergent requirements to support SOF. SOF units require communications equipment that improves their warfighting capability without degrading their mobility. SOF Communications Equipment and Electronics is a continuing effort to develop smaller, lighter, more efficient and more robust SOF Command, Control, Communications, and Computer (C4) capabilities.</p>		

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 United States Special Operations Command **Date:** May 2017

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>
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Tactical Systems Development:

This project provides for development, testing, and integration of specialized automation equipment to meet the unique requirements of SOF. Tactical systems provide forward deployed forces with advanced networking, automated data processing, storage, and display capabilities to support situational awareness, mission planning and execution, and command and control (C2) of forces.

Tactical Radio Systems:

This project is for the development of all SOF tactical radio programs. SOF units require radio communication equipment that improves their warfighting capability without degrading their mobility. United States Special Operations Command (USSOCOM) has developed an overall strategy to ensure that Tactical Radio Systems continue to provide SOF with the required capabilities throughout the 21st century. SOF Tactical Radios provide the critical C3 link between SOF Commanders and SOF Teams involved in operational missions and training exercises. They also provide interoperability with all Services, various agencies of the U.S. Government, Air Traffic Control, commercial agencies, and allied/coalition forces. Tactical Radios rapidly and seamlessly establish and maintain mobile and fixed C2 communications between infiltrated/operational elements and higher echelon headquarters, allowing SOF to operate with any force combination in multiple environments.

Munitions Development:

This project provides for the advanced engineering, operational system development, and qualification efforts related to SOF-peculiar and Foreign/Non-standard munitions and equipment. Funding supports development of Insensitive Munitions (IM) technology and evaluation, in accordance with statutory requirement set forth in U.S. Code, Title 10, Chapter 141, Section 2389 (December 2001). Testing is in accordance with the USSOCOM IM Strategic Plan. Funding also supports efforts to develop and improve Stand-Off Precision Guided Munitions (SOPGM), including the development and integration of improved warheads, seeker, guidance navigation and control systems, operational flight software and missile delivery to meet SOF requirements.

B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	33.842	44.885	29.581	-	29.581
Current President's Budget	32.677	45.285	45.935	-	45.935
Total Adjustments	-1.165	0.400	16.354	-	16.354
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-1.165	-			
• Other Adjustments	-	-	16.354	-	16.354
• FY 2017 REQUEST FOR ADDITIONAL APPROPRIATIONS	-	0.400	-	-	-

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 United States Special Operations Command		Date: May 2017	
Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development</i>		R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	
<u>Congressional Add Details (\$ in Millions, and Includes General Reductions)</u>		FY 2016	FY 2017
Project: S800: <i>Munitions Advanced Development</i>			
Congressional Add: <i>Stand-Off Precision Guided Munitions (SOPGM)</i>		10.500	-
Congressional Add Subtotals for Project: S800		10.500	-
Congressional Add Totals for all Projects		10.500	-
<u>Change Summary Explanation</u>			
Funding:			
FY 2016: Decrease of -\$1.165 million is due to a transfer of funds to Small Business Innovative Research/Small Business Technology Transfer programs.			
FY 2017: Increase of \$0.400 million is due to an increase in the FY 2017 Request for Additional Appropriations required to address emergency warfighting readiness requirements. This effort continues to ensure the ability to defeat current and emerging threat systems. Project S385 Soldier Protection and Survival Systems funding provides for development and testing of new capability in electronic counter measure equipment.			
FY 2018: Net increase of \$16.354 million is due to an increase in MISO (\$1.352 million), an increase in SOF Deployable Nodes Communications-on-the-Move development (\$5.121 million), an increase in SOF Tactical Communications radio development integration and testing (\$9.331 million), and an increase in Counter-Improvised Explosive Devise for Modi future technology integration (\$0.550 million).			
Schedule: None.			
Technical: None.			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command										Date: May 2017		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 1160431BB / Warrior Systems				Project (Number/Name) D476 / Military Information Support Operations			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
D476: Military Information Support Operations	5.508	6.144	4.711	4.843	-	4.843	2.848	2.883	2.922	1.808	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project provides for the development and acquisition of Military Information Support Operations (MISO) equipment. MISO are planned operations to convey selected information and indicators to foreign audiences to influence their emotions, motives, objective reasoning, and ultimately, the behavior of foreign governments, organizations, groups, and individuals. This project funds transformational systems and equipment to conduct MISO in support of combatant commanders and includes:

- Media Production and Broadcast Systems support the Media Production Center (MPC) and the Fly Away Broadcast System (FABS) MISO missions. The MPC includes the fixed site MPC with light and medium media production capability. FABS is a transit case fly-away broadcast system that consists of a combination of amplitude modulation (AM), frequency modulation (FM), shortwave (SW), cellular, and television (TV) transmitters.
- Long Range Broadcast System (LRBS) is a family of broadcast systems intended to be integrated into multiple manned and unmanned, long-loiter aerial systems with the capability of broadcasting in AM, FM, SW, TV, Very High Frequency (VHF), TV Ultra High Frequency (UHF) and cellular (Short Message Service, Multi-Media Messaging Service, and Voice). This system provides the capability of broadcasting MISO messages via multiple mediums into permissive, semi-permissive, and denied foreign areas.
- FABS is a transit case fly-away broadcast system that consists of a combination of AM, FM, SW, cellular, and TV transmitters.
- Family Of Loudspeakers (FOL) is a portable loudspeaker system that is capable of disseminating high quality recorded and live audio messages by MISO Forces in varied geographical areas and climate conditions. The new variant of the FOL is the Next Generation Loudspeaker System (NGLS). The NGLS consists of a Dismounted and Mounted variants that are lighter, smaller, and louder than legacy speaker systems, with added clarity and durability.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Title: Media Production and Broadcast Systems	1.789	-	-	-	-
FY 2016 Accomplishments: Tested and evaluated new systems and components to enhance MISO product. Integrated and disseminated new analytical software tools to enhance production supporting MISO target audience assessment and measures of effectiveness requirements.					
Title: LRBS	4.355	2.894	1.632	-	1.632

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command				Date: May 2017		
Appropriation/Budget Activity 0400 / 7		R-1 Program Element (Number/Name) PE 1160431BB / Warrior Systems		Project (Number/Name) D476 / Military Information Support Operations		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
FY 2016 Accomplishments: Continued with primary hardware development, systems engineering, and test and evaluation of pod-based FM and cellular broadcast, power, and antenna technologies.						
FY 2017 Plans: Continue with primary development, systems engineering, and test and evaluation of pod-based cellular and television broadcast, power, and antenna technologies.						
FY 2018 Base Plans: Continues with primary development, systems engineering, and test and evaluation of pod-based cellular and television broadcast, power, and antenna technologies.						
Title: FABS		-	1.817	2.757	-	2.757
FY 2017 Plans: Continue to test and evaluate new systems and components to enhance MISO broadcasts. Continue with primary hardware development to reduce broadcast system weight and size while adding multi-mission capabilities.						
FY 2018 Base Plans: Continues testing and evaluation of new systems and components to enhance MISO broadcasts. Continues with primary hardware development to reduce broadcast system weight and size while adding multi-mission capabilities.						
Title: FOL		-	-	0.454	-	0.454
FY 2018 Base Plans: Begins testing and evaluation of new systems and components to enhance MISO broadcasts. Focuses on wireless, Common Operating Picture, and Mobile Ad Hoc Network development to reduce broadcast system weight and size while adding multi-mission capabilities.						
Accomplishments/Planned Programs Subtotals		6.144	4.711	4.843	-	4.843

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command			Date: May 2017
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) D476 / <i>Military Information Support Operations</i>	

C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u> <u>Base</u>	<u>FY 2018</u> <u>OCO</u>	<u>FY 2018</u> <u>Total</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• PROC1/0204OTHER: OTHER ITEMS <\$5M	76.709	78.016	54.592	-	54.592	90.958	77.732	92.076	58.694	Continuing	Continuing

Remarks

D. Acquisition Strategy

- The Media Production and Broadcast system program has an evolutionary acquisition strategy. Commercial and government agency sources will be leveraged for required certifications, functional and operational tests, and acceptance support.
- The LRBS program has an evolutionary acquisition strategy. Commercial and government agency sources will be leveraged for required certifications, functional and operational tests, and acceptance support.
- The FABS program has an evolutionary acquisition strategy. Commercial and government agency sources will be leveraged for required certifications, functional and operational tests, and acceptance support.
- The FOL program has an evolutionary acquisition strategy. Commercial and government agency sources will be leveraged for required certifications, functional and operational tests, and acceptance support.

E. Performance Metrics

N/A

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command										Date: May 2017		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>				Project (Number/Name) S375 / <i>Weapons Systems</i>			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
S375: <i>Weapons Systems</i>	0.565	1.417	1.481	1.480	-	1.480	1.474	1.475	1.505	1.535	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project provides for the development and testing of specialized, common caliber, individual, sniper, machine gun, pistol, crew served weapons systems that enable SOF to accurately engage enemy personnel and material in all SOF environments at ranges up to 1500 meters. Weapons include common caliber modular assault rifles to engage out to 600 meters, Sniper Support Rifles to engage out to 800 meters, sniper rifles to engage out to 1500 meters, shoulder fired Grenade Launchers, vehicle and man-portable high velocity grenade launchers, pistols, machine guns to engage out to 1000 meters, multi-barreled mini-guns which can be mounted on boats, vehicles, aircraft, and ground mounted to engage out to 3,500 meters, and Weapon Accessories (WPAC) to be used on both service-common and SOF weapons, enabling the operator to tailor the configuration of the weapon to the assigned mission and operational environment, enhancing the overall effectiveness of the weapons, which enables mission accomplishment and operator survivability.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Title: Weapons Accessories	1.417	1.481	1.480	-	1.480
FY 2016 Accomplishments: Developed enhanced capabilities to improve performance of individual sniper and machine gun weapons.					
FY 2017 Plans: Develop enhanced capabilities to improve performance of individual sniper and machine gun weapons.					
FY 2018 Base Plans: Develops enhanced capabilities to improve performance of individual sniper and machine gun weapons.					
Accomplishments/Planned Programs Subtotals	1.417	1.481	1.480	-	1.480

C. Other Program Funding Summary (\$ in Millions)

Line Item	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
• PROC/0204WARRIOR: <i>Warrior Systems <\$5M</i>	233.629	246.381	252.070	20.215	272.285	258.375	251.203	264.258	257.103	Continuing	Continuing

Remarks

D. Acquisition Strategy

Weapons accessory development will take place within government laboratories as well as industry depending on the weapons system.

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command		Date: May 2017
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) S375 / <i>Weapons Systems</i>

E. Performance Metrics

N/A

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command										Date: May 2017		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 1160431BB / Warrior Systems				Project (Number/Name) S385 / Soldier Protection and Survival Systems			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
S385: Soldier Protection and Survival Systems	4.663	2.516	2.977	2.852	-	2.852	2.849	2.668	2.676	2.819	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project provides specialized equipment to meet the unique operator protection and survival requirements of Special Operations Forces (SOF) to include: Army Rangers; Army Special Forces; Navy Sea, Air, Land (SEAL) teams; Navy Special Boat Units; Air Force Operators; and Marine Raiders. Specialized equipment improves survivability protection from the environment by providing the operator with hearing protection and clothing systems, as well load bearing equipment to improve the mobility of SOF, while conducting varied missions, and personnel safety equipment. These missions are generally conducted in harsh environments, for unspecified periods and in locations requiring small unit autonomy.

SOF Personal Equipment Advanced Requirements (SPEAR) provides for the research, development, testing and evaluation of a variety of individual and survival equipment to include: ballistic and environmental protective systems, combat uniforms, load carriage systems, communications headsets, and visual augmentation system mounts.

Tactical Combat Casualty Care (TCCC) provides medical devices, ancillary equipment and Casualty Evacuation (CASEVAC) sets for SOF. The CASEVAC procures a suite of Food and Drug Administration approved medical items including, but not limited, to intraosseous infusion devices, patient monitoring and assessment devices, emergency airway kits, as well as devices that provide SOF the capability to support extraction, extrication, mobility, transportation, and sustainment of casualties in forward areas. This program fields tactical medical and CASEVAC capabilities with the intention to transition capabilities developed under the National Mission Force Tactical Medical Programs. This capability provides significant ability to lessen battlefield losses by providing timely, critical lifesaving and evacuation capabilities to the forward-deployed SOF operators.

Counter Radio Controlled-Improvised Explosive Device (RC-IED) program provides SOF with the ability to counter current and future RC-IED threats used by terrorist networks.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Title: SPEAR	1.230	0.474	0.493	-	0.493
FY 2016 Accomplishments:					
Continued research and development of a Maritime communications material solution, safety belt and lanyard test standardization and arctic capability gap solutions. Continued materials testing. Completed user evaluations, developmental testing (I.e., weight measurements, volume, drop-testing, and environmental					

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command			Date: May 2017			
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / Warrior Systems	Project (Number/Name) S385 / Soldier Protection and Survival Systems				
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
exposure) and initiated fielding of hot weather rucks, softshell jackets and pants, updated glove suites and overwhites. Completed initial downselects of rucksack suite and maritime Body Armor Vests and Load Carriage Systems. FY 2017 Plans: Continue research and development of land communications material solutions, arctic uniform capability gap solutions, and initiates jungle uniform capability gap solutions. Continue materials testing and incorporation into commodity lines. Begin signature management evaluations. FY 2018 Base Plans: Continues research and development of land communications material solutions and protective combat uniforms. Continues materials testing and incorporation into commodity lines. Begins wireless headset evaluations. Completes interoperability of headsets with SOCOM handheld radios.						
Title: TCCC FY 2016 Accomplishments: Provided for test support to include program management, market surveys, test article acquisition, test and evaluation and systems engineering in direct support of the CASEVAC. Completed laboratory airworthiness testing of enhanced electronic medical systems, including patient ventilation and fluid warming capabilities for use while aboard SOCOM air platforms. Initiated evaluations for the integration of these systems into the CASEVAC program. FY 2017 Plans: Provide for test support to include program management, market surveys, test article acquisition, test and evaluation and systems engineering in direct support of the CASEVAC program. Support the evaluation of enhanced medical monitoring systems for incorporation into the CASEVAC program. Develop and test water resistant solutions for maritime operations of components within the CASEVAC set. Support the re-compete of the CASEVAC program. FY 2018 Base Plans: Provides for test support to include program management, market surveys, test article acquisition, test and evaluation and systems engineering in direct support of the CASEVAC program. Supports the evaluation of enhanced medical monitoring systems for incorporation into the CASEVAC program. Develops and tests water resistant solutions for maritime operations of components within the CASEVAC set.		0.369	0.396	0.199	-	0.199
Title: RC-IED		0.917	2.107	2.160	-	2.160

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command			Date: May 2017
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / Warrior Systems	Project (Number/Name) S385 / Soldier Protection and Survival Systems	

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
<p><i>FY 2016 Accomplishments:</i> Provided for National Assessment Group (NAG) test support to the Counter RC-IED program. Supported system engineering, test and evaluation, test article acquisition, and market research of the RC-IED programs. Maintained test range effectiveness and currency, ensuring the ability to accurately test against current and emerging threat systems. Initiated development and testing of ECM systems capability and advanced software technique countermeasures.</p> <p><i>FY 2017 Plans:</i> Continue NAG test support to the Counter RC-IED program. Support system engineering, test and evaluation, test article acquisition, and market research of the RC-IED programs. Maintain range effectiveness and currency, ensuring the ability to accurately test against current and emerging threat systems. Continue development and testing of ECM systems capability to include advanced software technique countermeasures and loadsets for mounted and dismounted systems. Continue open architecture development to increase efficiency of sharing software and firmware solutions across multiple industry original equipment manufacturer (OEM) vendors and government organizations.</p> <p><i>FY 2018 Base Plans:</i> Continues NAG test support to the Counter RC-IED program. Supports system engineering, test and evaluation, test article acquisition, and market research of the RC-IED programs. Maintains range effectiveness and currency, ensuring the ability to accurately test against current and emerging threat systems. Continues development and testing of ECM systems capability to include advanced software technique countermeasures and loadsets for mounted and dismounted systems. Implements Modi software refactoring, improving stability and future technology integration.</p>					
Accomplishments/Planned Programs Subtotals	2.516	2.977	2.852	-	2.852

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
• PROC/0204WARRIOR: Warrior Systems<\$5M	233.629	246.381	252.070	20.215	272.285	258.375	251.203	264.258	257.103	Continuing	Continuing
Remarks											

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command		Date: May 2017
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) S385 / <i>Soldier Protection and Survival Systems</i>
<p><u>D. Acquisition Strategy</u></p> <p>SPEAR primarily takes advantage of modified commercial-off-the-shelf (COTS) or non-developmental items (NDI) through open competition.</p> <p>TCCCE-CASEVAC takes advantage of COTS equipment and/or NDI.</p> <p>RC-IED uses evolutionary development of hardware and software capabilities, leveraging collaborative development with Government Agencies and Industry partners.</p> <p><u>E. Performance Metrics</u></p> <p>N/A</p>		

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command										Date: May 2017		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 1160431BB / Warrior Systems				Project (Number/Name) S385A / Body Armor and Associated Equipment			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
S385A: Body Armor and Associated Equipment	3.659	1.286	1.339	1.289	-	1.289	1.289	1.636	1.669	1.716	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project provides specialized equipment to meet the unique operator protection and survival requirements of SOF, to include: Army Rangers; Army Special Forces; Navy Sea, Air, Land (SEAL) teams; Navy Special Boat Units; Air Force Operators; and Marine Raiders. Specialized ballistic equipment improves survivability impacting the mobility of SOF while conducting varied missions. These missions are generally conducted in harsh environments, for unspecified periods and in locations requiring small unit autonomy.

This project enhances the SOF Personal Equipment Advanced Requirement (SPEAR) program by supporting body armor plates, soft armor, helmets, and eye protection. It also provides for the research, development, and testing of a variety of body armor and personal protective equipment.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Title: SPEAR-Ballistic Protection	1.286	1.339	1.289	-	1.289
FY 2016 Accomplishments: Continued foreign ammunition testing and threat validation to assess effectiveness of currently fielded personal protective equipment. Continued development and testing of lightweight body armor and helmets to upgrade systems that have been fielded. Continued evaluation of transparent armor products which include variable light transmission, anti-fogging, ballistic, and laser lenses to upgrade systems that have been fielded. Addressed emerging SOF-unique requirements as SOF transitions from deployments in Iraq and Afghanistan to a global focus.					
FY 2017 Plans: Continue foreign ammunition testing and threat validation to assess effectiveness of currently fielded personal protective equipment. Continue development and testing of lightweight body armor and helmets to upgrade systems that have been fielded. Continue evaluation of transparent armor products which include variable light transmission and laser lenses to upgrade systems that have been fielded. Initiate selection of maritime crewman helmet.					
FY 2018 Base Plans:					

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command										Date: May 2017	
Appropriation/Budget Activity 0400 / 7				R-1 Program Element (Number/Name) PE 1160431BB / Warrior Systems				Project (Number/Name) S385A / Body Armor and Associated Equipment			
B. Accomplishments/Planned Programs (\$ in Millions)						FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	
Continues foreign ammunition testing and threat validation to assess effectiveness of currently fielded personal protective equipment. Continues development and testing of lightweight body armor and helmets to upgrade systems that have been fielded. Continues evaluation of transparent armor products which include variable light transmission and laser lenses to upgrade systems that have been fielded. Initiates development and testing of technologies to upgrade the maritime crewman helmet.											
Accomplishments/Planned Programs Subtotals						1.286	1.339	1.289	-	1.289	
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
• PROC/0204WARRIOR: Warrior Systems<\$5M	233.629	246.381	252.070	20.215	272.285	258.375	251.203	264.258	257.103	Continuing	Continuing
Remarks											
D. Acquisition Strategy											
SPEAR ballistic protection equipment takes advantage of modified commercial-off-the-shelf or non-developmental items acquired through full and open competition. Currently these SPEAR purchases are made with the O&M appropriation. USSOCOM requirements are different from those of the Services, items leveraged from industry are often on the cutting edge of technology and require substantial testing in the SOF environments. Some SPEAR ballistic systems have transitioned to the U.S. Army, other services and other government agencies.											
E. Performance Metrics											
N/A											

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command										Date: May 2017		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 1160431BB / Warrior Systems				Project (Number/Name) S395 / Visual Augmentation, Lasers and Sensor Systems			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
S395: Visual Augmentation, Lasers and Sensor Systems	1.422	2.075	1.482	1.517	-	1.517	1.546	1.575	1.602	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project provides for development, testing and integration of specialized visual augmentation, binocular and monocular night vision devices, laser markers, laser designators, geo-location systems, weapon optics, weapon aiming lasers, sensor systems, visible lights, infrared imagers, clandestine pointers, and accessories to meet the unique requirements of SOF. Sensor technology being developed includes image intensification thermal imaging, short wave infrared, multi-spectral, fusion, and other sensor types. Developments will decrease weight, increase range, increase situational awareness, provide data, image processing, image filtering, determine wind speed, observe bullet trace, and sensor fusion to be able to detect, identify, classify and engage targets at greater ranges. These projects ensure SOF systems shall remain technologically superior to enemy threats to ensure mission success.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Title: Visual Augmentation Systems	2.075	1.482	1.517	-	1.517
FY 2016 Accomplishments: Continued to develop visual augmentation and laser devices to improve situational awareness, sharing of data/ images and target acquisition.					
FY 2017 Plans: Continue development and begin testing of visual augmentation and laser devices to improve situational awareness, sharing of data/images and target acquisition.					
FY 2018 Base Plans: Continues development and testing of visual augmentation and laser devices to improve situational awareness, sharing of data/images and target acquisition.					
Accomplishments/Planned Programs Subtotals	2.075	1.482	1.517	-	1.517

C. Other Program Funding Summary (\$ in Millions)

Line Item	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
• PROC/0204WARRIOR: <i>Warrior Systems</i> <\$5M	233.629	246.381	252.070	20.215	272.285	258.375	251.203	264.258	257.103	Continuing	Continuing

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command			Date: May 2017
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / Warrior Systems	Project (Number/Name) S395 / Visual Augmentation, Lasers and Sensor Systems	

C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u> <u>Base</u>	<u>FY 2018</u> <u>OCO</u>	<u>FY 2018</u> <u>Total</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
Remarks											

D. Acquisition Strategy

These developmental efforts will leverage Science and Technology projects to develop prototype systems for SOF to evaluate. VAS will award an Indefinite Delivery Indefinite Quantity production contract.

E. Performance Metrics

N/A

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command										Date: May 2017		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 1160431BB / Warrior Systems				Project (Number/Name) S700 / Communications Equipment and Electronics Systems			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
S700: Communications Equipment and Electronics Systems	7.241	5.466	9.373	12.864	-	12.864	14.803	16.354	16.664	11.858	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project provides for communication systems to meet emergent requirements to support Special Operations Forces (SOF). Communications Equipment and Electronics Systems is a continuing effort to develop smaller, lighter, more efficient and more robust SOF Command, Control, Communications, and Computer (C4) capabilities.

USSOCOM's C4 systems comprise an integrated network of systems providing positive command and control and the timely exchange of information to all organizational echelons. The C4I systems that support this new architecture employ the latest standards and technology by transitioning from separate systems to full integration within the Global Information Grid (GIG). The GIG is a multitude of existing and projected national assets that allows SOF elements to operate with any force combination in multiple environments.

- SOF Deployable Node (SDN) is a family of deployable, super high frequency, multi-band, Satellite Communications (SATCOM) systems providing the transport path for high-capacity, voice, data, video tele-conferencing (VTC), and full motion video at all levels of classification. It consists of SDN subprograms, transport for intelligence variants, technology insertions and capital equipment replacement.
- Civil Information Management (CIM). The CIM Data Processing System (CIMDPS) is an automation system that assists active Civil Affairs (CA) and others engaged in civil-military operations to collect, process, analyze, maintain, mine, and deliver Civil Information and analysis products in support of military operations.
- The Special Communications (SPCOM) Enterprise program, formerly justified as the Special Communication Enterprise (SCE) includes organizations, practices, processes, services, networks, systems and subsystems that manage and provide clandestine exchange of information between elements (field-to-field, field-to-base, base-to-field) for worldwide deployed SOF units, often in austere environments with heavy adversarial monitoring.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Title: SDN	2.461	2.940	7.982	-	7.982
FY 2016 Accomplishments:					

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command			Date: May 2017			
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / Warrior Systems	Project (Number/Name) S700 / Communications Equipment and Electronics Systems				
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Assessed, tested and evaluated advance antenna design and performance. Continued to integrate Evolutionary Technology Insertions (ETIs). FY 2017 Plans: Assess, test, and evaluate advanced antenna design and performance. Continue ETI integration. Assess, test, and evaluate design and development of distributed cloud architecture to reduce complexity, improve resiliency, empower mobility, and increase security of the SOF Information Environment. FY 2018 Base Plans: Assesses, tests and evaluates wide-band Communications-on-the-Move (COTM) airborne technologies. Continues ETI integration. Evaluates new SATCOM constellations.						
Title: CIM FY 2017 Plans: Begin development and integration of new capabilities in support of CA communities. FY 2018 Base Plans: Continues development and integration of new capabilities in support of CA communities.		-	1.847	0.207	-	0.207
Title: SPCOM FY 2016 Accomplishments: Continued segment development for the SPCOM enterprise; developed means and methods to provide near-term impact to operators. Increased emphasis on developing anti-intrusion/anti-tamper capabilities. Conducted extensive vulnerability assessments plus independent verification and validation. FY 2017 Plans: Continue segment development for the SPCOM enterprise; develop means and methods to provide near-term impact to operators. Continue development of anti-intrusion/anti-tamper capabilities. Conduct extensive vulnerability assessments plus independent verification and validation. FY 2018 Base Plans: Continues segment development for the SPCOM enterprise; develops means and methods to provide near-term impact to operators. Continues development of anti-intrusion/anti-tamper capabilities. Conducts extensive vulnerability assessments plus independent verification and validation.		3.005	4.586	4.675	-	4.675
Accomplishments/Planned Programs Subtotals		5.466	9.373	12.864	-	12.864

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command								Date: May 2017			
Appropriation/Budget Activity 0400 / 7				R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>				Project (Number/Name) S700 / <i>Communications Equipment and Electronics Systems</i>			

C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u> <u>Base</u>	<u>FY 2018</u> <u>OCO</u>	<u>FY 2018</u> <u>Total</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• PROC/0204WARRIOR: <i>Warrior Systems<\$5M</i>	233.629	246.381	252.070	20.215	272.285	258.375	251.203	264.258	257.103	Continuing	Continuing
• PROC/0204OTHER: <i>OTHER ITEMS <\$5M</i>	76.709	78.016	54.592	-	54.592	90.958	77.732	92.076	58.694	Continuing	Continuing

Remarks

D. Acquisition Strategy

- SDN is a fielded program with ETIs into all variants: heavy, medium, and light, wideband SATCOM-On-The-Move, Mobile SOF Strategic Entry Point, and airborne Intelligence Surveillance Reconnaissance transport variants. Commercial and government agency sources will be leveraged for required certifications, functional and operational tests, and acceptance support.
- CIM has an evolutionary acquisition strategy to enhance its capability to meet the CA communities emerging requirements.
- SPCOM is an ETI effort to provide and support multiple field segment kits. Commercial and government agency sources will be leveraged for required certifications, functional and operational tests, and acceptance support.

E. Performance Metrics

N/A

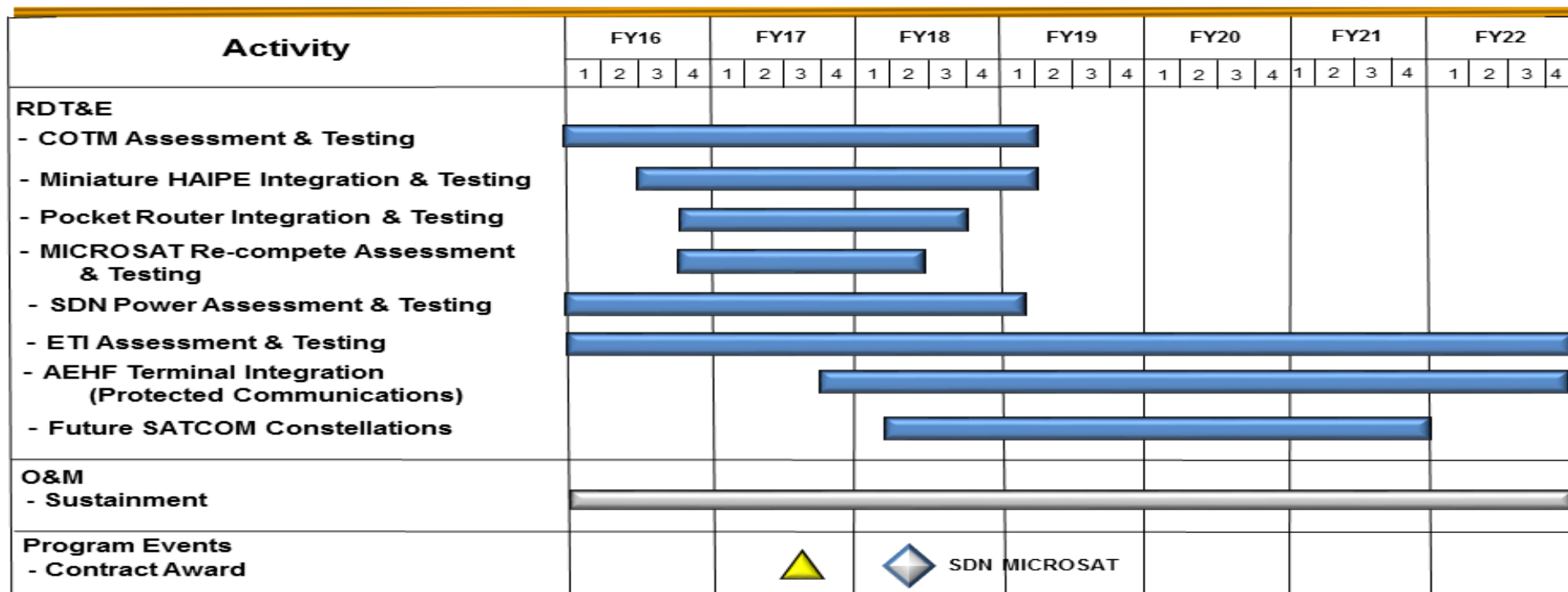
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Exhibit R-3, RDT&E Project Cost Analysis: FY 2018 United States Special Operations Command												Date: May 2017			
Appropriation/Budget Activity 0400 / 7						R-1 Program Element (Number/Name) PE 1160431BB / Warrior Systems				Project (Number/Name) S700 / Communications Equipment and Electronics Systems					
Product Development (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
SOF Deployable Node (SDN) Development Assessment	MIPR	Various : Various	2.205	1.251	Jun 2016	1.535	Mar 2017	2.110	Feb 2018	-		2.110	Continuing	Continuing	-
Civil Information Management Data Processing System (CIMDPS) Development	TBD	TBD : TBD	-	-		1.847	Mar 2017	0.207	Mar 2018	-		0.207	0.211	2.265	2.265
Special Communications (SPCOM) Enterprise Capability Development	TBD	Various : Various	2.699	2.118	Feb 2016	3.780	Mar 2017	3.845	Feb 2018	-		3.845	Continuing	Continuing	-
SPCOM Technology Vulnerability Assessments	MIPR	MITRE : Bedford, MA	0.567	0.603	Dec 2015	0.504	Dec 2016	0.530	Dec 2017	-		0.530	Continuing	Continuing	-
Subtotal			5.471	3.972		7.666		6.692		-		6.692	-	-	-
Test and Evaluation (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
SDN Market Research Evaluation and Testing	MIPR	Naval Research Lab (NRL) : Washington, D.C.	1.206	1.210	Dec 2015	1.405	Mar 2017	5.872	Jan 2018	-		5.872	Continuing	Continuing	-
SPCOM Operational Testing and Evaluation Independent Verification and Validation	MIPR	MITRE : Bedford, MA	0.564	0.284	Mar 2016	0.302	Mar 2016	0.300	Dec 2017	-		0.300	Continuing	Continuing	-
Subtotal			1.770	1.494		1.707		6.172		-		6.172	-	-	-
			Prior Years	FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			7.241	5.466		9.373		12.864		-		12.864	-	-	-
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: FY 2018 United States Special Operations Command			Date: May 2017
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / Warrior Systems	Project (Number/Name) S700 / Communications Equipment and Electronics Systems	

SOF Deployable Node (SDN) Schedule

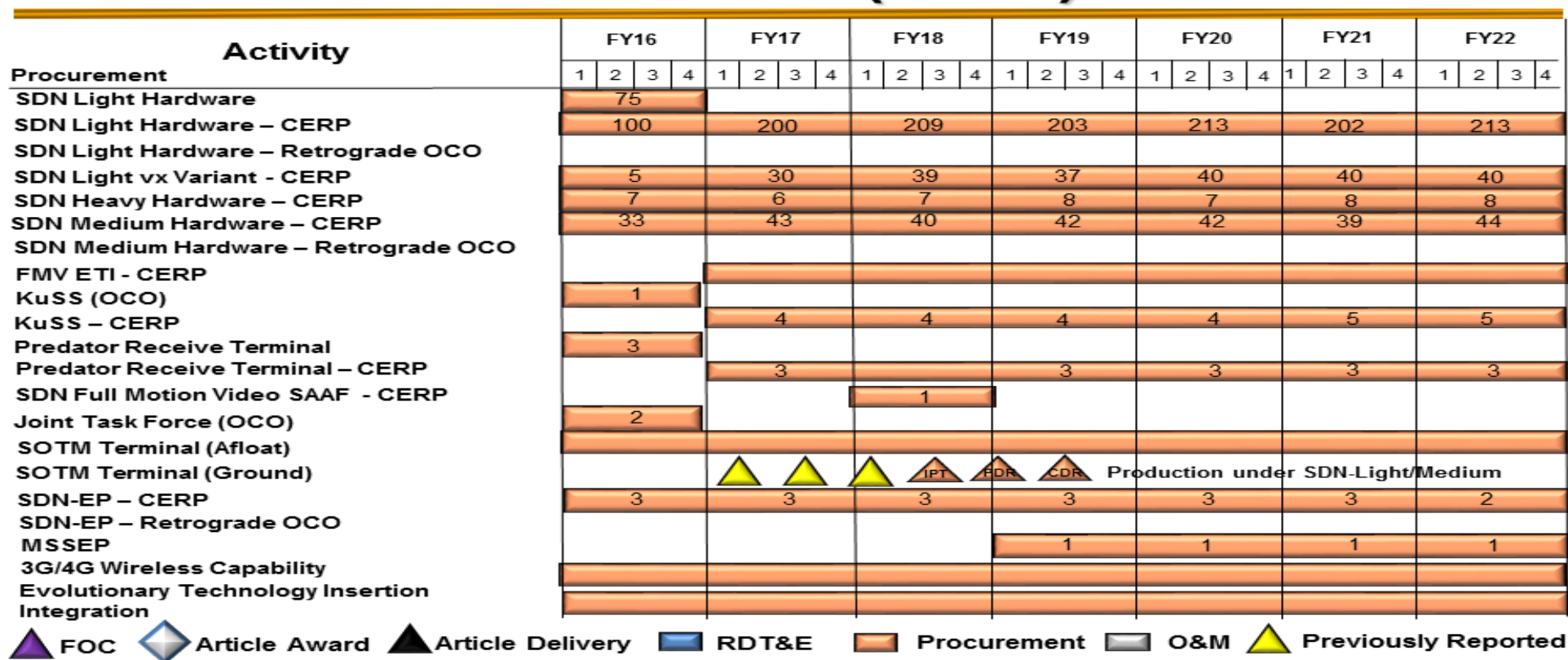


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  Article Award
  Article Delivery
  RDT&E
  Procurement
  O&M
  Previously Reported

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Exhibit R-4, RDT&E Schedule Profile: FY 2018 United States Special Operations Command				Date: May 2017			
Appropriation/Budget Activity 0400 / 7				R-1 Program Element (Number/Name) PE 1160431BB / Warrior Systems			
				Project (Number/Name) S700 / Communications Equipment and Electronics Systems			

SOF Deployable Node (SDN) Schedule (con't)



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Exhibit R-4, RDT&E Schedule Profile: FY 2018 United States Special Operations Command			Date: May 2017
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / Warrior Systems	Project (Number/Name) S700 / Communications Equipment and Electronics Systems	

Civil Information Management System Schedule

Activity	FY16				FY17				FY18				FY19				FY20				FY21				FY22			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
RDT&E																												
NextGen CIMDPS Sync Tool																												
NextGen CIMDPS Hardware Platform																												
Procurement																												
NextGen CIMDPS with Initial Maintenance																												
O&M																												
NextGen CIMDPS Integration, Configuration and Software Endpoint Development																												
Sustainment CIMDPS and NextGen CIMDPS																												

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  Article Award
  Article Delivery
  RDT&E
  Procurement
  O&M
  Previously Reported

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Exhibit R-4, RDT&E Schedule Profile: FY 2018 United States Special Operations Command			Date: May 2017
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) <i>S700 / Communications Equipment and Electronics Systems</i>	

Special Communications Enterprise Schedule

Activity	FY16				FY17				FY18				FY19				FY20				FY21				FY22			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Field Segment Development																												
Field Segment Procurement	14				13				22				20				20				20				20			
Enterprise Segment Capabilities Development																												
Enterprise Segment Procurement																												
Enterprise/Transport Segments Operations & Maintenance																												
"Market" Survey																												
IV&V Event																												
Annual Vulnerability Assessment																												

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Exhibit R-4A, RDT&E Schedule Details: FY 2018 United States Special Operations Command			Date: May 2017
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) S700 / <i>Communications Equipment and Electronics Systems</i>	

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>SOF Deployable Node</i>				
SOF Deployable Node (SDN) Development	1	2016	4	2022
SDN Market Research and Testing	1	2016	4	2022
<i>CIVIL INFORMATION MANAGEMENT (CIM)</i>				
CIMDPS Sync Tool Development	2	2017	2	2019
<i>Special Communications (SPCOM) Enterprise Program</i>				
Field Segment Kit Development	1	2016	4	2022
Enterprise Segment Services Development	1	2016	4	2022

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command										Date: May 2017		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 1160431BB / Warrior Systems				Project (Number/Name) S710 / Tactical Systems Development			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
S710: Tactical Systems Development	1.172	0.804	2.640	2.416	-	2.416	2.523	3.031	3.083	3.145	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
A. Mission Description and Budget Item Justification												
<p>This project provides for development, testing, and integration of specialized automation equipment to meet the unique requirements of Special Operations Forces (SOF). Specialized automation equipment will permit small, highly trained forces to conduct required operations across the entire spectrum of conflict. These operations are generally conducted in harsh environments, for unspecified periods and in locations requiring small unit autonomy. SOF must infiltrate by land, sea, and air to conduct unconventional warfare, direct action, or deep reconnaissance operations in denied areas against insurgent units, terrorists, or highly sophisticated threat forces. The requirement to operate in denied areas controlled by a sophisticated threat mandates that SOF systems remain technologically superior to threat forces to ensure mission success.</p> <p>- The Tactical Local Area Network (TACLAN) provides SOF operational commanders and forward deployed forces advanced networking, automated data processing, storage, and display capabilities to support situational awareness, mission planning and execution, and command and control of forces. The TACLAN consists of Suites, Mission Planning Kits and Field Computing Devices, Coalition Local Area Network, and Full Motion Video Kits.</p>												
B. Accomplishments/Planned Programs (\$ in Millions)								FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Title: TACLAN Suites								0.804	2.640	2.416	-	2.416
FY 2016 Accomplishments: Continued integration and testing of evolutionary technology insertions (ETI) for Secure Data At Rest, secure wireless and cross domain solutions.												
FY 2017 Plans: Continue integration and testing of ETI for Secure Data At Rest, secure wireless and cross domain solutions. Begin assessment, test and evaluation of the design and development of distributed cloud architecture to reduce complexity, improve resiliency, empower mobility, and increase security of the SOF Information Environment (SIE).												
FY 2018 Base Plans: Continues integration and testing of ETI for Secure Data At Rest, secure wireless and cross domain solutions. Continues assessment, test and evaluation of the design and development of distributed cloud architecture to reduce complexity, improve resiliency, empower mobility, and increase security of the SIE.												
Accomplishments/Planned Programs Subtotals								0.804	2.640	2.416	-	2.416

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command			Date: May 2017
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) S710 / <i>Tactical Systems Development</i>	

C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u> <u>Base</u>	<u>FY 2018</u> <u>OCO</u>	<u>FY 2018</u> <u>Total</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• PROC/0204OTHER: OTHER ITEMS <\$5M	76.709	78.016	54.592	-	54.592	90.958	77.732	92.076	58.694	Continuing	Continuing

Remarks

D. Acquisition Strategy

The TACLAN evolutionary acquisition strategy includes the use of commercial and government agency sources, that will be leveraged for required certifications, functional and operational test, and acceptance support.

E. Performance Metrics

N/A

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command										Date: May 2017		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 1160431BB / Warrior Systems				Project (Number/Name) S725 / Tactical Radio Systems			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
S725: Tactical Radio Systems	6.882	2.036	3.884	13.183	-	13.183	4.892	10.719	7.280	1.918	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project is for the development of all SOF tactical radio programs. Tactical Radios provide the critical Command, Control, Communications (C3) link between SOF Commanders and SOF Teams involved in operational missions and training exercises. They also provide interoperability with all Services, various agencies of the U.S. Government, Air Traffic Control, commercial agencies, and allied foreign forces. Tactical Radios, which includes SOF Tactical Communications (STC), and Blue Force Tracking (BFT), rapidly and seamlessly establish and maintain mobile and fixed Command and Control (C2) communications between infiltrated/operational elements and higher echelon headquarters, allowing SOF to operate with any force combination in multiple environments.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Title: STC	1.571	3.812	13.112	-	13.112
FY 2016 Accomplishments: Developed and tested new capabilities in tactical radio equipment.					
FY 2017 Plans: Continue to develop and test new capabilities in tactical radio equipment.					
FY 2018 Base Plans: Continues development, integration and testing of new capabilities in tactical radio equipment. Enables modernization and testing of Cryptography and Global Positioning System (GPS) technology in accordance with Department of Defense modernization directives for a fleet of more than 33,000 tactical radios. Enables integration and testing of emerging High Frequency (HF) waveform, the Mobile User Objective Waveform, emerging Mobile Ad-hoc Networking (MANET) waveforms, and the Link-16 Tactical Data Link (TDL) waveform.					
Title: BFT	0.465	0.072	0.071	-	0.071
FY 2016 Accomplishments: Continued to develop and test new capabilities in BFT equipment.					
FY 2017 Plans: Continue development and testing of new capabilities in BFT equipment.					
FY 2018 Base Plans:					

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command								Date: May 2017				
Appropriation/Budget Activity 0400 / 7				R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>				Project (Number/Name) S725 / <i>Tactical Radio Systems</i>				
B. Accomplishments/Planned Programs (\$ in Millions)								FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Continues development of new capabilities in BFT equipment.												
Accomplishments/Planned Programs Subtotals								2.036	3.884	13.183	-	13.183
C. Other Program Funding Summary (\$ in Millions)												
Line Item	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost	
• PROC/0204WARRIOR: <i>Warrior Systems<\$5M</i>	233.629	246.381	252.070	20.215	272.285	258.375	251.203	264.258	257.103	Continuing	Continuing	
Remarks												
D. Acquisition Strategy												
<ul style="list-style-type: none"> • STC is a Commercial-Off-The-Shelf/Non-Development Item program with evolutionary technology insertions (ETIs). Commercial and government agency sources will be leveraged for required certifications, functional and operational tests, and acceptance support. • BFT is a fielded program with ETIs leveraging commercial and other government agency sources for required certifications, functional and operational tests, and technology updates. 												
E. Performance Metrics												
N/A.												

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Exhibit R-3, RDT&E Project Cost Analysis: FY 2018 United States Special Operations Command												Date: May 2017			
Appropriation/Budget Activity 0400 / 7						R-1 Program Element (Number/Name) PE 1160431BB / Warrior Systems				Project (Number/Name) S725 / Tactical Radio Systems					
Product Development (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
SOF Tactical Communications Radio Development and Integration	MIPR	Various : Various	4.954	1.351	Apr 2016	3.276	Jan 2017	11.276	Jan 2018	-		11.276	Continuing	Continuing	-
Blue Force Tracking Development	MIPR	Various : Various	1.928	0.465	Nov 2015	0.072	Oct 2016	0.071	Jan 2018	-		0.071	Continuing	Continuing	-
Subtotal			6.882	1.816		3.348		11.347		-		11.347	-	-	-
Test and Evaluation (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
STC Testing	Option/ TBD	Various : Various	-	0.220	Apr 2016	0.536	Jan 2017	1.836	Jan 2018	-		1.836	Continuing	Continuing	-
Subtotal			-	0.220		0.536		1.836		-		1.836	-	-	-
			Prior Years	FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			6.882	2.036		3.884		13.183		-		13.183	-	-	-
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: FY 2018 United States Special Operations Command

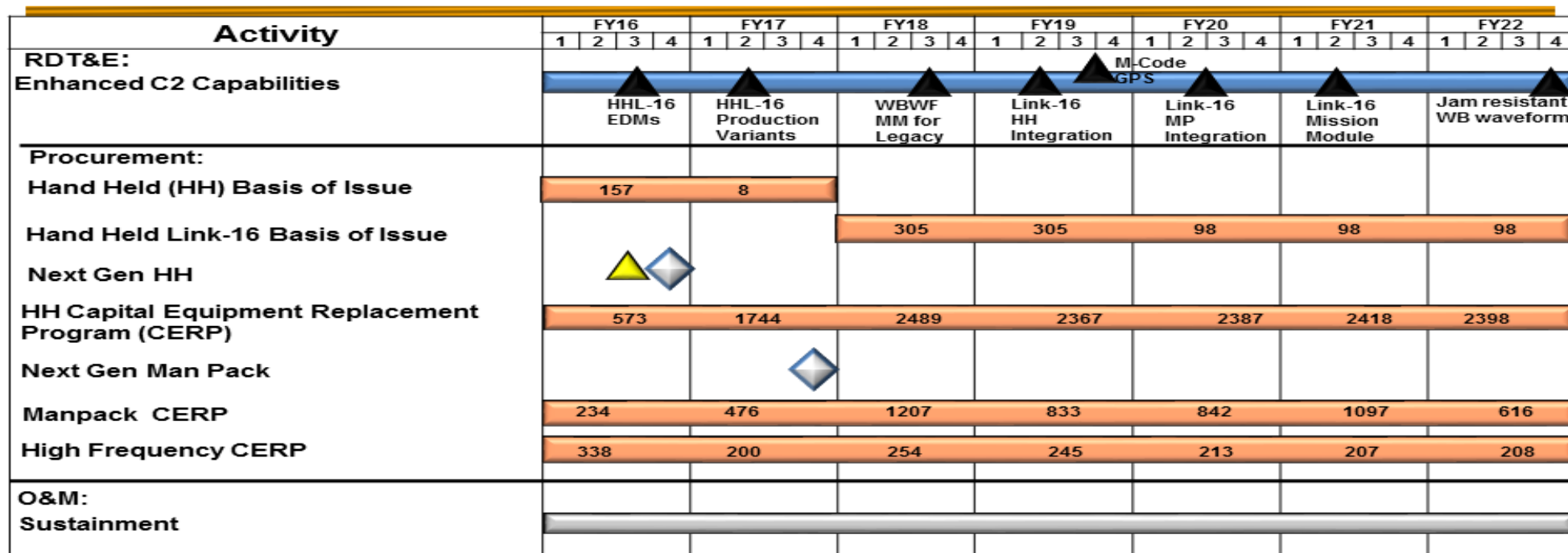
Date: May 2017

Appropriation/Budget Activity
0400 / 7

R-1 Program Element (Number/Name)
PE 1160431BB / Warrior Systems

Project (Number/Name)
S725 / Tactical Radio Systems

SOF Tactical Communications (STC) Schedule



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  Article Award
  Article Delivery
  RDT&E
  Procurement
  O&M
  Previously Reported

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Exhibit R-4, RDT&E Schedule Profile: FY 2018 United States Special Operations Command

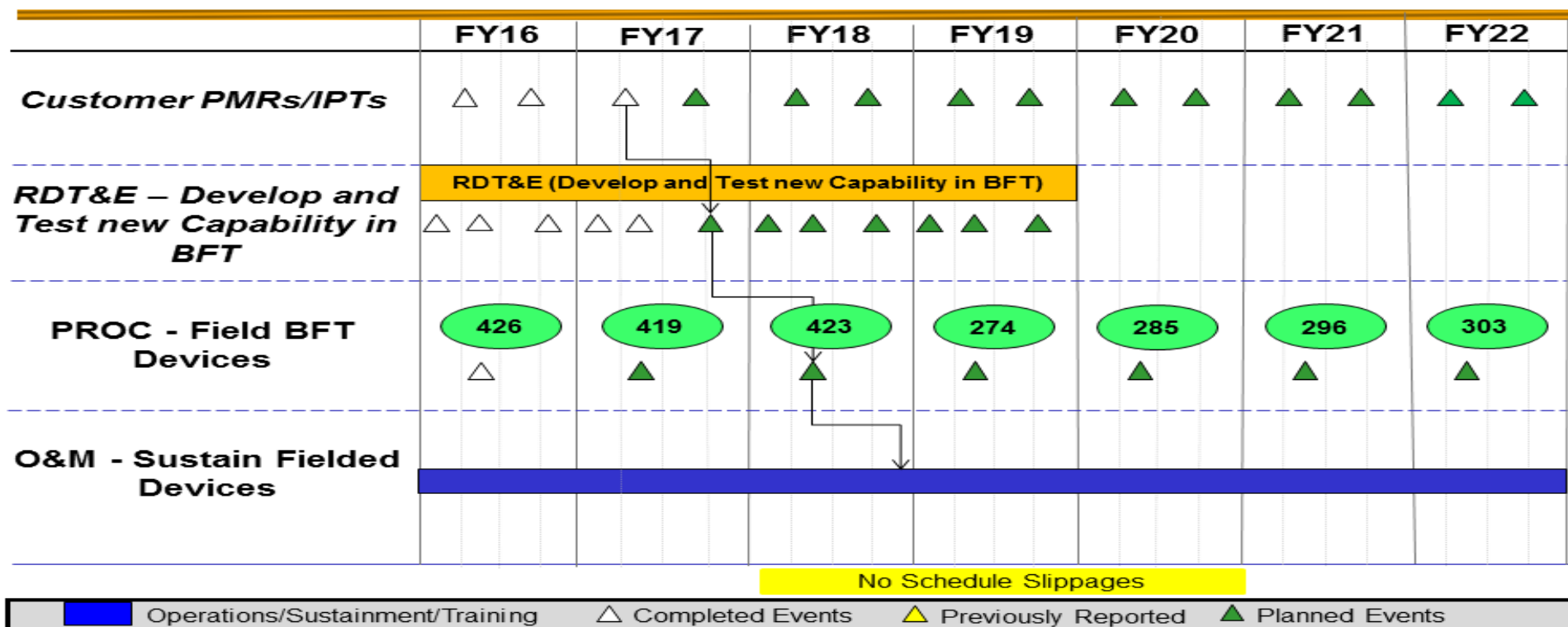
Date: May 2017

Appropriation/Budget Activity
0400 / 7

R-1 Program Element (Number/Name)
PE 1160431BB / Warrior Systems

Project (Number/Name)
S725 / Tactical Radio Systems

BFT Schedule



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Exhibit R-4A, RDT&E Schedule Details: FY 2018 United States Special Operations Command			Date: May 2017
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) <i>S725 / Tactical Radio Systems</i>	

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>SOF Tactical Communications (STC)</i>				
STC Radio Development	1	2016	4	2022
STC Radio Testing	1	2016	4	2022
<i>Blue Force Tracking (BFT)</i>				
BFT Capability Improvement Development	1	2016	4	2019

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command **Date:** May 2017

Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) S800 / <i>Munitions Advanced Development</i>
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COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
S800: <i>Munitions Advanced Development</i>	4.119	10.933	17.398	5.491	-	5.491	0.537	0.538	0.549	0.560	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project funds advanced engineering, operational system development and qualification efforts related to specialized munitions and equipment to meet the unique requirements of SOF.

Munitions Advanced Development. This program provides for Insensitive Munitions (IM) technology development and evaluations that allow SOF munitions to pass testing which includes bullet impact, sympathetic detonation, fast cook off, slow cook off and shaped charge test. Testing is in accordance with the United States Special Operations IM Testing Plan. Munitions product improvements are tested in accordance with command priorities.

Stand-Off Precision Guided Munitions (SOPGM). Provides for the integration and testing of service-common munitions on SOF-unique platforms. This project received a congressional add in FY 2016.

Aircraft Survivability Equipment (ASE). This program includes development of new systems, pre-planned product improvements/upgrades of fielded survivability equipment, and continue development of flare countermeasures.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Title: Munitions Advanced Development	0.433	0.525	0.531	-	0.531
FY 2016 Accomplishments: Conducted proof of concept and IM testing on various munitions. Continued full scale testing to satisfy safety requirements in Military Standard 2105C (Department of Defense Test and Method Standard: Hazard Assessment Test for Non-Nuclear Munition, 26 Sep 2006).					
FY 2017 Plans: Conduct proof of concept and IM testing on various munitions. Conduct SDB II flight test integration for SOF. Continue full scale testing to satisfy safety requirements in Military Standard 2105C (Department of Defense Test and Method Standard: Hazard Assessment Test for Non-Nuclear Munition, 26 Sep 2006).					
FY 2018 Base Plans:					

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command				Date: May 2017
Appropriation/Budget Activity 0400 / 7		R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>		Project (Number/Name) S800 / <i>Munitions Advanced Development</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Conducts SDB II flight test integration for SOF. Continues full scale testing to satisfy safety requirements in Military Standard 2105C (Department of Defense Test and Method Standard: Hazard Assessment Test for Non-Nuclear Munitions, 26 Sep 2006).					
Title: Stand-Off Precision Guided Munitions (SOPGM) FY 2017 Plans: Continue integration and testing of service-common precision guided munitions on SOF platforms. FY 2018 Base Plans: Continues integration and testing of service-common precision guided munitions on SOF platforms.	-	16.873	2.460	-	2.460
Title: Aircraft Survivability Equipment FY 2018 Base Plans: Begin development of flare countermeasures to increase effectiveness against evolving threats.	-	-	2.500	-	2.500
Accomplishments/Planned Programs Subtotals	0.433	17.398	5.491	-	5.491

	FY 2016	FY 2017
Congressional Add: Stand-Off Precision Guided Munitions (SOPGM) FY 2016 Accomplishments: Begin integration and testing of the Small Glide Munition (SGM) precision guided weapon on SOF platforms.	10.500	-
Congressional Adds Subtotals	10.500	-

C. Other Program Funding Summary (\$ in Millions)

Line Item	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
• PROC/0203ORDN: <i>Ordnance Items <\$5M</i>	195.079	166.771	112.331	62.643	174.974	124.450	146.751	156.857	158.945	Continuing	Continuing

Remarks

D. Acquisition Strategy

Munitions Advanced Development: Munitions and packaging redesign shall take place within government laboratories, as well as in industry, depending on the munitions. IM solutions shall be tested on a small scale for proof of principle. Planned product improvements are tested at Army, Navy, and Air Force test centers.

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command		Date: May 2017
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160431BB / <i>Warrior Systems</i>	Project (Number/Name) S800 / <i>Munitions Advanced Development</i>
SOPGM: Integration and developmental testing of service-common precision guided munitions will be conducted using government laboratories or industry partners depending on the munitions for various SOF platforms.		
ASE: Development of new systems, pre-planned product improvements/upgrades of fielded survivability equipment, and continue development of flare countermeasures.		
E. Performance Metrics		
N/A		

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 United States Special Operations Command	Date: May 2017
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Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development</i>					R-1 Program Element (Number/Name) PE 1160432BB / <i>Special Programs</i>							
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	23.912	3.284	1.949	1.978	-	1.978	1.678	1.711	1.746	1.781	Continuing	Continuing
S500E: <i>Special Programs</i>	23.912	3.284	1.949	1.978	-	1.978	1.678	1.711	1.746	1.781	Continuing	Continuing

A. Mission Description and Budget Item Justification

This project is reported in accordance with Title 10, United States Code, Section 119(a)(1) in the Special Access Program Annual Report to Congress.

B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	3.401	1.949	1.978	-	1.978
Current President's Budget	3.284	1.949	1.978	-	1.978
Total Adjustments	-0.117	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.117	-			

Change Summary Explanation

Funding:

FY2016: Decrease of -\$0.117 million is due to a transfer of funds to Small Business Innovative Research/Small Business Technology Research Transfer programs.

FY2017: None.

FY2018: None.

Schedule: None.

Technical: None.

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 United States Special Operations Command **Date:** May 2017

Appropriation/Budget Activity 0400: Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development	R-1 Program Element (Number/Name) PE 1160434BB / Unmanned ISR
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COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	0.000	0.000	22.117	31.766	3.000	34.766	28.060	28.552	28.964	29.534	Continuing	Continuing
S855: Unmanned ISR	0.000	0.000	22.117	31.766	3.000	34.766	28.060	28.552	28.964	29.534	Continuing	Continuing

A. Mission Description and Budget Item Justification

NOTE: Beginning in FY 2017 Unmanned ISR represents the approved consolidation of Special Applications for Contingencies Program Element (PE) 0304210BB; MQ-1 Unmanned Aerial Vehicle (UAV), PE 0305219BB; MQ-8, PE 0305231BB; RQ-11, UAV PE 1105232BB; and RQ-7 UAV, PE 1105233BB.

This program element is part of the Military Intelligence Program (MIP). Develops and deploys special capabilities to perform Intelligence, Surveillance, and Reconnaissance (ISR) for deployed Special Operations Forces (SOF) using non-traditional means. USSOCOM has been designated as the DOD lead for planning, synchronizing, and as directed, executing global operations against terrorist networks and targets. USSOCOM requires the capability to find, fix, and finish time-sensitive high-value fixed and fleeting targets at the unit and team level without placing personnel and units in harm's way. These targets can often only be identified with patient collection of information and require rapid, decisive action during the short periods in which they present themselves. This PE addresses the primary areas of Intelligence, Surveillance, Reconnaissance, and Targeting (ISR&T) capabilities for SOF.

Group 1, 2, 3 and 4, Unmanned Aerial Systems (UAS) developmental efforts are to identify, develop, integrate, and test SOF-unique mission kits, mission payloads, air vehicle enhancements, and modifications to ground control stations. SAFC develops and integrates UAS payloads to advance ISR capabilities that address dynamic and emergent operational needs of the SOF user. Efforts include improving imagery intelligence and electronic warfare payloads, capitalizing on developing technologies to reduce size, weight and power while addressing processing and data management challenges. This program provides a mechanism for SOF user combat evaluation of emerging sensor technologies.

B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	0.000	22.117	24.766	0.000	24.766
Current President's Budget	0.000	22.117	31.766	3.000	34.766
Total Adjustments	0.000	0.000	7.000	3.000	10.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other	-	-	7.000	3.000	10.000

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 United States Special Operations Command		Date: May 2017
Appropriation/Budget Activity 0400: Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development	R-1 Program Element (Number/Name) PE 1160434BB / Unmanned ISR	
<u>Change Summary Explanation</u> Funding: FY 2016: None. FY 2017: None. FY 2018: Increase of \$10.000 million is for SOF user combat evaluation of emerging sensor technologies (\$4.000 million), sensor testing and evaluation (\$3.000 million), and an increase for Overseas Contingency Operations for SOF Peculiar Payloads (\$3.000 million). Schedule: None. Technical: None.		

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command										Date: May 2017		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 1160434BB / <i>Unmanned ISR</i>				Project (Number/Name) S855 / <i>Unmanned ISR</i>			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
S855: <i>Unmanned ISR</i>	0.000	0.000	22.117	31.766	3.000	34.766	28.060	28.552	28.964	29.534	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

NOTE: Beginning in FY 2017, Unmanned ISR represents the approved consolidation of Special Applications for Contingencies Program Element (PE) 0304210BB; MQ-1 Unmanned Aerial Vehicle (UAV), PE 0305219BB; MQ-8 PE 0305231BB; RQ-11 UAV PE 1105232BB; and RQ-7 UAV, PE 1105233BB.

This project is part of the Military Intelligence Program (MIP). Develops and deploys special capabilities to perform intelligence, surveillance, and reconnaissance (ISR) for deployed Special Operations Forces (SOF) using non-traditional means.

Special Applications for Contingencies (SAFC). Provides for efforts to develop and integrate Unmanned Aerial Systems (UAS) payloads to advance ISR capabilities to address dynamic and emergent operational needs of the SOF user. Efforts include improving imagery intelligence and electronic warfare payloads, capitalizing on developing technologies to reduce size, weight and power while addressing processing and data management challenges. It provides a mechanism for SOF user combat evaluation of emerging sensor technologies. SAFC applies focused Research & Development (R&D) for relatively low cost solutions to provide short lead-time contingency planning requirements where focused R&D will allow for test and evaluation of leading edge solutions to emergent problem sets.

Group 1 UAS. Group 1 UAS are small tactical systems, less than 20 pounds in weight. Provides for development efforts to identify, develop, integrate, and test SOF-unique mission kits.

Group 2 UAS. Group 2 UAS are medium tactical systems, between 21 pounds and 55 pounds in weight. Provides for development efforts to identify, develop, integrate, and test SOF-unique mission kits.

Group 3 UAS. Group 3 UAS are large tactical systems that weigh less than 1,320 pounds and fly less than flight level 180.

Group 4 UAS. Group 4 UAS are large systems that weigh greater than 1,320 pounds and fly higher than flight level 180. Provides for development efforts to identify, develop, integrate, and test SOF-unique mission kits.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Title: SAFC	-	17.875	26.499	3.000	29.499
FY 2017 Plans:					

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command			Date: May 2017			
Appropriation/Budget Activity 0400 / 7		R-1 Program Element (Number/Name) PE 1160434BB / Unmanned ISR	Project (Number/Name) S855 / Unmanned ISR			
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Continue development and combat evaluation of selected sensor delivery platforms and mounted or deliverable ISR capabilities for global contingencies including short-notice requirements. Continue to evaluate unique sensor technologies, persistent stare and quick reaction systems. FY 2018 Base Plans: Continues development and combat evaluation of selected sensor delivery platforms and mounted or deliverable ISR capabilities for global contingencies including short-notice requirements. Continues to evaluate unique sensor technologies, persistent stare and quick reaction systems. FY 2018 OCO Plans: Develops various advanced payloads to support ISR payload requirements in deployed OCO theaters and in support of counterterrorism execution order missions. Service payloads insufficient for precision application of SOF mission sets.						
Title: Group 1 UAS (Previously justified as Small Unmanned Aerial System) FY 2017 Plans: Continue to integrate, and test SOF-unique mission kits, mission payloads, and modifications to the small tactical UAS and ground control station, to include but not limited to: improved capabilities for geo-location, collection of push-to-talk, communications, specialized tagging, tracking, and locating, and enhanced communications relay and work to miniaturize previously developed payloads. FY 2018 Base Plans: Continues to integrate, and test SOF-unique mission kits, mission payloads, and modifications to the small tactical UAS and ground control station, to include but not limited to: improved capabilities for geo-location, collection of push-to-talk, communications, specialized tagging, tracking, and locating, and enhanced communications relay and work to miniaturize previously developed payloads.		-	0.124	0.355	-	0.355
Title: Group 2 UAS (Previously justified as Multi-mission Tactical Unmanned Aerial System) FY 2017 Plans: Continue to integrate, and test SOF-unique mission capabilities to the medium tactical UAS, to include but not limited to: signals intelligence gathering, full motion video, and geo-location. FY 2018 Base Plans: Continues to integrate, and test SOF-unique mission capabilities to the medium tactical UAS, to include but not limited to: signals intelligence gathering, full motion video, and geo-location.		-	4.118	4.912	-	4.912
Accomplishments/Planned Programs Subtotals		-	22.117	31.766	3.000	34.766

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command	Date: May 2017
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Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160434BB / <i>Unmanned ISR</i>	Project (Number/Name) S855 / <i>Unmanned ISR</i>
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C. Other Program Funding Summary (\$ in Millions)

Line Item	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
• PROC/0201UMNISR: <i>Unmanned ISR</i>	-	80.820	13.295	38.933	52.228	6.103	5.343	10.940	11.163	Continuing	Continuing
• PROC/0809RQ11: <i>RQ-11 Unmanned Aerial Vehicle</i>	21.298	-	-	-	-	-	-	-	-	0.000	21.984
• PROC/1108MQ1: <i>MQ-1 Unmanned Aerial Vehicle</i>	1.934	-	-	-	-	-	-	-	-	0.000	1.934
• PROC/1108STU: <i>Small Tactical Unmanned Aerial System</i>	1.392	-	-	-	-	-	-	-	-	0.000	3.014

Remarks

D. Acquisition Strategy

SAFC acquisition strategy is evolutionary and spiral-based for technology insertion and low volume procurement. Utilizes existing competed contract vehicles for minor development and integration and modification of Government-Off-The-Shelf/Commercial-Off-The-Shelf equipment. It utilizes limited/full and open competition contracts for major developments.

The Group 1 UAS are evolutionary acquisition programs that deliver, integrate, and qualify SOF-unique mission kits, mission payloads, weapons, air vehicle enhancements, and ground control station upgrades. Contracting methods depend on the type of development effort. Competitive source selection will be conducted as much as possible. Proprietary considerations may direct some effort to the Original Equipment Manufacturer (OEM).

Group 2 UAS are evolutionary acquisition programs that deliver, integrate, and qualify SOF-unique mission kits, mission payloads, weapons, air vehicle enhancements, and ground control station upgrades. Contracting methods depend on the type of development effort. Competitive source selection will be conducted as much as possible. Proprietary considerations may direct some effort to the OEM.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: FY 2018 United States Special Operations Command												Date: May 2017			
Appropriation/Budget Activity 0400 / 7						R-1 Program Element (Number/Name) PE 1160434BB / <i>Unmanned ISR</i>						Project (Number/Name) S855 / <i>Unmanned ISR</i>			
Product Development (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
SAFC Platform/Payload Development and Integration	MIPR	Various : Various	-	-		8.911	Mar 2017	10.790	Mar 2018	3.000	Mar 2018	13.790	Continuing	Continuing	-
Group 1 Unmanned Aerial System (UAS) Payloads	C/IDIQ	Various : Various	-	-		0.124	Mar 2017	0.355	Mar 2018	-		0.355	Continuing	Continuing	-
Group 2 UAS Platform/ Payloads Development	C/TBD	Various : Various	-	-		2.059	Mar 2017	2.456	Mar 2018	-		2.456	Continuing	Continuing	-
Subtotal			-	-		11.094		13.601		3.000		16.601	-	-	-
Support (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
SAFC Platform/Payload Integration	MIPR	Various : Various	-	-		0.600	Jan 2017	0.682	Jan 2018	-		0.682	-	-	-
Group 2 UAS Platform/ Payload Support	C/TBD	Various : Various	-	-		0.617	Mar 2017	0.736	Mar 2018	-		0.736	-	-	-
Subtotal			-	-		1.217		1.418		-		1.418	-	-	-
Test and Evaluation (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
SAFC Sensor Testing, Evaluation and Demonstration	MIPR	Various : Various	-	-		7.291	Mar 2017	12.978	Mar 2018	-		12.978	-	-	-
Group 2 UAS Platform/ Payload Test and Evaluation	C/TBD	Various : Various	-	-		0.825	Mar 2017	0.984	Mar 2018	-		0.984	-	-	-
Subtotal			-	-		8.116		13.962		-		13.962	-	-	-

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Exhibit R-3, RDT&E Project Cost Analysis: FY 2018 United States Special Operations Command												Date: May 2017			
Appropriation/Budget Activity						R-1 Program Element (Number/Name)				Project (Number/Name)					
0400 / 7						PE 1160434BB / Unmanned ISR				S855 / Unmanned ISR					
Management Services (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
SAFC Sensor Testing, Evaluation and Demonstration Management	MIPR	Various : Various	-	-		1.073	Mar 2017	2.049	Mar 2018	-		2.049	-	-	-
Group 2 UAS Platform/ Payload Management	C/TBD	Various : Various	-	-		0.617	Mar 2017	0.736	Mar 2018	-		0.736	-	-	-
Subtotal			-	-		1.690		2.785		-		2.785	-	-	-
			Prior Years	FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			-	-		22.117		31.766		3.000		34.766	-	-	-
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: FY 2018 United States Special Operations Command

Date: May 2017

Appropriation/Budget Activity
0400 / 7

R-1 Program Element (Number/Name)
PE 1160434BB / *Unmanned ISR*

Project (Number/Name)
S855 / *Unmanned ISR*

SAFC Schedule

Activity	FY16				FY17				FY18				FY19				FY20				FY21				FY22			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
RDT&E																												
Payload Development/Integration																												
Sensor Testing, Evaluation and Demonstration																												
Procurement																												
Puma II UAS	3				0				2				3				3				3				3			
Scan Eagle UAS	0				2				0				0				0				0				0			
O&M																												
Flight Support/Program Management																												



Planned FY18 RD&TE Period of Performance Range

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Exhibit R-4, RDT&E Schedule Profile: FY 2018 United States Special Operations Command			Date: May 2017
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160434BB / <i>Unmanned ISR</i>	Project (Number/Name) S855 / <i>Unmanned ISR</i>	

Group 1 Unmanned ISR Schedule

Activity	FY16				FY17				FY18				FY19				FY20				FY21				FY22			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
RDT&E – Group 1 identifies, integrates, and tests SOF – unique mission kits, mission payloads, air vehicle announcements and mods on the Group 1 UAS and related ground control stations.																												
PROC – Puma II System Delivery																												
PROC – Group 1 UAS																												
Silent Echo 10.6 Integration/Fielding																												
O&M - Sustainment																												

 Actual Period of Performance (POP) date passed
  Planned POP date
  Planned or funded purchase
  Delivered purchase

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PE 1160434BB: *Unmanned ISR*
United States Special Operations Command

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R-1 Program Element (Number/Name)
PE 1160434BB / <i>Unmanned / SR</i>

Project (Number/Name)	S855 / <i>Unmanned ISR</i>
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Group 2 Unmanned ISR Schedule

Activity	FY16				FY17				FY18				FY19				FY20				FY21				FY22			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
RDT&E MTUAS Operational Test/Operational Assessment (OT/OA) Payloads	v1.0				 OT/OA of System Updates and Payloads																							
					 Develop and Integrate SOF-Unique Mission Payloads																							
Procurement MTUAS System Standup <ul style="list-style-type: none">Standardized Baseline ProcurementFull Operational Capability (FOC) Upgrade ModificationsFuture Upgrade Modifications Stalker SOF-P Equipment					 MTUAS Initial Operational Capability (IOC)								 MTUAS Full Operational Capability (FOC)															
					Baseline Systems / System Improvements FOC																							
					 Stalker Service Common Full Operational Capability (FOC)																							
O&M MTUAS Sustainment Stalker SOF-P Sustainment																												
					Life Cycle Sustainment of MTUAS and Payloads																							
									SOF-P O&M																			

Previously Reported

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Exhibit R-4A, RDT&E Schedule Details: FY 2018 United States Special Operations Command			Date: May 2017
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160434BB / <i>Unmanned ISR</i>	Project (Number/Name) S855 / <i>Unmanned ISR</i>	

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
SAFC				
Platform/Payload Development and Integration	1	2016	4	2022
Sensor Testing, Evaluation and Demonstration	1	2016	4	2022
Group 1 Unmanned Aerial System (UAS)				
Payload Integration	2	2016	4	2022
Group 2 UAS				
Operational Test/Operational Assessment (OT/OA)	2	2016	2	2022
Payload Integration	1	2017	4	2022

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 United States Special Operations Command **Date:** May 2017

Appropriation/Budget Activity 0400: Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development	R-1 Program Element (Number/Name) PE 1160480BB / SOF Tactical Vehicles
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COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	32.047	2.477	3.316	2.578	-	2.578	2.624	2.677	2.730	2.807	Continuing	Continuing
S910: SOF Tactical Vehicles	32.047	2.477	3.316	2.578	-	2.578	2.624	2.677	2.730	2.807	Continuing	Continuing

A. Mission Description and Budget Item Justification

This program element provides for the development and testing of a variety of incremental upgrades to Special Operations Forces (SOF) Vehicles and ancillary equipment. Current SOF tactical vehicles include: Lightweight Tactical All Terrain Vehicles (Light), Ground Mobility Vehicles (Medium), Non-Standard Commercial Vehicles (Commercial) for use in tactical missions, and Mine Resistant Ambush Protected Vehicles (Heavy). The SOF mission mandates that SOF vehicles remain technologically superior, operate in multiple environments and be able to meet any threat to provide a maximum degree of survivability.

B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	3.212	3.316	2.578	-	2.578
Current President's Budget	2.477	3.316	2.578	-	2.578
Total Adjustments	-0.735	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-0.625	-			
• SBIR/STTR Transfer	-0.110	-			

Change Summary Explanation

Funding:

FY 2016: Decrease of -\$0.735 million is due to reprogramming to higher command priorities (-\$0.625 million) and a transfer of funds to Small Business Innovative Research/Small Business Technology Research Transfer programs (-\$0.110 million).

FY 2017: None.

FY 2018: None.

Schedule: None.

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 United States Special Operations Command		Date: May 2017
Appropriation/Budget Activity 0400: Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development	R-1 Program Element (Number/Name) PE 1160480BB / SOF Tactical Vehicles	
Technical: None.		

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command										Date: May 2017		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 1160480BB / SOF Tactical Vehicles				Project (Number/Name) S910 / SOF Tactical Vehicles			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
S910: SOF Tactical Vehicles	32.047	2.477	3.316	2.578	-	2.578	2.624	2.677	2.730	2.807	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project develops, tests, and evaluates Special Operations vehicles and modifications. The Special Operations Forces (SOF) mission mandates that SOF vehicles remain technologically superior, operate in multiple environments and be able to meet any threat to provide a maximum degree of survivability. The current family of SOF tactical vehicles include: individual mobility vehicles, light mobility vehicles, medium mobility vehicles, non-standard commercial vehicles, and heavy mobility vehicles.

Family of Special Operations Vehicles (FSOV). This initiative provides for product improvements in the areas of suspension, power management, armor protection and unique vehicle design for all SOF tactical vehicle configurations. Designs must be standardized across all SOF Components that utilize a tactical vehicle. Improvements include, but are not limited to, new engineering change proposals (ECPs), field safety issues and theater endorsed requirements that make it essential to keep up with the increased weight and minimize the impact to mobility on the basic vehicle. FSOV develops, integrates and tests Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance systems in order to reduce space and power claim on vehicles and develop safety and engineering improvements that specifically address the enemy's changing tactics on the battlefield which typically focuses on survivability, force protection, or mobility. Specific efforts include but are not limited to: Ground Mobility Vehicle (GMV) Medium Version 1.1 effort which provides for a medium vehicle variant capable of meeting specific requirements of internal aircraft transport on the C/MH-47. The effort also provides for engineering costs related to performance, endurance, safety testing, integration and logistical analysis of product samples. Additionally, efforts include ECPs associated with the Non-Standard Commercial Vehicle (NSCV), the Lightweight Tactical All Terrain Vehicle (LTATV). These ECPs will address any identified safety, reliability, and performance concerns. Finally, funding will be used to support vehicle signature reduction efforts.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Title: FSOV	2.477	3.316	2.578	-	2.578
FY 2016 Accomplishments: Completed GMV 1.1 Initial, Operational, Test and Evaluation. Continued integration of ECPs that implement incremental upgrades and improve the design of the LTATV and GMV 1.1. Continued enhancements/modifications on the NSCV to improve reliability and survivability and engineering design changes.					
FY 2017 Plans: Continue design/development and integration of ECPs that implement incremental upgrades and improve the design of the LTATV, GMV 1.1, and NSCV, to include a C4 effort to incorporate a Chairman of the Joint Chiefs of Staff directed Global Positioning System (GPS) upgrade to M-Code. Continue GMV 1.1 product development					

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command			Date: May 2017
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160480BB / <i>SOF Tactical Vehicles</i>	Project (Number/Name) S910 / <i>SOF Tactical Vehicles</i>	

B. Accomplishments/Planned Programs (\$ in Millions)

to include an air drop certification for vehicle reliability. Continue enhancements/modifications on the NSCV to improve reliability and survivability.

FY 2018 Base Plans:

Continues design/development and integration of ECPs that implement incremental upgrades and improve the design of the LTATV, GMV 1.1, and NSCV, to include a C4 effort to incorporate a Chairman of the Joint Chiefs of Staff directed GPS upgrade to M-Code. Continues safety, reliability, performance, and operational testing of multiple variants of NSCV from the new contract.

	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Accomplishments/Planned Programs Subtotals	2.477	3.316	2.578	-	2.578

C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018 Base</u>	<u>FY 2018 OCO</u>	<u>FY 2018 Total</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• PROC/0204TACVEH: <i>Tactical Vehicles</i>	74.145	71.049	63.304	38.527	101.831	60.631	77.864	37.870	28.951	Continuing	Continuing

Remarks

D. Acquisition Strategy

Vehicle improvements integrate emerging technology or commercial-off-the-shelf/non-developmental items. Materiel solutions will be procured via existing contracts or through a competitive procurement.

E. Performance Metrics

N/A

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 United States Special Operations Command	Date: May 2017
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Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 1160483BB / <i>Maritime Systems</i>
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COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	288.199	57.544	54.577	42.315	-	42.315	20.457	15.275	13.455	8.351	Continuing	Continuing
S0417: <i>Underwater Systems</i>	270.558	50.442	50.150	35.114	-	35.114	16.109	8.746	6.809	4.694	Continuing	Continuing
S1684: <i>Surface Craft</i>	17.641	7.102	4.427	7.201	-	7.201	4.348	6.529	6.646	3.657	Continuing	Continuing

A. Mission Description and Budget Item Justification

This program element provides for engineering and manufacturing development (EMD) of Special Operations Forces (SOF) Surface and Undersea Mobility platforms. This program element also provides for pre-acquisition activities to quickly respond to new requirements for SOF surface and undersea mobility, looking at multiple alternatives to include cross-platform technical solutions, service-common solutions, Commercial-Off-The-Shelf technologies, and new development efforts.

The Underwater Systems project provides for EMD of combat submersibles, SOF operator diving systems, underwater support systems, and underwater equipment. This project also provides for pre-acquisition activities (materiel solutions analysis, advanced component and prototype development) to respond to emergent requirements. These submersibles, equipment, and diving systems are used by SOF in the conduct of infiltration/extraction, personnel/material recovery, hydrographic/inland reconnaissance, beach obstacle clearance, underwater ship attack, and other missions. The capabilities of the submersible systems, diving systems, and unique equipment provide small, highly trained forces the ability to successfully engage the enemy and conduct clandestine operations associated with SOF maritime missions.

The Surface Craft project provides for EMD of medium and heavy surface combatant craft, combatant craft mission equipment, and pre-planned product improvement and technology insertion engineering changes to meet the unique requirements of SOF. This project element also provides for pre-acquisition activities (materiel solutions analysis, advanced component development and prototypes) to quickly respond to new requirements for maritime craft and subsystems. The craft capabilities and unique equipment provide small, highly trained forces the ability to successfully engage the enemy and conduct operations associated with SOF maritime missions.

B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	59.597	54.577	29.451	-	29.451
Current President's Budget	57.544	54.577	42.315	-	42.315
Total Adjustments	-2.053	0.000	12.864	-	12.864
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-2.053	-			
• Other	-	-	12.864	-	12.864

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 United States Special Operations Command		Date: May 2017
Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development</i>		R-1 Program Element (Number/Name) PE 1160483BB / <i>Maritime Systems</i>
<p><u>Change Summary Explanation</u></p> <p>Funding:</p> <p>FY 2016: Decrease of \$2.053 million is due to a transfer of funds to Small Business Innovative Research/Small Business Technology Transfer programs.</p> <p>FY 2017: None.</p> <p>FY 2018: Net Increase of \$12.864 million is due to an increase of \$0.441 million to support Independent Operational Test and Evaluation of the Shallow Water Combat Submersible, an increase of \$5.200 million for Dry Deck Shelter Modernization efforts, an increase of \$3.045 million for development and test of the Threat Awareness System (TAS), \$6.000 million for the Dry Combat Submersible developmental and acceptance testing, and a decrease of \$1.822 million to support higher command priorities.</p> <p>Schedule: None.</p> <p>Technical: Added TAS.</p>		

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command										Date: May 2017		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 1160483BB / Maritime Systems				Project (Number/Name) S0417 / Underwater Systems			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
S0417: Underwater Systems	270.558	50.442	50.150	35.114	-	35.114	16.109	8.746	6.809	4.694	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project provides for engineering and manufacturing development of combat underwater submersibles, Special Operations Forces (SOF) operator diving systems, underwater support systems, and underwater equipment. This project also provides for pre-acquisition activities (materiel solutions analysis, advanced component development and prototypes) to respond to emergent requirements. These submersibles, equipment, and diving systems are used by SOF in the conduct of infiltration/extraction, personnel/material recovery, hydrographic/inland reconnaissance, beach obstacle clearance, underwater ship attack, and other missions. The capabilities of the submersible systems, diving systems, and unique equipment provides small, highly trained forces the ability to successfully engage the enemy and conduct clandestine operations associated with SOF maritime missions. Sub-projects include:

- **Shallow Water Combat Submersible (SWCS):** This sub-project provides for the engineering, manufacturing, testing, and development of one Engineering Developmental Model (EDM) to replace the SEAL Delivery Vehicle (SDV) system. The EDM is being developed due to obsolescence of the SDV system. This project will utilize mature technologies, which include electric propulsion along with upgraded navigation, communication, and sensor suites. It also provides for integration efforts with the current Dry Deck Shelter (DDS), development of engineering changes for SWCS production craft configuration, and integration of other diving technologies to meet SOF requirements.
- **Dry Combat Submersible (DCS):** This sub-project provides for the advanced engineering, manufacturing, testing, and development efforts for a surface-launched, dry, diver lock-in/lock-out vessel capable of inserting and extracting SOF and/or payloads into denied areas. USSOCOM awarded an Engineering and Manufacturing Development (EMD) contract in FY 2016 to produce one production representative vessel, with options to produce two additional vessels. USSOCOM is testing one submersible prototype to validate test, commercial classification, and SOCOM safety certification processes and will continue to use the prototype to evaluate capability enhancing technologies and reduce risk in the DCS program.
- **DDS Modernization:** This sub-project provides for the pre-planned product improvements, testing, and integration of specialized underwater systems to meet the unique requirements of SOF, and compatibility with the submarine fleet. The current DDS is a certified diving system which attaches to modified host submarines that provides for insertion of SOF forces and platforms. Funding supports product improvements to the current DDS, as well as associated diver equipment for in-service submarine support systems, unmanned underwater vehicles, and follow on development efforts for future SOF payloads.
- **SOF Combat Diving:** This sub-project provides for the engineering, manufacturing, testing, development, and transition of SOF peculiar diving equipment providing the SOF combat diver the ability to engage the enemy and conduct operations. SOF Combat Diving will provide capabilities to USSOCOM components and will support the SDV, SWCS, and DCS in conduct of infiltration/extraction, material recovery, underwater ship attack, beach clearance, and other missions. Technologies include, but are not limited to, commercial and developmental life support, maneuverability, employment of weapons, diver navigational accuracy and situational awareness, thermal protection, and underwater communications.

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command		Date: May 2017	
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160483BB / <i>Maritime Systems</i>	Project (Number/Name) S0417 / <i>Underwater Systems</i>	
B. Accomplishments/Planned Programs (\$ in Millions)	FY 2016	FY 2017	FY 2018
Title: SWCS FY 2016 Accomplishments: Continued EDM development testing. Completed successful Dry Deck Shelter (DDS) fit checks. Received certification approval for government divers and for contractor maintenance under NAVSEA NOTE5000. Completed a successful Milestone C and awarded the initial production contract. FY 2017 Plans: Complete EDM, including final logistics packages, develop and incorporate any engineering changes into SWCS production craft configuration as needed. FY 2018 Plans: Completes Initial Operational Test and Evaluation. Delivers first articles to the fleet.	5.750	0.950	1.378
Title: DCS FY 2016 Accomplishments: Continued testing of safe Li-Ion batteries, completed government acceptance testing on two prototypes and began characterization testing on one prototype. Achieved SOF embarkation on one prototype. Awarded an EMD contract for a production representative system and completed contract kick-off, Integrated Baseline Review, System Requirements Review, and Preliminary Design Reviews, and Pressure Vessel Critical Design Review. FY 2017 Plans: Continue EMD for DCS production representative system. Complete testing of the prototypes and initiate refit of one prototype submersible to be used as a training vessel. FY 2018 Plans: Continues to evaluate capability enhancing technologies and reduce risk in the DCS program. Completes EMD for DCS production representatives system. Completes government acceptance testing and initiates developmental testing. Achieves Milestone C.	35.299	38.700	21.497
Title: DDS Modernization FY 2016 Accomplishments: Began development of the modernization necessary to extend useful life, transition from SSGN to Virginia Class host platform, and increase capacity to carry larger payloads. Completed Preliminary Design Review (PDR) for field changes. FY 2017 Plans:	8.893	8.500	10.200

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command			Date: May 2017
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160483BB / <i>Maritime Systems</i>	Project (Number/Name) S0417 / <i>Underwater Systems</i>	

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2016	FY 2017	FY 2018
Continue development of the modernization necessary to extend useful life of the DDS, transition from SSGN to Virginia Class host platform, and increase capacity to carry larger payloads. FY 2018 Plans: Continues development of the modernization necessary to extend useful life of the DDS, transition from SSGN to Virginia Class host platform, and increase capacity to carry larger payloads.			
Title: SOF Combat Diving FY 2016 Accomplishments: Transitioned Free-Swimming Diver Heating and Cooling System from Science and Technology to Program of Record. FY 2017 Plans: Continue thermal protection testing. Begin development for situational awareness and underwater breathing apparatuses. FY 2018 Plans: Continues development for environmental protection, navigation, communication, and propulsion.	0.500	2.000	2.039
Accomplishments/Planned Programs Subtotals	50.442	50.150	35.114

C. Other Program Funding Summary (\$ in Millions)

Line Item	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
• PROC/0210US: <i>Underwater Systems</i>	29.021	37.098	92.606	-	92.606	88.541	42.097	9.523	9.714	Continuing	Continuing

Remarks

D. Acquisition Strategy

- SWCS used full and open competition, with a down select to a single contractor. The full spectrum of contracting activities is being utilized for any integration and subsystem requirements, using existing contracts where appropriate, government agencies, and new contracts as necessary.
- DCS acquisition strategy was a full and open competitive source selection process resulting in award for an EMD contract. This Fixed Price Incentive Firm Target contract is for a production representative system in FY 2016 with options to procure one vessel in FY 2018 and one in FY 2019.
- The DDS modernization and engineering/change efforts for the six DDS in inventory are executed utilizing existing services contracts awarded for a five year period.
- SOF Combat Diving utilizes a full spectrum of contracting activities, using existing contracts where appropriate, government agencies, and new contracts competitively selected as necessary.

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command		Date: May 2017
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160483BB / <i>Maritime Systems</i>	Project (Number/Name) S0417 / <i>Underwater Systems</i>

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: FY 2018 United States Special Operations Command												Date: May 2017			
Appropriation/Budget Activity 0400 / 7						R-1 Program Element (Number/Name) PE 1160483BB / <i>Maritime Systems</i>				Project (Number/Name) S0417 / <i>Underwater Systems</i>					
Product Development (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Shallow Water Combat Submersible (SWCS)	C/CPIF	Teledyne Brown Engineering : Huntsville, AL	78.594	3.918	Jan 2016	-		-		-		-	0.000	82.512	-
Dry Combat Submersibles (DCS) (Button 5.60 prototype)	C/Various	General Dynamic-Electric Boat : Groton, CT	27.299	0.261	May 2016	-		-		-		-	0.000	27.560	-
DCS Technologies Government Furnished Equipment	C/Various	Various : Various	26.199	4.093	Jun 2016	7.377	Jun 2017	3.000	Jun 2018	-		3.000	Continuing	Continuing	-
DCS Engineering & Manufacturing Development	C/FPIF	Lockheed Martin : Riviera Beach, FL	-	26.846	Jul 2016	25.723	Jun 2017	12.997	Jun 2018	-		12.997	9.772	75.338	75.338
DCS Engineering Changes	C/Various	Various : Various	-	-		3.100	Jun 2017	1.571	Jun 2018	-		1.571	Continuing	Continuing	-
Dry Deck Shelter (DDS) Modernization	SS/CPFF	Oceaneering International Inc. Marine Services Division : Chesapeake, VA	-	8.543	Nov 2015	8.197	Jan 2017	9.850	Jan 2018	-		9.850	Continuing	Continuing	-
SOF-Unique Diving Technologies	Various	Various : Various	-	0.370	Mar 2016	1.500	Nov 2016	1.369	Nov 2017	-		1.369	Continuing	Continuing	-
Prior Year Funding	Various	Various : Various	92.609	-		-		-		-		-	0.000	92.609	-
Subtotal			224.701	44.031		45.897		28.787		-		28.787	-	-	-
Support (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Prior Year Funding	Various	Various : Various	9.094	-		-		-		-		-	0.000	9.094	-
Subtotal			9.094	-		-		-		-		-	0.000	9.094	-

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Exhibit R-3, RDT&E Project Cost Analysis: FY 2018 United States Special Operations Command												Date: May 2017			
Appropriation/Budget Activity 0400 / 7						R-1 Program Element (Number/Name) PE 1160483BB / <i>Maritime Systems</i>				Project (Number/Name) S0417 / <i>Underwater Systems</i>					
Test and Evaluation (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
SWCS	Various	Puget Sound Naval Shipyard : Seattle, Washington	0.599	0.615	Jan 2016	0.950	Dec 2016	1.378	Dec 2017	-		1.378	0.000	3.542	-
DCS	C/Various	NAVSEA / CRANE : Panama City, FL	9.007	1.299	Jul 2016	-		2.144	Jun 2018	-		2.144	0.000	12.450	-
SOF Combat Diving	Various	Various : Various	-	0.130	Mar 2016	0.500	Jun 2017	0.500	Jun 2018	-		0.500	Continuing	Continuing	-
Prior Year Funding	Various	Various : Various	9.320	-		-		-		-		-	0.000	9.320	-
Subtotal			18.926	2.044		1.450		4.022		-		4.022	-	-	-
Management Services (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
SWCS	Various	John Hopkins University : Columbia, MD	1.564	1.217		-		-		-		-	0.000	2.781	-
DCS	Various	SRA : Tampa, FL	9.316	2.800	Jun 2016	2.500	Jun 2017	1.785	Jun 2018	-		1.785	Continuing	Continuing	-
DDS	MIPR	NAVSEA : Washington, DC	0.757	0.350	Jan 2016	0.303	Jan 2017	0.350	Jan 2018	-		0.350	Continuing	Continuing	-
SOF Combat Diving	C/Various	SRA : Tampa, FL	-	-		-		0.170	Dec 2017	-		0.170	Continuing	Continuing	-
Prior Year Funding	Various	Various : Various	6.200	-		-		-		-		-	0.000	6.200	-
Subtotal			17.837	4.367		2.803		2.305		-		2.305	-	-	-
			Prior Years	FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			270.558	50.442		50.150		35.114		-		35.114	-	-	-
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: FY 2018 United States Special Operations Command

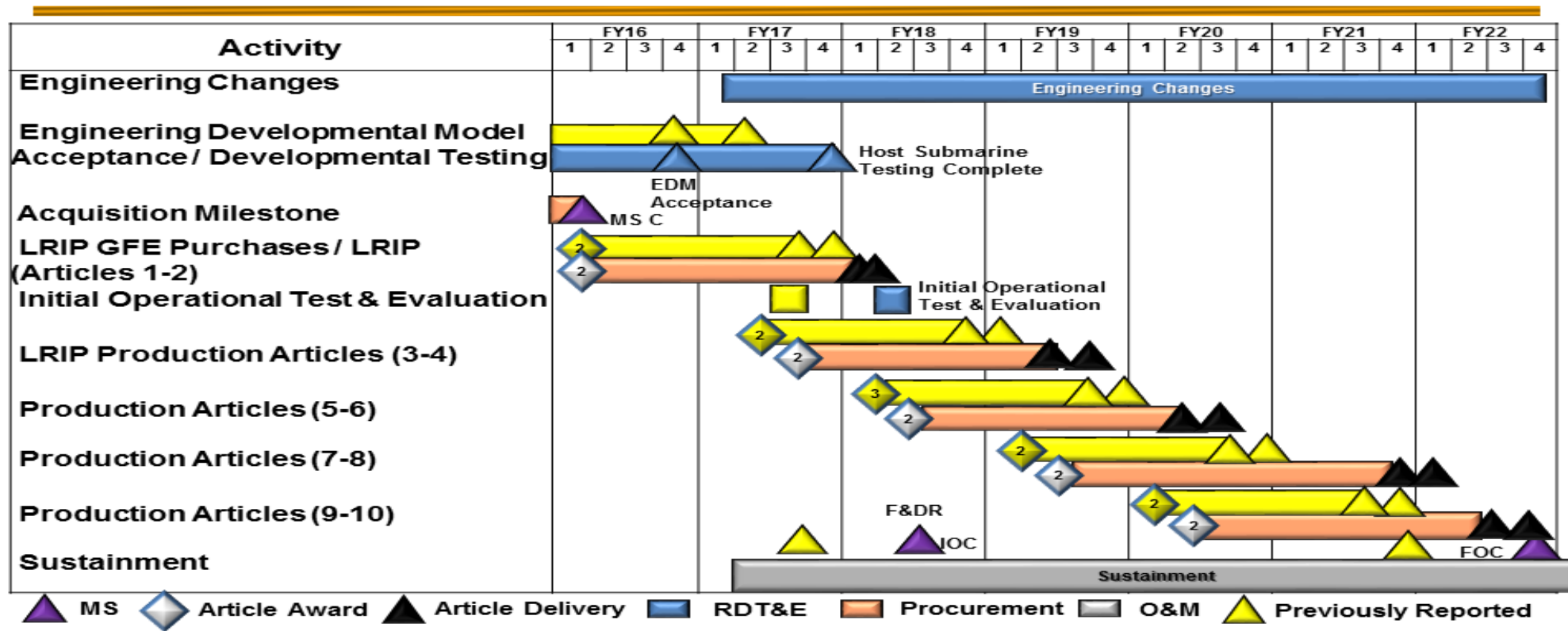
Date: May 2017

Appropriation/Budget Activity
0400 / 7

R-1 Program Element (Number/Name)
PE 1160483BB / Maritime Systems

Project (Number/Name)
S0417 / Underwater Systems

Shallow Water Combat Submersible Schedule



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Exhibit R-4, RDT&E Schedule Profile: FY 2018 United States Special Operations Command

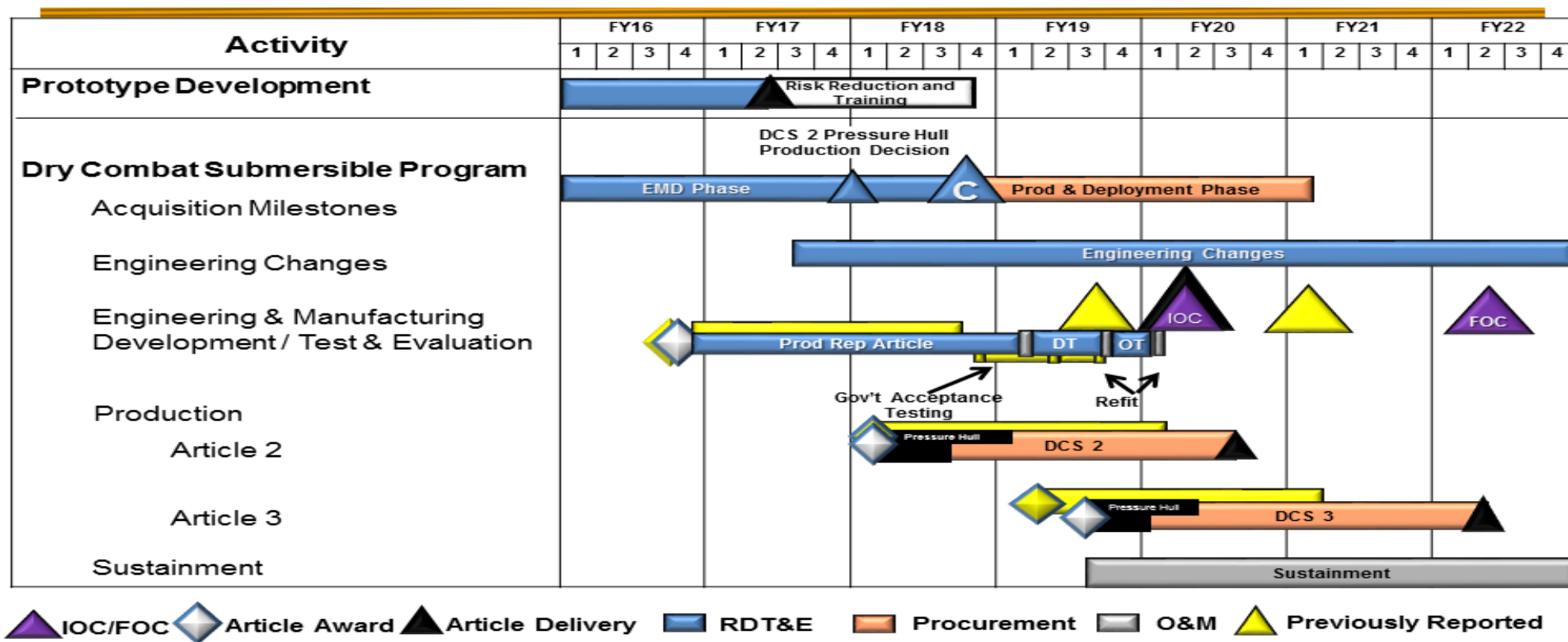
Date: May 2017

Appropriation/Budget Activity
0400 / 7

R-1 Program Element (Number/Name)
PE 1160483BB / Maritime Systems

Project (Number/Name)
S0417 / Underwater Systems

Dry Combat Submersible Schedule



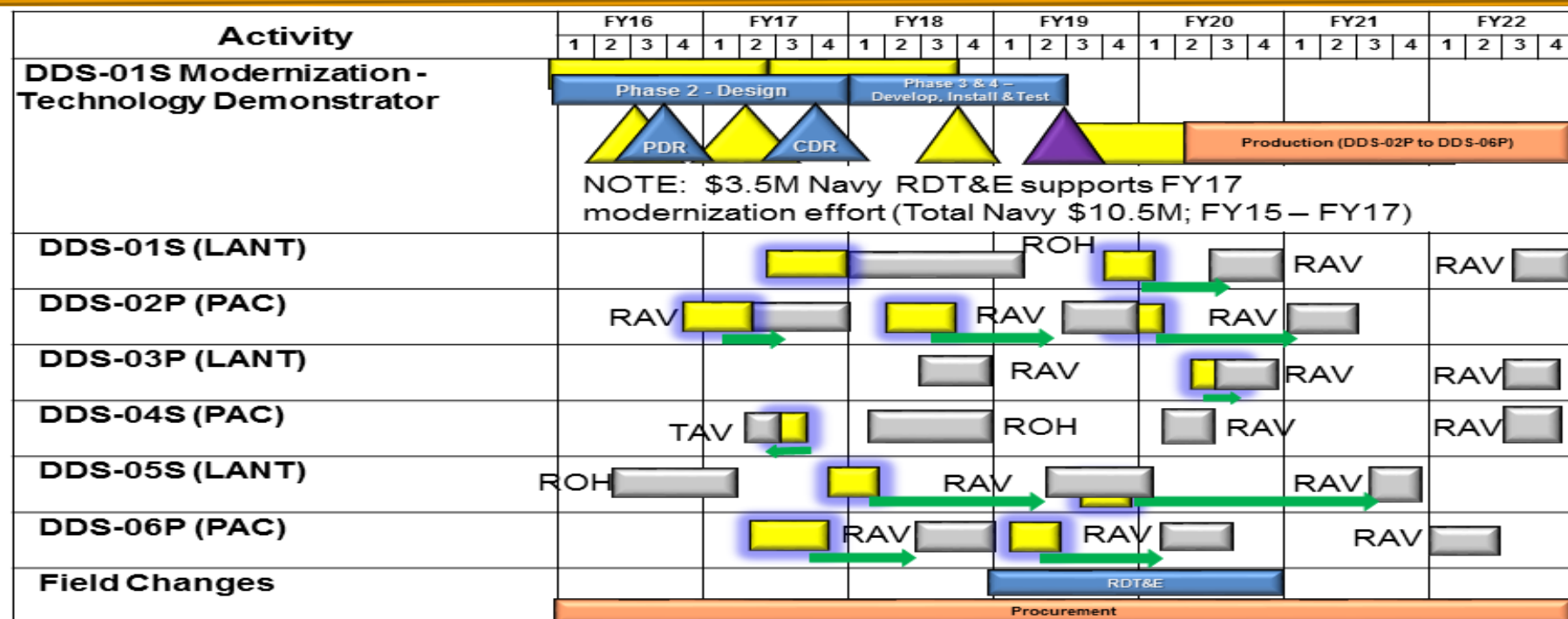
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Exhibit R-4, RDT&E Schedule Profile: FY 2018 United States Special Operations Command

Date: May 2017

Appropriation/Budget Activity
0400 / 7R-1 Program Element (Number/Name)
PE 1160483BB / Maritime SystemsProject (Number/Name)
S0417 / Underwater Systems

Dry Deck Shelter Schedule



IOC
 Article Award
 Article Delivery
 RDT&E
 Procurement
 O&M
 Previously Reported

TAV: Technical Availability
 RAV: Restricted Availability
 ROH: Regular Overhaul

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Exhibit R-4, RDT&E Schedule Profile: FY 2018 United States Special Operations Command

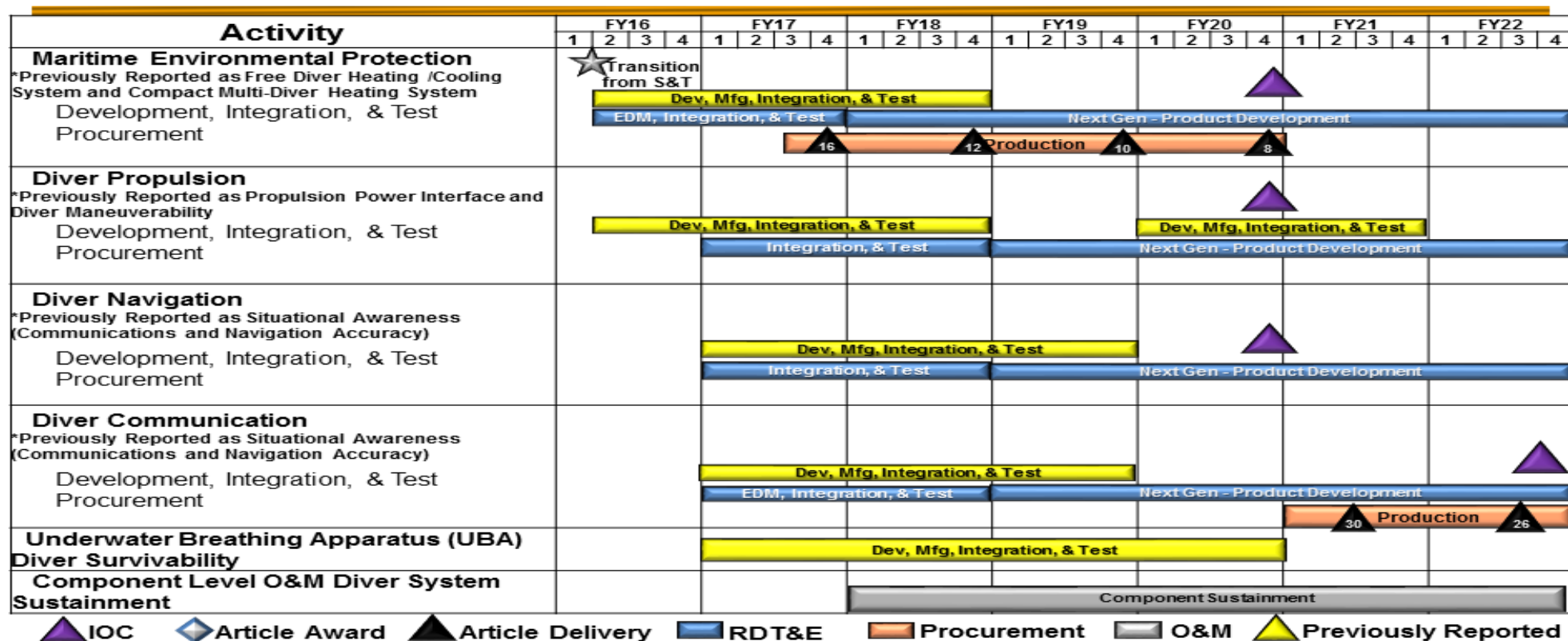
Date: May 2017

Appropriation/Budget Activity
0400 / 7

R-1 Program Element (Number/Name)
PE 1160483BB / Maritime Systems

Project (Number/Name)
S0417 / Underwater Systems

SOF Combat Diving Schedule



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Exhibit R-4A, RDT&E Schedule Details: FY 2018 United States Special Operations Command			Date: May 2017
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160483BB / <i>Maritime Systems</i>	Project (Number/Name) S0417 / <i>Underwater Systems</i>	

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Shallow Water Combat Submersible</i>				
Engineering Changes	1	2017	4	2022
Engineering Development Model Acceptance	4	2016	4	2016
Developmental Test	1	2016	4	2017
Milestone C	1	2016	1	2016
<i>Dry Combat Submersibles</i>				
Prototype Development	1	2016	2	2017
Engineering and Manufacturing Development Phase	1	2016	4	2018
Engineering Changes	3	2017	4	2022
Milestone C	4	2018	4	2018
Developmental Test and Evaluation	1	2019	3	2019
Operational Test and Evaluation	3	2019	1	2020
<i>Dry Deck Shelter Modernization</i>				
Phase 2 Design	1	2016	4	2017
Phase 3 & 4 Development	1	2018	2	2019
Preliminary Design Review	3	2016	3	2016
Critical Design Review	4	2017	4	2017
<i>SOF Combat Diving</i>				
Maritime Environmental Protection Development, Integration, and Test	2	2016	4	2022
Propulsion Development / Manufacturing / Test / Integration	1	2017	4	2022
Navigation Development / Manufacturing / Test / Integration	1	2017	4	2022
Communications Development / Manufacturing / Test / Integration	1	2017	4	2022

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command										Date: May 2017		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 1160483BB / <i>Maritime Systems</i>				Project (Number/Name) S1684 / <i>Surface Craft</i>			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
S1684: <i>Surface Craft</i>	17.641	7.102	4.427	7.201	-	7.201	4.348	6.529	6.646	3.657	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project provides for engineering and manufacturing development of medium and heavy surface combatant craft, combatant craft mission equipment, and pre-planned product improvement (P3I) and technology insertion engineering changes to meet the unique requirements of Special Operations Forces (SOF). This project also provides for pre-acquisition activities (materiel solutions analysis, advanced component development and prototypes) to quickly respond to new requirements for maritime craft and subsystems. The craft capabilities and unique equipment provide small, highly trained forces the ability to successfully engage the enemy and conduct operations associated with SOF maritime missions. Sub-projects include:

- **Combatant Craft Medium Mk 1 (CCM):** This sub-project is a semi-enclosed, low-observable, multi-mission combatant craft for platoon-size maritime mobility in maritime denied environments. It is multi-mission capable, including Maritime Interdiction, Insert / Extract, and Visit, Board, Search, and Seizure (VBSS) Operations. CCM is Naval Special Warfare's (NSW) craft-of-choice for long-range, high-payload SOF mobility operations in denied environments up to high threat. CCM has NSW's best Iron Triangle: 40 knot (kt) speed; 4 crew + 19 passengers (pax) / 10,000 pound (lb) payload; and 600 nautical miles (nm) range. CCM Mk 1 payload capacity enables inclusion of shock mitigating seats, which is critical for ride quality, operator tactical readiness, and operator health. At 60 feet long, CCM is C-17 / C5 transportable and can launch/recover by well deck or shore based trailer.
- **Combatant Craft Heavy (CCH):** This sub-project represents a family of solutions that provides platoon-size maritime surface mobility. The current CCH is the Sea, Air, Land Insertion, Observation, and Neutralization (SEALION) craft. SEALION is a fully-enclosed, climate-controlled, low-observable, semi-submersible craft that operates in denied environments up to high-threat. SEALION is NSW's most versatile and survivable combatant craft and the craft-of-choice for sensitive maritime intelligence, surveillance, and reconnaissance missions and those missions requiring a prolonged presence in denied environments. Its clandestine mobility capability is only exceeded by an undersea craft. Iron Triangle: 40 kt speed; 7 crew + 12 pax / 3,300 lb payload; and 400 nm range. SEALION payload capacity enables inclusion of shock mitigating seats, which is critical for ride quality, operator tactical readiness, and operator health. At 77+ feet long, SEALION is C-17/C-5 transportable and can launch/recover by well deck or shore based mobile travel lift or crane.
- **Next Generation Combatant Craft Forward Looking Infrared Radar (NG CCFLIR):** The CCFLIR capability provides SOF with a multi-sensor, electro-optic system that enhances SOF effectiveness by improving their ability to detect, recognize, identify, range, track, and highlight objects of interest in a maritime environment. The NG CCFLIR will use technological advancements to gain significant improvements in capability such as operational range, image fusion, net-centric data sharing, information assurance, and seamless craft and combat systems integration.
- **Combatant Craft Mission Equipment (CCME):** This sub-project (previously Next Generation Surface Systems) provides a rapid response capability to support SOF combatant craft systems, subsystems, and their emerging requirements. CCME provides technology refresh efforts to correct system deficiencies, improve asset life, and enhance mission capability. Demonstrations and modifications may be made to support emerging capability enhancements such as, but not limited to, conformal

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command			Date: May 2017		
Appropriation/Budget Activity 0400 / 7		R-1 Program Element (Number/Name) PE 1160483BB / Maritime Systems	Project (Number/Name) S1684 / Surface Craft		
antennas, identification friend-or-foe capabilities, enhanced communications, weapon integration, software refresh, and navigation subsystems in support of future missions. Solutions to these emerging requirements may be commercial-off-the-shelf (COTS), leveraged from other Government agencies , or new solutions.					
<ul style="list-style-type: none">• Combatant Craft Assault (CCA): This sub-project is a National-to-Theater transition. The CCA is the theater version of the High Speed Assault Craft. The CCA is a low-observable combatant craft for squad-size maritime mobility operations in maritime denied environments. CCA is NSW's best craft for VBSS in maritime denied environments up to and including medium threat. It is the craft-of-choice for maritime interdiction and boarding operations because of the open deck space, maneuverability, and interoperability with an Afloat Forward Staging Base. Iron Triangle: 40 kt speed; 3 crew + 12 pax / 5,000 lb payload; and 300 nm range. At 41 feet long, CCA is air transportable by C-130 / C-17 / C-5 and can launch/recover by crane, davit, well deck, or shore based trailer.• Threat Awareness System (TAS): This sub-project provides SOF with an Electronic Intelligence capability for enhanced force protection of SOF in Maritime denied environments by allowing them to identify and avoid enemy detection capabilities. TAS will utilize technological advancements to gain significant improvements in capability such as miniaturization and marinization to enable seamless craft integration.					
B. Accomplishments/Planned Programs (\$ in Millions)			FY 2016	FY 2017	FY 2018
Title: CCM			1.256	1.659	1.662
FY 2016 Accomplishments: Completed craft Initial Operational Test and Evaluation. Began design for integration of MK50 remote weapon system.					
FY 2017 Plans: Develop conceptual, preliminary, and detail design drawings necessary to integrate and conduct initial testing of MK50 remote weapon system on the CCM test article. Begin integration of NG CCFLIR.					
FY 2018 Plans: Continues integration of NG CCFLIR and begins integration of Tactical Operations Center (TOCNET) Intercommunications System.					
Title: CCH			2.156	0.887	0.877
FY 2016 Accomplishments: Continued development and integration of enhanced communication equipment and windows. Initiated studies and analysis for upgraded CCH craft.					
FY 2017 Plans: Complete tactical computer system upgrades. Continue P3I and technology insertion. Begin integration of NG CCFLIR and applicable CCME technology onto CCH crafts.					
FY 2018 Plans:					

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command			Date: May 2017		
Appropriation/Budget Activity 0400 / 7		R-1 Program Element (Number/Name) PE 1160483BB / <i>Maritime Systems</i>		Project (Number/Name) S1684 / <i>Surface Craft</i>	
B. Accomplishments/Planned Programs (\$ in Millions)			FY 2016	FY 2017	FY 2018
Completes NG CCFLIR integration and continues development and integration of upgraded Satellite Communications (SATCOM) antennas.					
Title: NG CCFLIR			1.650	-	-
FY 2016 Accomplishments: Completed testing and integration with combatant craft systems. Began Developmental and Operational Testing.					
Title: CCME			2.040	1.381	1.107
FY 2016 Accomplishments: Analyzed Magnetic Antenna technology for Combatant Craft Assault. Completed Combatant Craft threat vulnerabilities study to address capability gaps. Conducted Maritime Intercom System (TOCNET) at-sea operational test and user assessment to address VIC3 obsolescence.					
FY 2017 Plans: Evaluate candidate solutions for technology development to include, but not limited to, MK50 SOF improvements (i.e., accuracy and increased rounds), Vehicular Intercommunications-3 intercom control integration tests, craft survivability painting studies and verification, and situational awareness studies.					
FY 2018 Plans: Evaluates candidate solutions for technology development to include, but not limited to, Maritime Precision Engagement, family of antennas testing, Airborne Mission Networking Marinization, and situational awareness.					
Title: CCA			-	0.500	0.510
FY 2017 Plans: Begin integration of NG CCFLIR and applicable CCME technology onto CCA crafts.					
FY 2018 Plans: Completes integration and testing of CCFLIR mast design and SSN-8 Tactical Computer System.					
Title: TAS			-	-	3.045
FY 2018 Plans: Begins development and testing of TAS.					
Accomplishments/Planned Programs Subtotals			7.102	4.427	7.201

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Exhibit R-2A, RDT&E Project Justification: FY 2018 United States Special Operations Command			Date: May 2017
Appropriation/Budget Activity 0400 / 7	R-1 Program Element (Number/Name) PE 1160483BB / Maritime Systems	Project (Number/Name) S1684 / Surface Craft	

C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u> <u>Base</u>	<u>FY 2018</u> <u>OCO</u>	<u>FY 2018</u> <u>Total</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• PROC/0204SCCS: <i>Combatant Craft Systems</i>	63.287	55.820	23.272	-	23.272	11.619	36.751	30.403	38.191	Continuing	Continuing

Remarks

N/A

D. Acquisition Strategy

- CCM acquisition strategy was a competition using a two-phase source selection process. Phase I involved a Small Business Set-Aside competition for two vendors to design, build and deliver test articles. Phase II selected a single vendor to provide a fully integrated baseline craft system for test and evaluation with options for production, engineering support, and contractor logistic support.
- CCH: SEALION I & II were transitioned from U.S. Navy advanced technology demonstrator craft to USSOCOM. Sustainment for SEALION I & II is conducted via Special Operations Forces Support Activity. Based on market research completed in December 2015; currently pursuing a Sole Source award for SEALION III in order to take advantage of previous Government investments in manufacturing infrastructure for SEALION I & II.
- NG CCFLIR: Completed a full and open competition in September 2015. An Engineering Manufacturing Development contract was awarded to FLIR Systems Incorporated, which included production and sustainment options. The NG CCFLIR will be installed on the CCM, CCH, and CCA.
- CCME acquisition strategy emphasizes on spearheading Technology Readiness Level (TRL) 6 technology for successful transition into SOF Combatant Crafts. CCME accomplishes this by using the full spectrum of contracting services, using existing contracts where appropriate, and leveraging from other Government agencies including the Services and USSOCOM SOF AT&L Science & Technology. CCME focuses on developing the technology for maturity, marinization and compatibility, to then transition to the craft. The integration and procurement piece is managed by the individual Combatant Craft Program.
- CCA will use various contracting and better buying power practices to develop, test, and integrate capability enhancements required to increase the craft's current performance envelope.
- TAS will conduct market research to determine feasibility and appropriateness of conducting a full and open competition. TAS will pursue existing Government-Off-The-Shelf technology in order to reduce acquisition timeline.

E. Performance Metrics

N/A

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 United States Special Operations Command	Date: May 2017
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Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 7: Operational Systems Development</i>					R-1 Program Element (Number/Name) PE 1160489BB / <i>Global Video Surveillance Activities</i>							
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	46.043	3.933	3.841	4.661	-	4.661	4.820	5.388	5.496	5.606	Continuing	Continuing
S500C: <i>Global Video Surveillance Activities</i>	46.043	3.933	3.841	4.661	-	4.661	4.820	5.388	5.496	5.606	Continuing	Continuing

A. Mission Description and Budget Item Justification

This program element is part of the Military Intelligence Program. Details are provided under separate cover.

<u>B. Program Change Summary (\$ in Millions)</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018 Base</u>	<u>FY 2018 OCO</u>	<u>FY 2018 Total</u>
Previous President's Budget	3.933	3.841	4.661	-	4.661
Current President's Budget	3.933	3.841	4.661	-	4.661
Total Adjustments	0.000	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			

Change Summary Explanation

Funding:

FY2016: None.

FY2017: None.

FY2018: None.

Schedule: None.

Technical: None.

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 United States Special Operations Command	Date: May 2017
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Appropriation/Budget Activity					R-1 Program Element (Number/Name)							
0400: Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development					PE 1160490BB / Operational Enhancements Intelligence							
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	75.370	10.623	11.834	12.049	-	12.049	12.279	13.693	13.967	14.246	Continuing	Continuing
S500D: Operational Enhancements Intelligence	75.370	10.623	11.834	12.049	-	12.049	12.279	13.693	13.967	14.246	Continuing	Continuing

A. Mission Description and Budget Item Justification

This project is part of the Military Intelligence Program. This project is reported in accordance with Title 10, United States Code, Section 119(a)(1) in the Special Access Program Annual Report to Congress.

B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	10.623	11.834	12.049	0.000	12.049
Current President's Budget	10.623	11.834	12.049	0.000	12.049
Total Adjustments	0.000	0.000	0.000	0.000	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			

Change Summary Explanation

Funding:

FY2016: None.

FY2017: None.

FY2018: None.

Schedule: None.

Technical: None.

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**Department of Defense
Fiscal Year (FY) 2018 Budget Estimates**

May 2017



Washington Headquarters Service

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Research, Development, Test & Evaluation, Defense-Wide

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Department of Defense
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

16 May 2017

Appropriation	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO
Research, Development, Test & Eval, DW	975	827	827				
Total Research, Development, Test & Evaluation	975	827	827				

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Department of Defense
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

16 May 2017

Appropriation	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total

Research, Development, Test & Eval, DW	827	827		827	29,594		29,594
Total Research, Development, Test & Evaluation	827	827		827	29,594		29,594

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Department of Defense
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

16 May 2017

	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO
Summary Recap of Budget Activities							

Advanced Technology Development							
Management Support	975	827	827				
Total Research, Development, Test & Evaluation	975	827	827				
Summary Recap of FYDP Programs							

Research and Development							
Administration and Associated Activities	975	827	827				
Total Research, Development, Test & Evaluation	975	827	827				

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Department of Defense
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

16 May 2017

	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Summary Recap of Budget Activities							

Advanced Technology Development					29,594		29,594
Management Support	827	827		827			
Total Research, Development, Test & Evaluation	827	827		827	29,594		29,594
Summary Recap of FYDP Programs							

Research and Development					29,594		29,594
Administration and Associated Activities	827	827		827			
Total Research, Development, Test & Evaluation	827	827		827	29,594		29,594

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Defense-Wide
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

16 May 2017

	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO
Summary Recap of Budget Activities							

Advanced Technology Development							
Management Support	975	827	827				
Total Research, Development, Test & Evaluation	975	827	827				
Summary Recap of FYDP Programs							

Research and Development							
Administration and Associated Activities	975	827	827				
Total Research, Development, Test & Evaluation	975	827	827				

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Defense-Wide
 FY 2018 President's Budget Request
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 Total Obligational Authority
 (Dollars in Thousands)

16 May 2017

	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Summary Recap of Budget Activities -----							
Advanced Technology Development					29,594		29,594
Management Support	827	827		827			
Total Research, Development, Test & Evaluation	827	827		827	29,594		29,594
Summary Recap of FYDP Programs -----							
Research and Development					29,594		29,594
Administration and Associated Activities	827	827		827			
Total Research, Development, Test & Evaluation	827	827		827	29,594		29,594

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Defense-Wide
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

16 May 2017

Appropriation	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO

Washington Headquarters Services	975	827	827				
Total Research, Development, Test & Evaluation	975	827	827				

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Defense-Wide
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

16 May 2017

Appropriation	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total

Washington Headquarters Services	827	827		827	29,594		29,594
Total Research, Development, Test & Evaluation	827	827		827	29,594		29,594

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Defense-Wide
FY 2018 President's Budget Request
Exhibit R-1 FY 2018 President's Budget Request
Total Obligational Authority
(Dollars in Thousands)

16 May 2017

Appropriation: 0400D Research, Development, Test & Eval, DW

Line No	Program Element Number	Item	Act	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO	S e c
41	0603342D8W	Defense Innovation Unit Experimental (DIUx)	03								U
		Advanced Technology Development									
185	0903230D8W	WHS - Mission Operations Support - IT	06	975							U
186	0903235D8W	Joint Service Provider (JSP)	06		827	827					U
		Management Support		975	827	827					
Total Research, Development, Test & Eval, DW				975	827	827					

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Defense-Wide
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

16 May 2017

Appropriation: 0400D Research, Development, Test & Eval, DW

Line	Program Element No Number	Item	Act	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total	S e c
41	0603342D8W	Defense Innovation Unit Experimental (DIUx)	03					29,594		29,594	U
		Advanced Technology Development						29,594		29,594	
185	0903230D8W	WHS - Mission Operations Support - IT	06								U
186	0903235D8W	Joint Service Provider (JSP)	06	827	827		827				U
		Management Support		827	827		827				
Total Research, Development, Test & Eval, DW				827	827		827	29,594		29,594	

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Washington Headquarters Services
 FY 2018 President's Budget Request
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 Total Obligational Authority
 (Dollars in Thousands)

16 May 2017

Appropriation: 0400D Research, Development, Test & Eval, DW

Line	Program Element No Number	Item	Act	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO	S e c
41	0603342D8W	Defense Innovation Unit Experimental (DIUx)	03								U
		Advanced Technology Development									
185	0903230D8W	WHS - Mission Operations Support - IT	06	975							U
186	0903235D8W	Joint Service Provider (JSP)	06		827	827					U
		Management Support		975	827	827					
Total Washington Headquarters Services				975	827	827					

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Washington Headquarters Services
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

16 May 2017

Appropriation: 0400D Research, Development, Test & Eval, DW

Line	Program Element No Number	Item	Act	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total	S e c
41	0603342D8W	Defense Innovation Unit Experimental (DIUx)	03					29,594		29,594	U
		Advanced Technology Development						29,594		29,594	
185	0903230D8W	WHS - Mission Operations Support - IT	06								U
186	0903235D8W	Joint Service Provider (JSP)	06	827	827		827				U
		Management Support		827	827		827				
Total Washington Headquarters Services				827	827		827	29,594		29,594	

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WHS - Mission Operations Support - IT	0903230D8W	185	06.....	Volume 5 - 971

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Washington Headquarters Service **Date:** May 2017

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 3: Advanced Technology Development (ATD)</i>	R-1 Program Element (Number/Name) PE 0603342D8W I <i>Defense Innovation Unit Experimental (DIUx)</i>
---	--

COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	-	0.000	0.000	29.594	-	29.594	29.611	29.659	29.680	30.304	Continuing	Continuing
434: <i>DIUx</i>	-	0.000	0.000	29.594	-	29.594	29.611	29.659	29.680	30.304	Continuing	Continuing

Note

Defense Innovation Unit Experimental (DIUx) transfer from OSD (PE 0602230D8Z) to WHS - (Non-Management Headquarters)

The U.S. Department of Defense (DoD) relies on innovation to maintain our nation's ability to deter, and if need be, prevail in conflict. Defense Innovation Unit Experimental (DIUx) increases the Department's access to leading-edge technologies and talent that reside in the commercial sector, with the ultimate goal of accelerating innovation into the hands of the warfighter. Working across the country, and in collaboration with allied international partners, DIUx is developing new ways of doing business, growing our defense industrial base to include "non-traditional" companies that never imagined the military as a potential customer, working with traditional vendors in novel ways to increase efficiency, and challenging innovators to share their tremendous talents on the vital and difficult mission of our nation's defense.

A. Mission Description and Budget Item Justification

Defense Innovation Unit Experimental (DIUx) was established in April 2015 and DIUx 2.0 in May 2016.

DIUx mission is to accelerate innovation the majority of which resides in the commercially- focused technology sector to the warfighter. Initially, DIUx was managed by the Under Secretary of Defense Acquisition, Technology and Logistics, (USD, AT&L) when it was established in July 2015. In May 2016, DIUx was placed under the operational control of the Secretary of Defense and administratively managed by Washington Headquarters Services (WHS) with a functional realignment of \$148.8 million across the FYDP to WHS.

DIUx funds the acquisition and/or prototyping of leading-edge technologies from commercially-focused companies (i.e., "non-traditionals") from Silicon Valley, Boston, Austin, and across the country; as well as from traditional defense contractors that either partner with non-traditionals or offer one-third in cost sharing. DIUx acquires and/or prototypes these commercially viable technologies solutions, in direct response to particular capability gaps faced by our nation's warfighters. As such, solution proposals are assessed to ensure alignment with DoD's strategic objectives to increase and strengthen our nation's security.

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Washington Headquarters Service	Date: May 2017
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Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 3: Advanced Technology Development (ATD)</i>	R-1 Program Element (Number/Name) PE 0603342D8W I <i>Defense Innovation Unit Experimental (DIUx)</i>
---	--

B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	0.000	0.000	0.000	-	0.000
Current President's Budget	0.000	0.000	29.594	-	29.594
Total Adjustments	0.000	0.000	29.594	-	29.594
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Functional Realignment of DIUx from Under Secretary of Defense Acquisition, Technology, and Logistics, (USD, AT&L) to Deputy Chief Management Officer, Washington Headquarters Services (WHS)	-	-	29.594	-	29.594

Change Summary Explanation

Initially, DIUx was managed by the Under Secretary of Defense Acquisition, Technology and Logistics, (USD, AT&L) when it was established in July 2015. In May 2016, DIUx was placed under the operational control of the Secretary of Defense and administratively managed by Washington Headquarters Services (WHS),with functional realignment of \$148.8 million across the FYDP Washington Headquarters Services (WHS) beginning in FY 2018.

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Washington Headquarters Service										Date: May 2017		
Appropriation/Budget Activity 0400 / 3					R-1 Program Element (Number/Name) PE 0603342D8W / Defense Innovation Unit Experimental (DIUx)				Project (Number/Name) 434 / DIUx			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
434: DIUx	-	0.000	0.000	29.594	-	29.594	29.611	29.659	29.680	30.304	Continuing	Continuing
A. Mission Description and Budget Item Justification												
DIUx mission is to accelerate innovation to the warfighter by leveraging commercial technology innovations. Initially, this program was managed by the Under Secretary of Defense Acquisition, Technology, and Logistics, (USD, AT&L) with functional realignment of \$148.8 million across the FYDP to Washington Headquarters Services (WHS) beginning in FY 2018. The DIUx program will fund the development of novel leading-edge technologies emerging from high-tech companies that are not traditional defense contractors. An objective of this program is to obtain innovative ideas from industry that have low technology readiness and are of high priority to DoD leadership. Incoming proposals will be assessed to ensure alignment with the DoD's strategic objectives to increase and strengthen our nation's security.												
B. Accomplishments/Planned Programs (\$ in Millions)										FY 2016	FY 2017	FY 2018
Title: Defense Innovation Unit - Experimental (DIUx)										-	-	29.594
FY 2018 Plans:												
The U.S. Department of Defense relies on innovation to maintain our nation's ability to deter, and if need be, prevail in conflict. With outposts in the heart of Silicon Valley and Boston, Defense Innovation Unit Experimental (DIUx) serves as a bridge between those in the U.S. military executing on some of our nation's toughest security challenges and companies operating at the cutting edge of technology. DIUx is an experiment that continuously repeat how best to identify, contract, and prototype novel innovations through sources traditionally not available to the Department of Defense, with the ultimate goal of accelerating technology into the hands of warfighters and keep them on the cutting edge of technology.												
Accomplishments/Planned Programs Subtotals										-	-	29.594
C. Other Program Funding Summary (\$ in Millions)												
Line Item	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost	
• PE 0901650D8W: O&M	0.000	0.000	24.221	-	24.221	24.270	24.350	24.431	24.809	Continuing	Continuing	
Remarks												
DIUX O&M mission support funding.												
D. Acquisition Strategy												
N/A												
E. Performance Metrics												
N/A												

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Exhibit R-3, RDT&E Project Cost Analysis: FY 2018 Washington Headquarters Service		Date: May 2017
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603342D8W / <i>Defense Innovation Unit Experimental (DIUx)</i>	Project (Number/Name) 434 / <i>DIUx</i>
<u>Remarks</u> The DIUx program will fund the development of novel leading-edge technologies emerging from high-tech companies that are not traditional defense contractors.		

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Exhibit R-4, RDT&E Schedule Profile: FY 2018 Washington Headquarters Service																Date: May 2017			
Appropriation/Budget Activity 0400 / 3								R-1 Program Element (Number/Name) PE 0603342D8W / <i>Defense Innovation Unit Experimental (DIUx)</i>								Project (Number/Name) 434 / <i>DIUx</i>			

	FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
<i>DIUx Partnering</i>																												
Innovation Assessments																												
<i>Technology Assesment</i>																												
Innovation Prototyping																												
<i>Research and Development</i>																												
Delivery coordination																												

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Exhibit R-4A, RDT&E Schedule Details: FY 2018 Washington Headquarters Service			Date: May 2017
Appropriation/Budget Activity 0400 / 3	R-1 Program Element (Number/Name) PE 0603342D8W / <i>Defense Innovation Unit Experimental (DIUx)</i>	Project (Number/Name) 434 / <i>DIUx</i>	

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>DIUx Partnering</i>				
Innovation Assessments	4	2018	4	2022
<i>Technology Assessment</i>				
Innovation Prototyping	4	2019	4	2022
<i>Research and Development</i>				
Delivery coordination	3	2020	4	2022

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Washington Headquarters Service	Date: May 2017
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Appropriation/Budget Activity 0400: Research, Development, Test & Evaluation, Defense-Wide / BA 6: RDT&E Management Support	R-1 Program Element (Number/Name) PE 0903230D8W / WHS - Mission Operations Support - IT
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COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	0.000	0.975	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	-	-
945: Miscellaneous IT Initiative	0.000	0.975	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	-	-

A. Mission Description and Budget Item Justification

The Washington Headquarters Services (WHS) Information Technology (IT) program provides ongoing research, test, and development and enhancement initiatives for the Office of the Secretary of Defense (OSD), OSD Principal Staff Assistants, and WHS Directorates. Ongoing initiatives include enterprise storage testing, enterprise performance and productivity analysis, enterprise/business applications development and enhancements, operational support enhancements, and information assurance testing and development.

B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	0.975	0.000	0.000	-	0.000
Current President's Budget	0.975	0.000	0.000	-	0.000
Total Adjustments	0.000	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			

Change Summary Explanation

The FY 2016 program will develop, test, pilot, and deploy new integrated business tools that will enhance human resource management, acquisition, and executive services business processes that support Washington Headquarters Services (WHS)/Office of the Secretary of Defense (OSD). Funds will also be used for developing and testing tools that will improve the delivery of IT services and capabilities for all WHS/OSD users.

1. Joint Service Provider (JSP) IT FY 2016 - \$878K.

To develop, test, pilot, and deploy new integrated business tools that will enhance human resource management, acquisition, and executive services business processes that support WHS/OSD. WHS/OSD continues to expand the Engineering, Test and Development networks for NIPRnet and SIPRnet to provide and maintain a centrally managed, "State-of-the-Art", Virtual Environment for OSD, and WHS.

2. Secure Mobile Computing FY 2016 - \$97K

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Washington Headquarters Service		Date: May 2017
Appropriation/Budget Activity 0400: Research, Development, Test & Evaluation, Defense-Wide / BA 6: RDT&E Management Support	R-1 Program Element (Number/Name) PE 0903230D8W / WHS - Mission Operations Support - IT	
The FY 2016 program plans to develop better mobile classified computing and communications platforms for all customers to have secured computing at residences and at temporary and mobile locations around the world.		

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Washington Headquarters Service										Date: May 2017		
Appropriation/Budget Activity 0400 / 6					R-1 Program Element (Number/Name) PE 0903230D8W / WHS - Mission Operations Support - IT				Project (Number/Name) 945 / Miscellaneous IT Initiative			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
945: Miscellaneous IT Initiative	0.000	0.975	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification
P945 – Miscellaneous IT Initiative - The WHS provides various IT support for the WHS/OSD to align processes and information technology that will enable mission accomplishment.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018
Title: Joint Service Provider	0.878	-	-
FY 2016 Accomplishments: To develop, test, pilot, and deploy new integrated business tools that will enhance human resource management, acquisition, and executive services business processes that support WHS/OSD. Funds will also be used for developing and testing tools that will improve the delivery of IT services and capabilities for all WHS/OSD users. WHS/OSD continues to expand the Engineering, Test and Development networks for NIPR and SIPR. The long term goal is to provide and maintain a centrally managed, "State-of-the-Art", Virtual Environment for developers throughout OSD and WHS.			
Title: Secure Mobile Computing	0.097	-	-
FY 2016 Accomplishments: The FY 2016 program plans to develop better mobile classified computing and communications platforms for all customers to have secure computing at residences and at temporary and mobile locations around the world.			
Accomplishments/Planned Programs Subtotals	0.975	-	-

C. Other Program Funding Summary (\$ in Millions)
N/A

Remarks

D. Acquisition Strategy
N/A

E. Performance Metrics
To achieve a 15% reduction in the time to deploy modifications, upgrades and capabilities to customers.

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Washington Headquarters Service	Date: May 2017
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Appropriation/Budget Activity 0400: Research, Development, Test & Evaluation, Defense-Wide / BA 6: RDT&E Management Support	R-1 Program Element (Number/Name) PE 0903235D8W / Joint Service Provider (JSP)											
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	0.000	0.000	0.827	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
945: Miscellaneous - IT Initiative	0.000	0.000	0.827	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Washington Headquarters Services (WHS) Information Technology (IT) program provides ongoing research, test, and development and enhancement initiatives for the Office of the Secretary of Defense (OSD), OSD Principal Staff Assistants, and WHS Directorates. Ongoing initiatives include enterprise storage testing, enterprise performance and productivity analysis, enterprise/business applications development and enhancements, operational support enhancements, and information assurance testing and development.

B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	0.000	0.827	0.000	0.000	0.000
Current President's Budget	0.000	0.827	0.000	0.000	0.000
Total Adjustments	0.000	0.000	0.000	0.000	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Joint Service Provider transfer to DISA	0.000	0.000	0.000	0.000	0.000

Change Summary Explanation

The JSP Program will transfer to DISA in FY 2018.

Decrease results from functional transfer of resources as the Defense Information System Agency (DISA) assumes operational control of the Joint Information Service Provider (JSP) in accordance with Deputy Secretary of Defense Directive Memorandum, Consolidation of Pentagon Information Technology Operations, 1 May 2015.

The FY 2017 funding will remain with WHS and executed by JSPs.

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Washington Headquarters Service										Date: May 2017		
Appropriation/Budget Activity 0400 / 6					R-1 Program Element (Number/Name) PE 0903235D8W / Joint Service Provider (JSP)				Project (Number/Name) 945 / Miscellaneous - IT Initiative			
COST (\$ in Millions)	Prior Years ⁽⁺⁾	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
945: Miscellaneous - IT Initiative	0.000	0.000	0.827	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
⁽⁺⁾ The sum of all Prior Years is \$0.000 million less than the represented total due to several projects ending												
A. Mission Description and Budget Item Justification P945 - Miscellaneous IT Initiative - The WHS provides various IT support for the WHS/OSD to align processes and information technology that will enable mission accomplishment.												
B. Accomplishments/Planned Programs (\$ in Millions)									FY 2016	FY 2017	FY 2018	
Title: Joint Service Provider (JSP)									-	0.728	0.000	
FY 2017 Plans: To develop, test, pilot, and deploy new integrated business tools that will enhance human resource management, acquisition, and executive services business processes that support WHS/OSD. funds will also be used for developing and testing tools that will improve the delivery of IT services and capabilities for all WHS/OSD users. WHS/OSD continues to expand the Engineering, Test and Development networks for NIPR and SIPR. the long term goal is to provide and maintain a centrally managed, "State-of-the-Art," Virtual Environment for developers throughout OSD, WHS, and PFPA.												
FY 2018 Plans: Program transferred to DISA												
Title: Secure Mobile Computing									-	0.099	0.000	
FY 2017 Plans: The FY 2017 program plans to develop better mobile classified commuting and communications platforms for all customers. The plan is for continue to focus on secure mobile platforms capable of highly classified communications with an emphasis on the ever-changing nature of the technology and the development of state-of-the-art capabilities to support the Secretary of Defense in his command and control responsibilities.												
FY 2018 Plans: Program transferred to DISA												
Accomplishments/Planned Programs Subtotals									-	0.827	0.000	
C. Other Program Funding Summary (\$ in Millions) N/A												

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Washington Headquarters Service		Date: May 2017
Appropriation/Budget Activity 0400 / 6	R-1 Program Element (Number/Name) PE 0903235D8W / <i>Joint Service Provider (JSP)</i>	Project (Number/Name) 945 / <i>Miscellaneous - IT Initiative</i>
C. Other Program Funding Summary (\$ in Millions) Remarks D. Acquisition Strategy N/A E. Performance Metrics FY 2017: To achieve a 15% reduction in the time to deploy modifications, upgrades, and capabilities to customers.		

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**Department of Defense
Fiscal Year (FY) 2018 Budget Estimates**

May 2017



Operational Test and Evaluation, Defense

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Department of Defense
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

09 May 2017

Appropriation -----	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO
Operational Test & Eval, Defense	187,483	187,127	189,852				
Total Research, Development, Test & Evaluation	187,483	187,127	189,852				

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Department of Defense
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

09 May 2017

Appropriation	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Operational Test & Eval, Defense	187,127	189,852		189,852	210,900		210,900
Total Research, Development, Test & Evaluation	187,127	189,852		189,852	210,900		210,900

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Department of Defense
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

09 May 2017

	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO
Summary Recap of Budget Activities							

Management Support	187,483	178,994	181,719				
Undistributed		8,133	8,133				
Total Research, Development, Test & Evaluation	187,483	187,127	189,852				
Summary Recap of FYDP Programs							

Research and Development	187,483	178,994	181,719				
Administration and Associated Activities		8,133	8,133				
Total Research, Development, Test & Evaluation	187,483	187,127	189,852				

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Department of Defense
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

09 May 2017

	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Summary Recap of Budget Activities							

Management Support	178,994	181,719		181,719	210,900		210,900
Undistributed	8,133	8,133		8,133			
Total Research, Development, Test & Evaluation	187,127	189,852		189,852	210,900		210,900
Summary Recap of FYDP Programs							

Research and Development	178,994	181,719		181,719	210,900		210,900
Administration and Associated Activities	8,133	8,133		8,133			
Total Research, Development, Test & Evaluation	187,127	189,852		189,852	210,900		210,900

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Defense-Wide
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

09 May 2017

	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO
Summary Recap of Budget Activities							
Management Support	187,483	178,994	181,719				
Undistributed		8,133	8,133				
Total Research, Development, Test & Evaluation	187,483	187,127	189,852				
Summary Recap of FYDP Programs							
Research and Development	187,483	178,994	181,719				
Administration and Associated Activities		8,133	8,133				
Total Research, Development, Test & Evaluation	187,483	187,127	189,852				

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Defense-Wide
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

09 May 2017

	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Summary Recap of Budget Activities							

Management Support	178,994	181,719		181,719	210,900		210,900
Undistributed	8,133	8,133		8,133			
Total Research, Development, Test & Evaluation	187,127	189,852		189,852	210,900		210,900
Summary Recap of FYDP Programs							

Research and Development	178,994	181,719		181,719	210,900		210,900
Administration and Associated Activities	8,133	8,133		8,133			
Total Research, Development, Test & Evaluation	187,127	189,852		189,852	210,900		210,900

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Defense-Wide
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

09 May 2017

Appropriation: 0460D Operational Test & Eval, Defense

Line No	Program Element Number	Item	Act	FY 2016 Base + OCO	FY 2017 PB Request with CR Adj Base	FY 2017 Total PB Requests* with CR Adj Base	FY 2017 PB Request with CR Adj OCO	FY 2017 Total PB Requests* with CR Adj OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj OCO	S e c
1	06051180	OTE Operational Test and Evaluation	06	76,838	78,047	80,772					U
2	06051310	OTE Live Fire Test and Evaluation	06	46,882	48,316	48,316					U
3	06058140	OTE Operational Test Activities and Analyses	06	63,763	52,631	52,631					U
		Management Support		187,483	178,994	181,719					
4	09015600	OTE Continuing Resolution Programs	20		8,133	8,133					U
		Undistributed			8,133	8,133					
Total Operational Test & Eval, Defense				187,483	187,127	189,852					

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Defense-Wide
 FY 2018 President's Budget Request
 Exhibit R-1 FY 2018 President's Budget Request
 Total Obligational Authority
 (Dollars in Thousands)

09 May 2017

Appropriation: 0460D Operational Test & Eval, Defense

Line No	Program Element Number	Item	Act	FY 2017 Total PB Requests** with CR Adj Base+OCO+SAA	FY 2017 Total PB Requests* with CR Adj Base + OCO	FY 2017 Less Enacted Div B P.L.114-254** OCO	FY 2017 Remaining Req with CR Adj Base + OCO	FY 2018 Base	FY 2018 OCO	FY 2018 Total	S e c
1	0605118	OTE Operational Test and Evaluation	06	78,047	80,772		80,772	83,503		83,503	U
2	0605131	OTE Live Fire Test and Evaluation	06	48,316	48,316		48,316	59,500		59,500	U
3	0605814	OTE Operational Test Activities and Analyses	06	52,631	52,631		52,631	67,897		67,897	U
		Management Support		178,994	181,719		181,719	210,900		210,900	
4	0901560	OTE Continuing Resolution Programs	20	8,133	8,133		8,133				U
		Undistributed		8,133	8,133		8,133				
Total Operational Test & Eval, Defense				187,127	189,852		189,852	210,900		210,900	

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Operational Test and Evaluation, Defense • Budget Estimates FY 2018 • RDT&E Program

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Appropriation 0460: Operational Test and Evaluation, Defense

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Operational Test and Evaluation (OT&E)	0605118OTE	1	06.....	Volume 5 - 995

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Operational Test and Evaluation, Defense **Date:** May 2017

Appropriation/Budget Activity 0460: Operational Test and Evaluation, Defense / BA 6: RDT&E Management Support	R-1 Program Element (Number/Name) PE 0605118OTE / Operational Test and Evaluation (OT&E)
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COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	90.673	76.838	80.772	83.503	-	83.503	85.397	86.803	88.620	90.499	Continuing	Continuing
0605118OTE: OT&E	90.673	76.838	80.772	83.503	-	83.503	85.397	86.803	88.620	90.499	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Director of Operational Test and Evaluation (DOT&E) was created by Congress in 1983. The Director is responsible under Title 10 for policy and procedures for all aspects of Operational Test and Evaluation (OT&E) within the Department of Defense (DoD). Particular focus is given to OT&E that supports major weapon system production decisions for acquisition programs included on the Office of Secretary of Defense Test and Evaluation Oversight List that is prepared and approved annually. Generally, there are about 300 programs on the oversight list including all Major Defense Acquisition Programs (MDAP) and Major Automated Information Systems (MAIS). MDAPs may not proceed beyond low-rate initial production (BLRIP) until OT&E of the program is complete. DOT&E is involved early in the planning phase of each program to ensure adequate testing is planned and executed. Key elements of DOT&E's oversight authority include:

- Approve component Test and Evaluation Master Plans (TEMPS).
- Approve component OT&E Test Plans (TPs).
- Oversee Military Department preparation and conduct of field operational tests; analysis and evaluation of the resultant test data; the assessment of the adequacy of the executed test and evaluation programs; and assessment of the operational effectiveness and suitability of the weapon systems.
- Report results of OT&E that supports BLRIP decisions to the Secretary of Defense and Congress, as well as providing an annual report summarizing all OT&E activities and the adequacy of test resources within DoD during the previous fiscal year.
- Review and make recommendations to the Secretary of Defense on all budgetary and financial matters related to OT&E, including operational test facilities, resources and ranges.

DOT&E also oversees and resources OT&E community efforts to plan and execute joint operational evaluations of information assurance and interoperability (IA and IOP) of fielded systems and networks during major Combatant Command (CCMD) and Service exercises, and reports the trends and findings in the annual report.

DOT&E is also involved in increasing the capacity to access realistically advanced cyber warfare capabilities to keep pace with heightened demand for their capabilities, advancing technologies and the growing cyber threat.

This Program Element includes funds to obtain Federally Funded Research and Development Center (FFRDC) support in performing the described tasks, travel funds to carry out oversight of the OT&E and IA and IOP programs, funds for Service teams performing information assurance and interoperability assessments during exercises, administrative support services, DFAS support, and engineering and technical support services related to the conduct of operational test and evaluation and exercise assessments.

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Operational Test and Evaluation, Defense	Date: May 2017
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Appropriation/Budget Activity 0460: <i>Operational Test and Evaluation, Defense I BA 6: RDT&E Management Support</i>	R-1 Program Element (Number/Name) PE 0605118OTE / <i>Operational Test and Evaluation (OT&E)</i>
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B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	76.838	78.047	80.129	-	80.129
Current President's Budget	76.838	80.772	83.503	-	83.503
Total Adjustments	0.000	2.725	3.374	-	3.374
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Program increases for Cyber Testing	-	-	3.374	-	3.374
• Cybersecurity Assessments	-	2.725	-	-	-

Change Summary Explanation

AMENDED BUDGET REQUEST JUSTIFICATION: \$2.725 million is required to address emergency warfighting readiness requirements. This increase is for Cybersecurity Assessments including funding three commercially available exploits to help DoD Red Teams portray Tier 3 cyber adversaries; funding and configuring three Cross Domain Solutions (CDS) for cybersecurity testing to identify vulnerabilities in fielded systems and acquisition programs, identify mitigation strategies, and promulgate efficient test guidance; deploying a new platform to improve situational awareness and control of five DoD Red Teams.

\$3.374 million in FY 2018 is to develop testing standards, policies, and practices for cyber payloads.

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Operational Test and Evaluation, Defense **Date:** May 2017

Appropriation/Budget Activity 0460 / 6	R-1 Program Element (Number/Name) PE 0605118OTE / <i>Operational Test and Evaluation (OT&E)</i>	Project (Number/Name) 0605118OTE / <i>OT&E</i>
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COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
0605118OTE: <i>OT&E</i>	90.673	76.838	80.772	83.503	-	83.503	85.397	86.803	88.620	90.499	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Director of Operational Test and Evaluation (DOT&E) was created by Congress in 1983. The Director is responsible under Title 10 for policy and procedures for all aspects of Operational Test and Evaluation (OT&E) within the Department of Defense (DoD). Particular focus is given to OT&E that supports major weapon system production decisions for acquisition programs included on the Office of Secretary of Defense Test and Evaluation Oversight List that is prepared and approved annually. Generally, there are about 300 programs on the oversight list including all Major Defense Acquisition Programs (MDAP) and Major Automated Information Systems (MAIS). MDAPs may not proceed beyond low-rate initial production (BLRIP) until OT&E of the program is complete. DOT&E is involved early in the planning phase of each program to ensure adequate testing is planned and executed. Key elements of DOT&E's oversight authority include:

- The approval of component Test and Evaluation Master Plans (TEMPS).
- The approval of component OT&E Test Plans (TPs).
- Oversight of Military Department preparation and conduct of field operational tests; analysis and evaluation of the resultant test data; the assessment of the adequacy of the executed test and evaluation programs; and assessment of the operational effectiveness and suitability of the weapon systems.
- Reporting results of OT&E that support BLRIP decisions to the Secretary of Defense and Congress, as well as providing an annual report summarizing all OT&E activities and the adequacy of test resources within DoD during the previous fiscal year.
- The review and make recommendations to the Secretary of Defense on all budgetary and financial matters related to OT&E, including operational test facilities, resources and ranges.

DOT&E also oversees and resources OT&E community efforts to plan and execute joint operational evaluations of information assurance and interoperability (IA and IOP) of fielded systems and networks during major Combatant Command (CCMD) and Service exercises, and reports the trends and findings in the annual report.

DOT&E is also involved in increasing the capacity to access realistically advanced cyber warfighting capabilities to keep pace with heightened demand for those capabilities, advancing technologies and the growing cyber threat.

This Program Element includes funds to obtain Federally Funded Research and Development Center (FFRDC) support in performing the described tasks, travel funds to carry out oversight of the OT&E and IA and IOP programs, funds for Service teams performing information assurance and interoperability assessments during exercises, administrative support services, DFAS support, and engineering and technical support services related to the conduct of operational test and evaluation and exercise assessments.

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Operational Test and Evaluation, Defense		Date: May 2017	
Appropriation/Budget Activity 0460 / 6	R-1 Program Element (Number/Name) PE 0605118OTE / <i>Operational Test and Evaluation (OT&E)</i>	Project (Number/Name) 0605118OTE / <i>OT&E</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
Title: Operational Test and Evaluation		76.838	80.772
FY 2016 Accomplishments: Operational Test and Evaluation Oversight			83.503
<p>This effort is in direct support of the Director's Title 10 responsibilities and is a continuing effort. Funding for FY 2016 provides Operational Test and Evaluation inputs for Test and Evaluation Master Plans, Test Plans, System Acquisition Reports, Defense Acquisition Executive Summary Reports for those programs designated for oversight by DOT&E and OUSD(AT&L). Key elements of DOT&E oversight authority are identified in Calendar Year 2016 Office of the Secretary of Defense Test and Evaluation Oversight List.</p> <p>Cybersecurity Evaluations</p> <p>DOT&E sponsored seven Combatant Command (CCMD) and two Service cybersecurity exercise assessments in FY 2016. In addition to the nine exercise assessments, DOT&E performed two assessments during visits to operational sites not involved in an exercise. All DOT&E-sponsored assessments included a "fix" phase during which DOT&E-funded cybersecurity experts helped CCMD and Service personnel address critical cybersecurity vulnerabilities. As part of our new Cyber Readiness Campaigns (CRCs), DOT&E worked with U.S. Pacific Command, U.S. Northern Command, U.S. Strategic Command, U.S. European Command, and U.S. Southern Command to evaluate a larger spectrum of cybersecurity related issues than is possible during a short exercise. The CRCs included more frequent and focused assessment events, and they helped commands address persistent, mission-critical cybersecurity vulnerabilities. To enable more threat-representative and longer-duration adversary portrayal, DOT&E initiated a Persistent Cyber Opposing Force (PCO) capability as part of U.S. Pacific Command's CRC as well as at U.S. Northern Command. DOT&E worked with U.S. Cyber Command to expand the use of PCOs to better understand and address our network vulnerabilities, to be more threat representative, and to allow more efficient use of limited cyber red team assets. To support cybersecurity assessments of live DoD networks, DOT&E conducted lab-based cyber testing of cross-domain solutions (CDSs) and programmable logic controllers (PLCs). These are critical components in many DoD systems and networks, and DOT&E's testing resulted in recommendations to improve CDS and PLC security and test procedures. Using personnel with advanced cybersecurity expertise, DOT&E conducted evaluations of a small number of offensive cyber capabilities in direct support of the capabilities' sponsor. DOT&E transmitted critical findings to DoD leadership along with recommended actions to improve DoD's cybersecurity posture. DOT&E's FY 2016 cybersecurity evaluations included trend analyses across prior year results, both within and across CCMDs.</p>			
FY 2017 Plans: Operational Test and Evaluation Oversight			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Operational Test and Evaluation, Defense		Date: May 2017	
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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
<p>This effort is in direct support of the Director's Title 10 responsibilities and is a continuing effort. Funding for FY 2017 provides Operational Test and Evaluation inputs for Test and Evaluation Master Plans, Test Plans, System Acquisition Reports, Defense Acquisition Executive Summary Reports for those programs designated for oversight by DOT&E and OUSD(AT&L). Key elements of DOT&E oversight authority are identified in Calendar Year 2017 Office of the Secretary of Defense Test and Evaluation Oversight List.</p> <p>Cybersecurity Evaluations</p> <p>DOT&E plans to sponsor approximately 10 CCMD and Service cybersecurity assessments and CRCs in FY 2017, each including a "fix" phase as described above. DOT&E plans to continue working with the CCMDs and Services to develop multi-year plans for exercise cyber assessments and CRC events. These plans will focus on assessing the CCMD or Service's ability to complete missions in a contested cyber environment. To support threat-representative assessments, and to enable continuous improvement of DoD's cybersecurity posture, DOT&E will continue to work with U.S. Cyber Command to establish a PCO capability for all CCMDs and Services. Primary objectives for DOT&E's assessments in FY 2017 include the portrayal of advanced nation-state cyber threats and the assessment of operational missions during realistic cyber attacks. DOT&E will assess Cyber Protection Teams when they participate during PCO, CRC or exercise events. DOT&E will continue to develop techniques to efficiently and effectively assess offensive cyber capabilities, and conduct timely evaluations of these capabilities. DOT&E will use the DoD Enterprise Cyber Range Environment (DECRE) and other lab and cyber range assets to support events, for added threat realism. DOT&E will transmit critical findings to DoD leadership along with recommended actions to improve DoD's cybersecurity posture. FY 2017 evaluations will include trend analyses across prior year results, both within and across CCMDs.</p> <p>FY 2018 Plans: Operational Test and Evaluation Oversight</p> <p>This effort is in direct support of the Director's Title 10 responsibilities and is a continuing effort. Funding for FY 2018 provides Operational Test and Evaluation inputs for Test and Evaluation Master Plans, Test Plans, System Acquisition Reports, Defense Acquisition Executive Summary Reports for those programs designated for oversight by DOT&E and OUSD(AT&L). Key elements of DOT&E oversight authority are identified in Calendar Year 2018 Office of the Secretary of Defense Test and Evaluation Oversight List.</p> <p>Cybersecurity Evaluations</p>			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Operational Test and Evaluation, Defense		Date: May 2017	
Appropriation/Budget Activity 0460 / 6	R-1 Program Element (Number/Name) PE 0605118OTE / <i>Operational Test and Evaluation (OT&E)</i>	Project (Number/Name) 0605118OTE / <i>OT&E</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
<p>DOT&E will oversee and resource approximately 10 CCMD and Service assessments in FY 2018, each including a “fix” phase. Pending CCMD and Service agreement, DOT&E plans to conduct CRC events with all of the CCMDs and Services. Each CRC will include frequent assessments focused on new cybersecurity technologies or procedures to address problems identified in prior assessments. CRCs will culminate in a capstone event during a major exercise that evaluates the cybersecurity of critical missions, as improved by the new technologies and procedures. Using the PCO, DOT&E will continue to work with the CCMDs and cyber red teams to increase the portrayal of advanced nation-state cyber threats. The goal is to have the majority of assessments in FY 2018 include advanced threats that stress critical missions. DOT&E will assess Cyber Protection Teams when they participate during PCO, CRC or exercise events. DOT&E will continue to develop techniques to efficiently and effectively assess offensive cyber capabilities, and conduct timely evaluations of these capabilities. DOT&E will use the DoD Enterprise Cyber Range Environment (DECRE) and other lab and cyber range assets to support events, for added threat realism. DOT&E will transmit critical findings to DoD leadership along with recommended actions to improve DoD’s cybersecurity posture. FY 2018 evaluations will include trend analyses across prior year results, both within and across CCMDs and Services. In FY 2018 DOT&E will develop testing standards, policies, and practices for cyber payloads.</p>			
Accomplishments/Planned Programs Subtotals		76.838	80.772
C. Other Program Funding Summary (\$ in Millions)			
N/A			
Remarks			
D. Acquisition Strategy			
N/A			
E. Performance Metrics			
<p>Performance Measure: Percentage of required operational test planning documents, assessments, and reports applicable to acquisition programs on the OSD Test and Evaluation Oversight List and other special interest programs/legacy systems that are completed and delivered to the appropriate decision makers on time.</p> <p>The on-time completion rate was computed on the basis of the number of required products that were submitted within established time standards relative to the total number of such products that fell due during the fiscal year. Products included in the measure include beyond low-rate initial production reports, Test Plans, and Test and Evaluation Master Plans for operational test and evaluation oversight as well as assessment plans, “quick look” reports, and final reports for the information assurance and interoperability testing associated with scheduled test events.</p>			

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Operational Test and Evaluation, Defense	Date: May 2017
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Appropriation/Budget Activity					R-1 Program Element (Number/Name)							
0460: Operational Test and Evaluation, Defense / BA 6: RDT&E Management Support					PE 0605131OTE / Live Fire Test and Evaluation (LFT&E)							
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	47.776	46.882	48.316	59.500	-	59.500	56.962	56.390	59.362	57.370	Continuing	Continuing
0605131OTE: LFT&E	47.776	46.882	48.316	59.500	-	59.500	56.962	56.390	59.362	57.370	Continuing	Continuing

A. Mission Description and Budget Item Justification

This Program Element consists of three programs: Live Fire Test and Evaluation, Joint Aircraft Survivability Program (JASP), and Joint Technical Coordinating Group for Munitions Effectiveness (JTTCG/ME).

This Program Element directly supports the Congressional statutory requirements for oversight of Live Fire Test and Evaluation (LFT&E). The primary objective of LFT&E is to assure that the vulnerability and survivability of Department of Defense (DoD) crew-carrying platforms and the lethality of our conventional munitions are known and acceptable before entering full-rate production. LFT&E encompasses realistic tests involving actual United States (U.S.) and foreign threat hardware or, if not available, acceptable surrogate threat hardware. The objective is to identify and correct design deficiencies early in the development process. A completed LFT&E program and test report is required before programs proceed beyond low-rate initial production (BLRIP). LFT&E also includes realistic modeling and simulation (M&S) to examine survivability and lethality attributes not assessed during testing.

This Program Element also supports DoD's Joint Live Fire (JLF) Program and other LFT&E related initiatives. JLF was begun in 1984 under an Office of the Secretary of Defense charter to test fielded front-line combat aircraft and armor systems for their vulnerabilities as well as fielded weapons, both U.S. and foreign, for their lethality against their respective targets. Funds are also used to support other initiatives related to quick reaction requests from theater and other areas of personnel survivability.

The Joint Aircraft Survivability Program is the DoD's focal point for joint service enhancement of military aircraft non-nuclear survivability. The JASP is chartered by the commanders of the USN Naval Air Systems Command, USA Aviation and Missile Command and USAF Life Cycle Management Center to coordinate and conduct RDT&E to improve military aircraft survivability, develop and standardize aircraft survivability modeling and simulation (M&S), facilitate information exchange on aircraft survivability and support aircraft survivability education for the DoD and U.S. aircraft community. Each chartering command provides a senior aircraft survivability expert for the JASP Principal Members Steering Group (PMSG), which guides the program and approves projects for funding. The JASP assesses and reports on combat damage incidents through the Joint Combat Assessment Team (JCAT), is the Executive Agent for the Joint Live Fire Aircraft Systems Program managed by the Live Fire Test office of DOT&E.

The Joint Logistics Commanders Joint Technical Coordinating Group for Munitions Effectiveness (JTTCG/ME) was chartered more than 40 years ago to serve as DoD's focal point for munitions effectiveness information. This has taken the form of widely used Joint Munitions Effectiveness Manuals (JMEMs) which address all major non-nuclear U.S. weapons. JTTCG/ME authenticates weapons effectiveness data for use in training, systems acquisition, weapon procurement, and combat modeling and simulation. JMEMs are used by the Armed Forces of the U.S., NATO, and other allies to plan operational missions, support training and tactics development, and support force-level analyses. JTTCG/ME also develops and standardizes methodologies for evaluation of munitions effectiveness and maintains databases for target vulnerability, munitions lethality, and weapon system accuracy. The JMEM requirements and development processes continues to be driven by operational lessons

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Operational Test and Evaluation, Defense	Date: May 2017
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Appropriation/Budget Activity 0460: <i>Operational Test and Evaluation, Defense / BA 6: RDT&E Management Support</i>	R-1 Program Element (Number/Name) PE 0605131OTE / <i>Live Fire Test and Evaluation (LFT&E)</i>
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learned (Enduring Freedom, Iraqi Freedom, Odyssey Dawn and Inherent Resolve) and the needs of Combatant Commands, Services, Military Targeting Committee, and Operational Users Working Groups input for specific weapon-target pairings and methodologies.

This program element also includes funds to obtain Federally Funded Research and Development Center (FFRDC) expertise in performing analyses in support of described Live Fire Test and Evaluation tasks, as well as travel funds to carry out the LFT&E, JASP and JTCG/ME programs.

B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	46.882	48.316	48.966	-	48.966
Current President's Budget	46.882	48.316	59.500	-	59.500
Total Adjustments	0.000	0.000	10.534	-	10.534
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	0.000	-			
• SBIR/STTR Transfer	-	-			
• Program increases for Enhanced Collateral Damage Methodology	-	-	4.534	-	4.534
• Program increases for Enhanced Laser Weaponizing Methodologies and Joint Munition Effectiveness Manual (JMEM) Development	-	-	6.000	-	6.000

Change Summary Explanation

\$4.534 million is to fund collateral damage estimation methodology improvements for buried ordinance characterization and Area of Responsibility (AoR) specific building debris.

\$6.000 million is to fund generation of preliminary data and analysis of selected Directed Energy Laser Weapons Systems (DWS) characteristics, to include their delivery accuracy, reliability, and damage effects on the targets of interest. Costs will include required component laboratory and field tests as well as advances to relevant modeling and simulation to set a more sustainable protocol for DEW JMEM database development and to have an ability to assess a wider spectrum of weapon-target pairings. It will also establish and guide the selection of DWS target pairing procedures based on potential engagement scenarios, collateral damage estimation, and other considerations.

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Operational Test and Evaluation, Defense										Date: May 2017		
Appropriation/Budget Activity 0460 / 6					R-1 Program Element (Number/Name) PE 0605131OTE / <i>Live Fire Test and Evaluation (LFT&E)</i>				Project (Number/Name) 0605131OTE / <i>LFT&E</i>			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
0605131OTE: <i>LFT&E</i>	47.776	46.882	48.316	59.500	-	59.500	56.962	56.390	59.362	57.370	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This Program Element consists of three programs: Live Fire Test and Evaluation, Joint Aircraft Survivability Program (JASP) and Joint Technical Coordinating Group for Munitions Effectiveness (JTCEG/ME).

This Program Element directly supports the Congressional statutory requirements for oversight of Live Fire Test and Evaluation (LFT&E). The primary objective of LFT&E is to assure that the vulnerability and survivability of Department of Defense (DoD) crew-carrying platforms and the lethality of our conventional munitions are known and acceptable before entering full-rate production. LFT&E encompasses realistic tests involving actual United States (U.S.) and foreign threat hardware or, if not available, acceptable surrogate threat hardware. The objective is to identify and correct design deficiencies early in the development process. A completed LFT&E program and test report is required before programs proceed beyond low-rate initial production (BLRIP). LFT&E also includes realistic modeling and simulation (M&S) to examine survivability and lethality attributes not assessed during testing.

This Program Element also supports DoD's Joint Live Fire (JLF) Program and other LFT&E related initiatives. JLF was begun in 1984 under an Office of the Secretary of Defense (OSD) charter to test fielded front-line combat aircraft and armor systems for their vulnerabilities as well as fielded weapons, both U.S. and foreign, for their lethality against their respective targets. Funds are also used to support other initiatives related to quick reaction requests from theater and other areas of personnel survivability.

The Joint Aircraft Survivability Program is the DoD's focal point for joint service enhancement of military aircraft non-nuclear survivability. The JASP is chartered by the commanders of the USN Naval Air Systems Command, USA Aviation and Missile Command and USAF Life Cycle Management Center to coordinate and conduct RDT&E to improve military aircraft survivability, develop and standardize aircraft survivability modeling and simulation (M&S), facilitate information exchange on aircraft survivability and support aircraft survivability education for the DoD and U.S. aircraft community. Each chartering command provides a senior aircraft survivability expert for the JASP Principal Members Steering Group (PMSG), which guides the program and approves projects for funding. The JASP assesses and reports on combat damage incidents through the Joint Combat Assessment Team (JCAT), is the Executive Agent for the Joint Live Fire Aircraft Systems Program managed by the Live Fire Test office of DOT&E.

The Joint Logistics Commanders' Joint Technical Coordinating Group for Munitions Effectiveness (JTCEG/ME) was chartered more than 40 years ago to serve as DoD's focal point for munitions effectiveness information. This has taken the form of widely used Joint Munitions Effectiveness Manuals (JMEMs) which address all major non-nuclear U.S. weapons. JTCEG/ME authenticates weapons effectiveness data for use in training, systems acquisition, weapon procurement, and combat modeling and simulation. JMEMs are used by the Armed Forces of the U.S., NATO, and other allies to plan operational missions, support training and tactics development, and support force-level analyses. JTCEG/ME also develops and standardizes methodologies for evaluation of munitions effectiveness and maintains databases for target vulnerability, munitions lethality, and weapon system accuracy. The JMEM requirements and development processes continues to be driven by operational lessons

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Operational Test and Evaluation, Defense		Date: May 2017		
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learned (Enduring Freedom, Iraqi Freedom, Odyssey Dawn and Inherent Resolve) and the needs of Combatant Commands (CCMDs), Services, Military Targeting Committee, and Operational Users Working Groups (OUWG) input for specific weapon-target pairings and methodologies.				
This program element also includes funds to obtain Federally Funded Research and Development Center (FFRDC) expertise in performing analyses in support of described Live Fire Test and Evaluation tasks, as well as travel funds to carry out the LFT&E, JASP and JTCG/ME programs.				
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017	FY 2018
Title: Live Fire Test and Evaluation		46.882	48.316	59.500
FY 2016 Accomplishments: Live Fire Test and Evaluation Major Test and Evaluation Programs				
The FY 2016 budget supported Live Fire Test and Evaluation deputate’s assessment of Test and Evaluation Master Plans, Test Plans, System Acquisition Reports, Defense Acquisition Executive Summary reports, and the development of Live Fire Test and Evaluation reports for those programs designated for OSD oversight. The DOT&E oversight list contains 132 programs on live fire oversight; it is maintained continuously and published annually.				
JLF Programs and LFT&E Initiatives				
In FY16, JLF funded 27 projects and delivered 21 reports. Focus areas for JLF included projects that either 1) characterized new survivability issues; 2) characterized new lethality issues; 3) improved accuracy and fidelity of weapon data; 4) improved test methods; or 5) improved modeling and simulation methods.				
JLF Air projects evaluated a range of contemporary vulnerability issues. Projects investigated the ballistic vulnerability of (1) rotorcraft with auxiliary fuel tanks inside the cabin; and (2) C-12 fuel subsystem ullage reactions. Another project evaluated the effectiveness of the CV-22 Wing Fire Protection System during various modes of fuel transfer. In addition, the effectiveness of ultra-high-molecular-weight polyethylene armor installed in CV-22 cabins (due to emerging threats encountered on the battlefield) was addressed by one project. Other projects improved modeling and simulation tools by collecting aircraft system-level damage effects data for medium-class missile warheads against fixed-wing aircraft, as well as a project to determine the vulnerability to yawed armor-piercing and armor-piercing incendiary projectiles. Finally, JLF Air projects assessed vulnerability to foreign threats such as the OG-7V fragmentation grenade as well as MANPADS.				
JLF Ground projects pursued a variety of lethality and survivability research objectives. One project characterized the complete fragmentation description data for an MK84 bomb. Other efforts quantified collateral damage effects from Hellfire and MK82 warheads, developed better methods to characterize blast debris for collateral damage assessments, and measured the effect of bomb burial on collateral damage. Other projects modeled the behind-armor debris of ground vehicle kinetic energy penetrators				

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B. Accomplishments/Planned Programs (\$ in Millions)			FY 2016	FY 2017	FY 2018
<p>as well as anti-tank mines, and an underbody blast vulnerability assessment of the JLTV was conducted. JLF Ground projects sought to develop materials to better evaluate body armor as well as evaluate various materials used in combat eye protection. JLF Ground conducted modeling to determine a more lethal mix of 30 mm ammunition combinations. Finally, JLF Ground pursued efforts to enhance test & evaluation methodology such as improved methods of collecting arena test data.</p> <p>JLF Sea projects provided various vulnerability results. One JLF Sea project conducted deep depth underwater explosion testing against a model surrogate to improve submarine vulnerability assessments. Another project collected test data of underwater explosion bubble jetting in order to improve modeling and simulation tools. Finally, another project developed ballistic mannequins that provide for real-time assessment of rapid incapacitation.</p> <p>JLF continued to support the development of a ground vehicle survivability educational program, including a 3-day short course and the development of formal course notes and a textbook.</p> <p>Joint Aircraft Survivability Program (JASP)</p> <p>In FY 2016 the JASP continued work on 37 multi-year RDT&E projects and initiated 18 new projects approved by the JASP Principal Members Steering Group and OSD/DOT&E. In the area of susceptibility reduction, the JASP addressed improving the effectiveness and reducing the space, weight and power required for directed energy infrared countermeasures, electronic countermeasures technology and techniques, integrated aircraft survivability equipment, and aircrew situational awareness. In the area of vulnerability reduction, the JASP continued to address requirements for lighter and more effective vulnerability reduction technology (e.g., armor, fuel containment, fire suppression, and aircrew and passenger protection). In aircraft survivability Modeling and Simulation (M&S), the JASP continued to improve survivability M&S credibility, address operator requirements for survivability data, integrate DIA threat missile models into threat engagement codes, improve the assessment of aircrew and passenger injuries, and address M&S requirements identified by the joint aircraft survivability community. The JASP completed 27 reports documenting efforts accomplished in FY 2016.</p> <p>The JCAT continued to support the Air Force, Army, Marine Corps and Navy by assessing combat damage incidents, training operators on threat effects and combat damage assessment, and reporting their findings to combatant commanders and the DoD science and technology and acquisition communities. The JASP continued supporting aircraft survivability education and information exchange through internet sites (restricted access and classified), by publishing the Aircraft Survivability Journal, developing educational materials and conducting training for the DoD and their contractors.</p> <p>Joint Technical Coordinating Group for Munitions Effectiveness</p>					

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Operational Test and Evaluation, Defense			Date: May 2017		
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B. Accomplishments/Planned Programs (\$ in Millions)			FY 2016	FY 2017	FY 2018
<p>JTCG/ME continued to field critical JMEM products to enable on-going Combatant Command (CCMD) operational Weaponeering and collateral damage estimates, along with support to the Anti-air effectiveness community (operational, training, testing, and analysis).</p> <p>In FY16, JTCG/ME continued to develop and standardize methodologies for evaluating munitions effectiveness, including target vulnerability characterization, munitions lethality, weapon system accuracy, and specific weapon-target pairings driven primarily from current operational lessons learned, Joint Staff Data Calls, and Combatant Commands' needs.</p> <p>JTCG/ME deployed and continued enhancement of future versions of its two major JTCG/ME Joint Munitions Effectiveness Manual (JMEM) products, the JMEM Weaponeering System (JWS) and Joint Antiair Combat Effectiveness (J-ACE). The JTCG/ME also continued coordination and development of a non-kinetic JMEM capability, to include a prototype Cyber JMEM. Beyond traditional JMEM products, JTCG/ME developed and supplied specialized weaponeering data and solutions for Warfighter requirements. This includes the Digital Precision Strike Suite (DPSS) Collateral Damage Estimation (DCiDE) tool and Digital Imagery Exploitation Engine (DIEE), as well as standalone resources such as the Probability of kill (Pk) Lookup Tools, Collateral Damage Estimation (CDE) tables, and munitions weaponeering guides.</p> <p>JWS is the DoD wide source for air-to-surface (AS) and surface-to-surface (SS) weaponeering, munitions, and target information used daily in the U.S. Central Command (USCENTCOM), U.S. Special Operations Command (USSOCOM), and U.S. Africa Command (USAFRICOM) in the deliberate planning process directly supporting Joint Publication 3-60 "Joint Targeting". JWS enables Combatant Commands to efficiently prosecute their target sets. JWS incorporates accredited methodologies, certified munition characteristics, delivery accuracy, target vulnerability data, and numerous user aids to support the operational use of JWS to predict weapons effectiveness for fielded weapons and delivery systems.</p> <p>The JTCG/ME deployed JWS v2.2 in FY16. JWS v2.2 included a total of 220 methodology, functionality, weapons/warheads/fuzes, and target updates. JWS v2.2 included initial connectivity with the Digital Precision Strike Suite (DPSS) Collateral Damage Estimation (DCiDE) Tool, as well as updates to the Fast Integrated Structural Tool (FIST) (containing building types and a quasi-static blast capability) and other high priority User requirement updates. The connectivity with DCiDE improves both speed and throughput of data. This capability enabled the Combatant Commands to have operational targeting, weaponeering, and collateral damage estimation capability in direct support of operations, mission planning, and training. Additionally, Warfighters were able to put ordnance on target and as such, directly affected combat effectiveness in current operations.</p> <p>JTCG/ME continued to facilitate coalition interoperability in FY16, and is currently completing several JWS version releases to key coalition partners in support of current operations under Foreign Military Sales (FMS) agreements. These efforts will enable the United Kingdom, Canada, Australia, Republic of Korea, and other coalition partners to plan operational weaponeering and</p>					

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Operational Test and Evaluation, Defense		Date: May 2017	
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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
<p>collateral damage estimates, support training and tactics development, and support force-level analyses. This capability is critical to the effectiveness of U.S. targeting and fires personnel working in combined environments.</p> <p>JTCG/ME finalized integration, performed operational testing, and progressed to final systems verification for JWS v2.3 in FY16, with Risk Mitigation Framework testing and release scheduled for FY17. JWS v2.3 will include enhanced data sets and capabilities with focus on connectivity to other targeting and mission planning capabilities for improved estimates and more seamless planning. Specifically, JWS v2.3 will include new/updated data sets, new Imagery Interface to implement aimpoint development leveraging the Tasked Target Text Data (T3D) data format implemented by currently fielded mission planning systems. JWS software and T3D imagery interface modifications to support integration of Electronic Light Table (ELT) viewers. There will also be a Modernized Integrated Database (MIDB) and Joint Targeting Toolbox (JTT) interface with additional capabilities to support connectivity. These developments will enable the integration of Weaponeeing, Precision Point Mensuration (PPM) and Collateral Damage Estimation (CDE) via Digital Imagery Exploitation Engine (DIEE). JWS v2.3 will also add the updated Gunship Delivery Accuracy Program (GDAP), Rotary Wing Delivery Accuracy Program (RWDAP), and Fast Integrated Structural Tool (FIST) v2.0.</p> <p>JTCG/ME continued to deliver data and methodology for integration and development of JWS v2.4 in FY16. Enhanced capabilities for data and connectivity will continue for JWS v2.4 during FY17.</p> <p>JTCG/ME began to plan and refine a future JWS architecture strategy to enable interactive scene base weaponeeing, maximize re-use and interoperability of capabilities, increase speed of modeling and simulation, support future hardware/software compatibility, and support allied releasability. A key to this strategy is a JWS v3.x prototyping effort initiated in FY16, which will continue in FY17.</p> <p>The JTCG/ME released Digital Precision Strike Suite (DPSS) Collateral Damage Estimation (DCiDE) tool version v1.2.3 in FY16 to support the Chairman of the Joint Chiefs of Staff Instruction (CJCSI) 3160.01B – “No-Strike and the Collateral Damage Estimation (CDE) Methodology”. The DCiDE tool is critical to the Warfighters’ ability to meet Urgent Operational Needs for an accredited automated CDE tool that both expedites and simplifies the CDE process. DCiDE is the only automated CDE tool authorized for use in the USCENTCOM and USAFRICOM Areas of Operation (AORs). The JTCG/ME CDE tables are used in every planned kinetic strike in all AORs to meet Commanders intent and to minimize civilian casualties. JTCG/ME updated the accredited Collateral Effect Radii (CER) Reference Tables for selected AS/SS weapons, which are the basic data that supports the CDE methodology. Changes included additions for airburst munitions, nomenclature changes, and additional updates for newly fielded/updated systems (e.g., Hellfire family). JTCG/ME also developed and accredited the Collateral Effects Library (CEL) Tool in support of advanced CDE mitigation techniques. DOT&E received positive feedback on the use of the CER values as a critical enabler in support of munitions employment against high value targets (HVTs).</p>			

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
<p>JTCG/ME is finalizing the Digital Imagery Exploitation Engine (DIEE) v2.0 with DPSS. DIEE will provide both seamless planning and direct linkages between JWS and mission planning systems in operational units. DIEE will combine applications that will allow targeteers and operational planners to develop more rapid strike plans, due to seamless connectivity of weaponeering, collateral damage estimation, and precision point mensuration results to mission planning systems for target execution. This new concept will integrate capabilities of an Electronic Light Table (ELT), Precision Point Mensuration tool (Common Geopositioning Services - CGS), and CDE tool (DCiDE), as well as other targeting applications in what we are calling an Integrated Display Viewer (IDV). Although DIEE is in final development, with expected fielding by beginning of FY17, several Combatant Commands have already committed to using DIEE as their primary tool for full-integrated targeteering capability.</p> <p>J-ACE provides authoritative air-to-air (AA) and surface-to-air (SA) weapons effectiveness information, and serves as the primary tool used by the Air Force and Navy to underpin air combat tactics, techniques, and procedures development. J-ACE is the umbrella program that includes both the Joint Anti-air Model (JAAM) and Endgame Manager (EM), which provides a full kill chain (end-to-end) capability. Other Users include National Test and Training Ranges for AA/SA shot validation and various members of the analytical community for air combat studies and planning. U.S. Strategic Command (USSTRATCOM) leverages J-ACE capabilities to support of route planning for the execution of strike packages. JAAM supports operational squadrons mission debrief tools such as Personal Computer Debriefing System (PCDS) and several others.</p> <p>In FY16, JTCG/ME performed operational testing and progressed to final systems verification reviews for J-ACE v5.3, with expected Risk Mitigation Framework testing and fielding in FY17. J-ACE v5.3 will extend and update data sets for missile and aircraft target aero-performance, anti-air missile lethality, and air target vulnerability. New capabilities include the Hybrid Integration and Visualization Engine (HIVE) computer architecture interface and BLUEMAX6 (six degree of freedom aero performance) model for increased aircraft aero performance modeling with Hands-On-Stick-and-Throttle (HOTAS) and display capability allowing for actual flight control of the air craft, as well as increased counter-measure capabilities leveraging Enhanced Surface-to-Air Missile Simulation (ESAMS). J-ACE v5.3 will also include the effect of weapon system reliability on the probability of a successful engagement. The fielding of J-ACE v5.3 will allow greater aero performance options and the ability to estimate counter-measure effectiveness. A key enhancement of J-ACE v5.3 is the continued evolution of the J-ACE architecture to maximize re-use, interoperability of capabilities, support future hardware/software compatibility, and optimize integration and validation testing.</p> <p>JTCG/ME continued to develop, deliver, and integrate data and methodology for J-ACE v5.4, which will provide enhanced data, methodology, and descriptive material to support new weapons in the JAAM and EM. The fielding of J-ACE v5.4 in FY18 will allow for greater connectivity for outbrief capabilities by units, target detection estimation, counter Air Defense prediction capability, and enhanced architecture allowing future version growth and compatibility. J-ACE will enhance Personal Computer Debriefing System (PCDS) capability, and further evaluate enhancement of aircraft maneuverability modeling with HIVE/BLUEMAX6. In</p>			

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
<p>addition, JAAM will include capability to evaluate two sided Suppression of Enemy Air Defense (SEAD) and Destruction of Enemy Air Defense (DEAD); improved target detection capability leveraging National Air and Space Intelligence Center (NASIC) Infrared (IR) and Radio Frequency (RF) models; and multiple ESAMS capability. The J-ACE architecture continues to be enhanced to maximize re-use, interoperability of capabilities, support future hardware/software compatibility, and optimize integration and validation testing.</p> <p>JTCG/ME performed requirements analysis and planning for J-ACE v5.5. J-ACE v5.5 will include rotary wing aircraft capability and further expansion of electronic warfare and counter-measure capabilities. User input through working groups and training sessions are feeding requirements generation and planning to ensure alignment with User community.</p> <p>In FY16, JTCG/ME continued the development of non-kinetic weaponeering tools and methodologies. Joint Non-Kinetic Effectiveness is intended to be the single source for operational Warfighters, analysts, targeteers, and planners to analyze offensive cyber capabilities, electronic attack weapons, and directed energy effectiveness.</p> <p>In conjunction with DOT&E and the Air Force's 363rd Intelligence, Surveillance, and Reconnaissance Group, the JTCG/ME continued development of a JMEM process for cyberspace operations, electronic attack, and directed energy. FY16 efforts centered on developing the foundational elements for JMEM production, including weapons characteristics, target vulnerability, and effects estimation tools (e.g., U.S. Cyber Command's Cyber Capabilities Registry, Electronic Warfare/Cyber Critical Elements/Weaponeering Guides, and Directed Energy Effectiveness Lookup Tables). These efforts culminated in an initial Cyber JMEM prototype to stimulate user interaction, feedback, and maturation, while setting the foundation for a full J-NKE capability suite, to include other non-kinetic effects (e.g., directed energy). JTCG/ME will continue to refine these initial efforts in FY17, with further expanded efforts in FY18.</p> <p>Since JTCG/ME products are User focused and requirements driven, there is considerable effort that goes into working with Users to establish Warfighter requirements for on-going efforts and future JTCG/ME products.</p> <p>The Operational Users Working Group (OUWG) is a critical venue for receiving direct User feedback and development of future requirements from the operational community in regards to needed software enhancements and capabilities to support AS, SS, AA, and non-kinetic engagements. JTCG/ME continued to chair OUWGs, while representatives from USCENTCOM, USAFRICOM, USSTRATCOM, U.S. Pacific Command (USPACOM), USSOCOM, the Services, the Defense Intelligence Agency (DIA), the Defense Threat Reduction Agency (DTRA), the Fires Center of Excellence, Service School Houses, the Marine Aviation Weapons/Tactics Squadron, Operations Support Squadrons, Intelligence Squadrons, and numerous other operational units routinely participate.</p>			

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<p>JTCG/ME provided User training on its products. For JWS in FY16, JTCG/ME supported 23 JWS sessions at 19 CONUS/ OCONUS locations and approximately 340 students. For DCiDE, JTCG/ME supported numerous training classes to support units in USCENTCOM (e.g., Combined Task Forces, J-34 FIRES, and J2 Targeting Elements), USPACOM, and coalition partners (e.g., Australia). With new versions of JWS, DCiDE, DIEE, and J-ACE expected in FY17, there will be additional growth in training support.</p> <p>JTCG/ME provides help desk and training packages via the JMEM Product Information Access System (JPIAS), as well as product newsletters. FY16 support included addressing over 400 User support requests and developing training aids, such as the JWS Training Tidbits and Sample Weaponneering Problems.</p> <p>At times User requirements call for specialized solutions, such as weapons fielded between product releases and need for urgent target vulnerability surrogations to support current operations. JWS is the calculation engine used to develop Quick Weaponneering Guides/Probability of Kill Lookup Tool software to address some of these requirements. FY16 examples include updates for the AGM-114, AGM-176, GBU-49/BLU-129, GBU-49/BLU-126, GBU-12/BLU-129. JTCG/ME also leveraged the Collateral Effects Library to deliver 40 collateral damage mitigation analysis packages to operational Users for HVTs. There were seven rapid request target vulnerability surrogation packages (31 target-weapon pairings - filled based on Urgent Operational Needs), and a specialized AN/SEQ-3(XN-1) Solid State Laser-Quick Reaction Capability Laser Weapon System (SSL-QRC LAWS) Weaponneering Guide authored.</p> <p>FY 2017 Plans: Live Fire Test and Evaluation Major Test and Evaluation Programs</p> <p>The FY 2017 budget will support the Live Fire Test and Evaluation deputate's assessment of Test and Evaluation Master Plans, Test Plans, System Acquisition Reports, Defense Acquisition Executive Summary reports, and the development of Live Fire Test and Evaluation reports for those programs designated for OSD oversight.</p> <p>JLF Programs and LFT&E Initiatives</p> <p>The FY 2017 JLF budget will support at least 20 projects (tentatively 12 new starts and 8 projects continuing from previous FYs). Focus areas for JLF include projects that either: 1) characterize new survivability issues; 2) characterize new lethality issues; 3) improve accuracy and fidelity of weapon data; 4) improve test methods; 5) improve modeling and simulation methods; or 6) develop vulnerability data libraries for emerging non-kinetic threats.</p>			

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B. Accomplishments/Planned Programs (\$ in Millions)			FY 2016	FY 2017	FY 2018
<p>JLF Air projects will continue to evaluate technologies and techniques to decrease vulnerabilities to all currently tested aircraft, against operationally relevant threats. Previously initiated projects that will be continued include developing a model for the OG-7V fragmentation grenade, quantifying the penetration of armor piercing incendiary munitions, evaluating the effectiveness of CV-22 Wing Fire Protection Systems, and evaluating the vulnerability of engines to MANPADS. New efforts will be initiated to (1) determine the root cause of CH-53 and CH-47 self-sealing bladder performance issues; (2) measure flammability traits of AH-64E Fire Detection Expansion Systems; and (3) develop a 12.7 x 108 mm Heat (High) Explosive Incendiary threat model prediction.</p> <p>JLF Ground projects will continue to optimize the mix of 30 mm ammunition, determine the fragment spray pattern and velocity for the MK84 warhead, and determine/mitigate collateral damage effects. Several new efforts will be initiated to develop better test methodologies: (1) develop instrumented inert warheads to mimic rocket-propelled grenade and anti-tank guided munitions; (2) develop better underbody blast threat and blast box analysis; and (3) develop improved instrumentation to assess local accelerative loading due to blast effects within armored vehicles. One effort will improve modeling and simulation of buried underbody blast effects. Finally, one effort will analyze statistical quantification of probability estimates of small caliber munitions in order to minimize the number of Live Fire tests required.</p> <p>JLF Sea projects include improving the modeling of simulation of equipment failure due to thermal effects, developing modeling tools for structural damage due to underwater explosions and their resulting bubble loading, and improving vulnerability hydrocodes by generating underwater explosion data that mimics multiple bubble pulsations.</p> <p>Live Fire initiatives will also include continued support of the execution and further development of a ground vehicle survivability course.</p> <p>JASP</p> <p>In FY 2017 the JASP will continue work on at least 28 multi-year RDT&E projects and initiate 12 new projects approved by the JASP Principal Members Steering Group and OSD/DOT&E. The JASP will develop measures to defeat Near-Peer Adversary Threat (N-PAT) radio-frequency and infrared guided threats coupled with quantifiable improvements in digital and hardware in the loop modeling and simulation capability and credibility. Improve aircraft force protection by increasing threat and flight environmental situational awareness, hostile fire identification, and degraded visual environment flight capabilities; advancing system hardening against ballistic and high energy laser threats; and improving aircraft crashworthiness. Improve aircraft survivability to fire by increasing the speed and efficiency of fire detection and suppression systems and the accuracy and confidence in prediction of threat initiated fires onboard aircraft.</p> <p>The JCAT will continue to support the Air Force, Army, Marine Corps and Navy by assessing combat damage incidents, training operators on threat effects and combat damage assessment, and reporting their findings to combatant commanders and the</p>					

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B. Accomplishments/Planned Programs (\$ in Millions)			FY 2016	FY 2017	FY 2018
<p>DoD science and technology and acquisition communities. The JASP will continue supporting aircraft survivability education and information exchange through internet sites (restricted access and classified), by publishing the Aircraft Survivability Journal, developing educational materials and conducting training for the DoD and their contractors. The JASP will initiate, continue and complete other projects as approved by the JASP Principal Members Steering Group and OSD/DOT&E</p> <p>Joint Technical Coordinating Group for Munitions Effectiveness</p> <p>In FY17, JTCG/ME will continue to develop and standardize methodologies for evaluating munitions effectiveness, including target vulnerability characterization, munitions lethality, weapon system accuracy, and specific weapon-target pairings driven primarily from current operational lessons learned, Joint Staff Data Calls, and CCMDs' needs.</p> <p>JTCG/ME will deploy and continue to enhance future versions of its two major JTCG/ME Joint Munitions JMEM products, the JWS and J-ACE. The JTCG/ME will continue to coordinate and develop a non-kinetic JMEM capability, leveraging its FY16 Cyber JMEM prototyping efforts. Additionally, JTCG/ME will field and coordinate new capabilities, such as the DIEE and DCiDE Collateral Damage Estimation. Beyond traditional JMEM products, JTCG/ME will continue to support specialized weaponneering data and solutions for Warfighter urgent requirements and support Users. This includes standalone resources such as the Pk Lookup Tools, CDE tables, and munitions weaponneering guides. The objective is to provide efficient and effective support to meet CCMD current and future needs for agility in a dynamic operational environment.</p> <p>The JTCG/ME will field JWS v2.3 in FY17. JWS v2.3 will include enhanced data sets and capabilities with focus on connectivity to other targeting and mission planning capabilities for improved estimates and more seamless planning inherent in the concept of operational agility. When fielded, this capability will continue to enable CCMDs to have operational targeting, weaponneering, and collateral damage estimation capability in direct support of operations, mission planning, and training.</p> <p>JTCG/ME will continue to facilitate coalition interoperability in FY17. It will supply several JWS version releases to key coalition partners in support of current operations under FMS agreements. FY17 efforts will enable the United Kingdom, Canada, Australia, Republic of Korea, and other coalition partners to plan operational weaponneering and collateral damage estimates, support training and tactics development, and support force-level analyses. This capability is critical to the effectiveness and synergy of U.S. targeting and fires personnel working in combined partnered environments.</p> <p>JTCG/ME will finalize integration and operational testing of JWS v2.4 in FY17, with expected release in FY18. JWS v2.4 will be the last in the JWS v2.x product line and will include enhanced and updated weapons and target data sets, improved Graphical User Interphases for improved business logic and human system interaction, and improved database designs for speed and updating. JWS v2.4 will also include FIST v2.1 with Integrated Munitions Effects Assessment (IMEA) v11.1, enhanced imagery,</p>					

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<p>and enhanced Response Surface Mapping/ Penetration Launch Acceptability Region capabilities. JWS v2.4 will continue to address and implement CCMD requirements.</p> <p>JTCG/ME will develop JWS v3.x product line open architecture construct. This will enable interactive scene base weaponeering, maximize re-use and interoperability of capabilities, increase speed of modeling and simulation, support future hardware/software compatibility, and support allied releasability. JWS v3.x efforts will include formulation and refinement of the Joint Effects Library (JEL), which will provide the modules for the open architecture. JWS v3.x is the next evolution of agile, scalable capability solutions to meet the needs of the Joint Force in a dynamic operational environment.</p> <p>JTCG/ME will continue to support updates for DCiDE tools in FY17 to support the CJCSI 3160.01B – “No-Strike and the CDE Methodology”. JTCG/ME will update and the accredit CER Reference Tables for selected air-to-surface and surface-to-surface weapons, which are the basic data that supports the CDE methodology. Changes will include additional updates for newly fielded/ updated systems, as well as new fragmentation and blast methodologies. JTCG/ME will also enhance and accredit improvements to the CEL Tool in support of advanced CDE mitigation techniques.</p> <p>JTCG/ME will field DIEE v2.0 with DPSS. The first fielded version of DIEE, v2.0, will integrate capabilities of an ELT, Precision Point Mensuration tool, and CDE tool, as well as other targeting applications in what we are calling an IDV. DIEE usage in Combatant Commands as their primary tool for full-integrated targeteering capability will continue to grow.</p> <p>JTCG/ME will develop and integrate DIEE v2.1 in FY17, with expected release in FY18. DIEE v2.1 will include CGS update, CEL interface development, additional imagery formats, and increased Common Operating Picture information on IDV. DIEE enhancements will continue to provide agile capability solutions for the Joint Force Commander in dynamic operational environments.</p> <p>JTCG/ME will field J-ACE v5.3 in FY17. J-ACE v5.3 will extend and update data sets for missile and aircraft target aero-performance, anti-air missile lethality, and air target vulnerability. The fielding of J-ACE v5.3 will allow greater aero performance options and the ability to estimate counter-measure effectiveness. A key enhancement of J-ACE v5.3 is the continued evolution of the J-ACE architecture to maximize re-use, interoperability of capabilities, support future hardware/software compatibility, and optimize integration and validation testing.</p> <p>JTCG/ME will continue to develop and progress to operational testing for J-ACE v5.4. J-ACE v5.4 will provide enhanced data, methodology, and descriptive material to support new weapons in the JAAM and EM. The fielding of J-ACE v5.4 in FY18 will allow for greater outbrief capability and connectivity by units, target detection estimation, counter Air Defense prediction capability, and enhanced architecture allowing future version growth and compatibility. J-ACE will enhance PCDS capability, and further evaluate</p>			

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<p>enhancement of aircraft maneuverability modeling with HIVE/BLUEMAX6. In addition, JAAM will include capability to evaluate two sided SEAD and DEAD; improved target detection capability leveraging NASIC IR and RF models; and multiple ESAMS capability. The J-ACE architecture will continue to be enhanced to maximize re-use, interoperability of capabilities, support future hardware/software compatibility, and optimize integration and validation testing.</p> <p>JTCG/ME will develop data and methodology for J-ACE v5.5. J-ACE v5.5 will include rotary wing aircraft capability and further expansion of electronic warfare and counter-measure capabilities.</p> <p>JTCG/ME will perform requirements analysis and plan for J-ACE v5.6 based on User requirements from working groups and training sessions to ensure alignment with User community.</p> <p>Joint Non-Kinetic Effectiveness JMEMs are intended to be the single source for operational Warfighters, analysts, targeteers, and planners to analyze offensive cyber capabilities and directed energy effectiveness.</p> <p>In FY17, JTCG/ME will continue to develop non-kinetic weaponeering tools and methodologies. JTCG/ME will continued to develop and mature the JMEM process for cyberspace operations and directed energy. FY17 efforts will build from FY16 that developed the foundational elements for JMEM production, including weapons characteristics, target vulnerability, and effects estimation tools. JTCG/ME will interact with the User community based on initial FY16 Cyber JMEM prototype. This will help with maturation process and further strengthen the foundation for a full J-NKE capability suite, to include other non-kinetic effects. JTCG/ME will continue to refine these initial efforts in FY17, with increased efforts in FY18.</p> <p>Since JTCG/ME products are User focused and requirements driven, there is considerable effort that goes into working with Users to establish Warfighter requirements for on-going efforts and future JTCG/ME products.</p> <p>JTCG/ME will chair OUWGs. OUWGs are a critical venue for receiving direct User feedback and development of future requirements from the operational community in regards to needed software enhancements and capabilities to support AS, SS, AA, and non-kinetic engagements.</p> <p>JTCG/ME will also continue User training on its products in FY17. With the fielding of new versions of JWS, DCiDE, DIEE, and J-ACE, there is an expected growth in training support requirements.</p> <p>JTCG/ME will provide help desk and training packages via the JPIAS, as well as product newsletters.</p>			
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<p>JTCG/ME will also support urgent operational needs with specialized solutions, such as weapons fielded between product releases and need for urgent target vulnerability surrogations to support current operations.</p> <p>FY 2018 Plans: Live Fire Test and Evaluation Major Test and Evaluation Programs</p> <p>The FY 2018 budget will support the Live Fire Test and Evaluation deputate's assessment of Test and Evaluation Master Plans, Test Plans, System Acquisition Reports, Defense Acquisition Executive Summary reports, and the development of Live Fire Test and Evaluation reports for those programs designated for OSD oversight.</p> <p>JLF Programs</p> <p>The FY 2018 budget will support the planning and execution of tests of fielded systems not previously tested under the Live Fire Programs to support DOT&E and operator needs. New threats, missions, TTPs, and combat environments will create the need for these tests and an assessment of performance. JLF projects will be defined, planned, and executed to provide survivability and lethality data on currently fielded U.S. systems; improve modeling and simulation tools; develop vulnerability data libraries for emerging threats; and initiate responses to quick reaction requests from theater.</p> <p>JASP</p> <p>In FY 2018 the JASP will continue work on at least 27 multi-year RDT&E projects and initiate about 5 new projects approved by the JASP Principal Members Steering Group and OSD/DOT&E. The JASP will develop measures to defeat Near-Peer Adversary Threat (N-PAT) radio-frequency and infrared guided threats coupled with quantifiable improvements in digital and hardware in the loop modeling and simulation capability and credibility. Improve aircraft force protection by increasing threat and flight environmental situational awareness, hostile fire identification, and degraded visual environment flight capabilities; advancing system hardening against ballistic and high energy laser threats; and improving aircraft crashworthiness. Improve aircraft survivability to fire by increasing the speed and efficiency of fire detection and suppression systems and the accuracy and confidence in prediction of threat initiated fires onboard aircraft.</p> <p>The JCAT will continue to support the Air Force, Army, Marine Corps and Navy by assessing combat damage incidents, training operators on threat effects and combat damage assessment, and reporting their findings to combatant commanders and the DoD science and technology and acquisition communities. The JASP will continue supporting aircraft survivability education and information exchange through internet sites (restricted access and classified), by publishing the Aircraft Survivability Journal, developing educational materials and conducting training for the DoD and their contractors. The JASP will initiate, continue and complete other projects as approved by the JASP Principal Members Steering Group and OSD/DOT&E.</p>			

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B. Accomplishments/Planned Programs (\$ in Millions)			FY 2016	FY 2017	FY 2018
<p>Joint Technical Coordinating Group for Munitions Effectiveness</p> <p>In FY18, JTCG/ME will continue to develop and standardize methodologies for evaluating munitions effectiveness, including target vulnerability characterization, munitions lethality, weapon system accuracy, and specific weapon-target pairings driven primarily from current operational lessons learned, Joint Staff Data Calls, and CCMDs' needs.</p> <p>JTCG/ME will deploy and continue to enhance future versions of its two major JTCG/ME JMEM products, the JWS and J-ACE. The JTCG/ME will increase development of a non-kinetic JMEM capability, as well as the DIEE and Collateral Damage Estimation capabilities. Beyond traditional JMEM products, JTCG/ME will continue to support specialized weaponeering data and solutions for Warfighter urgent requirements and support Users. This includes standalone resources such as the Pk Lookup Tools, CDE tables, and munitions weaponeering guides. The objective is to provide efficient and effective support to meet CCMD current and future needs for agility in a dynamic operational environment.</p> <p>JTCG/ME will continue to expand coalition interoperability in FY18 with JWS version releases to key coalition partners in support of current operations under FMS agreements. Past efforts enabled the United Kingdom, Canada, Australia, Republic of Korea, and other coalition partners to plan operational weaponeering and collateral damage estimates, support training and tactics development, and support force-level analyses. This capability is critical to the effectiveness and synergy of U.S. targeting and fires personnel working in combined partnered environments.</p> <p>JTCG/ME will field JWS v2.4 in FY18. JWS v2.4 will include enhanced and updated weapons and target data sets, improved Graphical User Interphases for improved business logic and human system interaction, and improved database designs for speed and updates. When fielded, this capability will continue to enable CCMDs to have operational targeting, weaponeering, and collateral damage estimation capability in direct support of operations, mission planning, and training.</p> <p>JTCG/ME will develop and begin implementing JWS v3.x product line capabilities. JWS v3.x will enable interactive scene base weaponeering, maximize re-use and interoperability of capabilities, increase speed of modeling and simulation, support future hardware/software compatibility, and support allied releasability. JWS v3.x efforts will implement the JEL, which will provide open architecture capabilities. JWS v3.x is the next evolution of agile, scalable capability solutions to meet the needs of the Joint Force in a dynamic operational environment.</p> <p>Beginning in FY18 (based on FY18-22 increases), JTCG/ME will have focused efforts to enhance and validate collateral damage. The enhancement will support improvements in weaponeering methodology to minimize risk to mission and risk to forces while not increasing risk of collateral damage by providing foundational data for the development of higher fidelity predictive tools. Specific</p>					

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Operational Test and Evaluation, Defense		Date: May 2017	
Appropriation/Budget Activity 0460 / 6	R-1 Program Element (Number/Name) PE 0605131OTE / <i>Live Fire Test and Evaluation (LFT&E)</i>	Project (Number/Name) 0605131OTE / <i>LFT&E</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
<p>efforts will generate buried ordnance characterization data based upon usage statistics from CCMD Expenditure reports, and AOR specific building debris data to enhance and validate current weaponeering/collateral damage estimation methodologies required by Strike Approval Authorities to make their strike decision calls.</p> <p>JTCG/ME will continue to support updates for DCiDE tools in FY18 to support the CJCSI 3160.01B – “No-Strike and the CDE Methodology”. JTCG/ME will update and the accredit CER Reference Tables for selected AS/SS weapons, which are the basic data that supports the CDE methodology.</p> <p>JTCG/ME will field DIEE v2.2. DIEE enhancements will continue to provide agile capability solutions for the Joint Force Commander in dynamic operational environments. JTCG/ME will continue to sustain and monitor DIEE requirements with the User community.</p> <p>JTCG/ME will field J-ACE v5.4 in FY18. J-ACE v5.4 will provide enhanced data, methodology, and descriptive material to support new weapons in the JAAM and EM.</p> <p>JTCG/ME will finalize development and provide operational testing for J-ACE v5.5 in FY18. J-ACE v5.5 will include rotary wing aircraft capability and further expansion of electronic warfare and counter-measure capabilities.</p> <p>JTCG/ME will continue to develop, deliver, and integrate data and methodology for J-ACE v5.6 based on User requirements from working groups and training sessions to ensure alignment with User community.</p> <p>Joint Non-Kinetic Effectiveness JMEmS are intended to be the single source for operational Warfighters, analysts, targeteers, and planners to analyze offensive cyber capabilities and directed energy effectiveness. Beginning in FY18 (based on FY18-22 increases), JTCG/ME will enhance development of non-kinetic weaponeering tools and methodologies. JTCG/ME will continue to develop and mature the JMEmS process for cyberspace operations and directed energy.</p> <p>JTCG/ME will expand efforts to review, analyze and synthesize offensive cyber capabilities and target data into standardized Joint Munitions Effectiveness Manuals. Cyber JMEmS is a top priority of USCYBERCOMMAND and CCMDs to support their Warfighting Force. FY18 efforts will include increased manpower to further enhance and build upon prototype efforts in FY16 and FY17. These increased efforts and resources will culminate in institutionalized methodology and cyber effectiveness capabilities that will provide warfighters with non-kinetic weaponeering assessments and a common non-kinetic measurement to predict cyber capability outcomes. The publishing of JMEmS, accreditation of non-kinetic capability effectiveness methodologies, facilitation for validation of operational data, and the population of non-kinetic capability databases will help fulfill the Department's Cyber Strategy.</p>			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Operational Test and Evaluation, Defense		Date: May 2017	
Appropriation/Budget Activity 0460 / 6	R-1 Program Element (Number/Name) PE 0605131OTE / <i>Live Fire Test and Evaluation (LFT&E)</i>	Project (Number/Name) 0605131OTE / <i>LFT&E</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
<p>Since JTCG/ME products are User focused and requirements driven, there is considerable effort that goes into working with Users to establish Warfighter requirements for on-going efforts and future JTCG/ME products.</p> <p>JTCG/ME will chair OUWGs. OUWGs are a critical venue for receiving direct User feedback and development of future requirements from the operational community in regards to needed software enhancements and capabilities to support AS, SS, AA, and non-kinetic engagements. JTCG/ME will continue User training on its products in FY18, as well as provide help desk and training packages via the JPIAS and newsletters.</p> <p>JTCG/ME will support urgent operational needs with specialized solutions, such as weapons fielded between product releases and need for urgent target vulnerability surrogations to support current operations.</p>			
Accomplishments/Planned Programs Subtotals		46.882	48.316
C. Other Program Funding Summary (\$ in Millions)			
N/A			
Remarks			
D. Acquisition Strategy			
N/A			
E. Performance Metrics			
<p>(U) Performance Measure: Percentage of required live fire test planning documents, assessments, munition effectiveness manuals, and reports applicable to acquisition programs on the OSD Test and Evaluation Oversight List and other special interest programs/legacy systems that are completed and delivered to the appropriate decision makers on time. Percentage of required products, such as test planning documents, munitions effectiveness manuals, tactic-techniques and reports that are developed and delivered to program managers and customers on time.</p>			

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Operational Test and Evaluation, Defense	Date: May 2017
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Appropriation/Budget Activity					R-1 Program Element (Number/Name)							
0460: Operational Test and Evaluation, Defense / BA 6: RDT&E Management Support					PE 0605814OTE / Operational Test Activities and Analyses							
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	70.262	63.763	52.631	67.897	-	67.897	58.941	47.907	48.618	49.531	Continuing	Continuing
0605814OTE: OTA&A	70.262	63.763	52.631	67.897	-	67.897	58.941	47.907	48.618	49.531	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Operational Test Activities and Analyses (OTA&A) programs are continuing efforts that provide management and oversight of test and evaluation functions and expertise to the Department of Defense (DoD). The OTA&A programs consist of three activities: Joint Test and Evaluation (JT&E); Threat Systems (TS); and Center for Countermeasures (CCM).

Joint Test and Evaluation projects are test and evaluation activities conducted in a joint military environment that develop process improvements. These multi-Service projects, chartered by the Office of the Secretary of Defense and coordinated with the Joint Staff, appropriate combatant commanders, and the Services, provide non-material solutions that improve: joint interoperability of Service systems, technical and operational concepts, joint operational issues, development and validation of joint test methodologies, and test data for validating models, simulations, and test beds. The JT&E projects address relevant joint war fighting issues in a joint test and evaluation environment by developing and providing new tactics, techniques, and procedures to improve joint capabilities and methodologies.

Threat Systems, based on a memorandum of agreement between the Director, Operational Test and Evaluation (DOT&E) and the Defense Intelligence Agency, provides DOT&E support in the areas of threat resource analysis, intelligence support and threat systems investments. Threat Systems provides threat resource analyses on the availability, capabilities and limitations of threat representations (threat simulators, targets, models, U.S. surrogates and foreign materiel) and analysis of test resources used for operational testing to support DOT&E's assessment of the adequacy of testing for those programs designated for oversight by DOT&E and the Office of the Under Secretary of Defense for Acquisition, Technology and Logistics. Threat Systems provides DOT&E assessment officers and other DOT&E activities with program specific threat intelligence support. Threat Systems also funds management, oversight, and development of common-use threat specifications for threat simulators, threat representative targets, and digital threat models used for test and evaluation.

The Center, a Joint Service Countermeasure (CM) T&E Activity, directs, coordinates, supports, and conducts independent countermeasure/counter-countermeasure (CCM) T&E activities of U.S. and foreign weapon systems, subsystems, sensors, and related components. The Center accomplishes this work in support of DOT&E, Deputy Assistant Secretary of Defense (DASD) for Developmental Test and Evaluation (DT&E), weapon system developers, and the Services. The Center's testing and analyses directly supports operational effectiveness and suitability evaluations of CM/CCM systems, such as missile warning and aircraft survivability equipment (ASE), used on rotary-wing and fixed-wing aircraft. The Center develops unique CM/CCM test equipment to support testing in operationally realistic environments. The Center determines effectiveness of precision guided weapon (PGW) systems and subsystems when operating in an environment degraded by CMs. Analysis and recommendations on CM/CCM effectiveness are provided to Service Program Offices, DOT&E, DASD (DT&E), and the Services. The Center also supports Service member exercises, training, and pre-deployment activities with expertise on CM/CCM technology and capabilities.

This Program Element includes funds to obtain Federally Funded Research and Development support and travel funds.

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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Operational Test and Evaluation, Defense	Date: May 2017
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Appropriation/Budget Activity 0460: <i>Operational Test and Evaluation, Defense I BA 6: RDT&E Management Support</i>	R-1 Program Element (Number/Name) PE 0605814OTE / <i>Operational Test Activities and Analyses</i>
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B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	63.763	52.631	58.002	-	58.002
Current President's Budget	63.763	52.631	67.897	-	67.897
Total Adjustments	0.000	0.000	9.895	-	9.895
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Program adjustment	-	-	-0.105	-	-0.105
• Program increases for Fifth Generation Aerial Target (5GAT)	-	-	10.000	-	10.000

Congressional Add Details (\$ in Millions, and Includes General Reductions)

Project: 0605814OTE: OTA&A

Congressional Add: *Joint Test and Evaluation*

Congressional Add: *Threat Resource Analysis*

FY 2016	FY 2017
10.000	-
8.000	-
18.000	-
18.000	-

Congressional Add Subtotals for Project: 0605814OTE

Congressional Add Totals for all Projects

Change Summary Explanation

\$10.000M 5GAT enhancement provides a second prototype to accelerate design and delivery of test ready 5th generation targets with the requisite threat characteristics for use in operational and developmental testing, as well as Weapons Systems Evaluation Programs (WSEP) and joint experimentation. The effort will provide validated cost data for alternative design and manufacturing approaches for future weapon system planning and development. This provides a near term solution for realistic testing of the F-35, F-22 3.2B, F-18, AIM-120, and other classified programs.

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Operational Test and Evaluation, Defense										Date: May 2017		
Appropriation/Budget Activity 0460 / 6					R-1 Program Element (Number/Name) PE 0605814OTE / <i>Operational Test Activities and Analyses</i>				Project (Number/Name) 0605814OTE / OTA&A			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
0605814OTE: OTA&A	70.262	63.763	52.631	67.897	-	67.897	58.941	47.907	48.618	49.531	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Operational Test Activities and Analyses (OTA&A) programs are continuing efforts that provide management and oversight of test and evaluation functions and expertise to the Department of Defense (DoD). The OTA&A programs consist of three activities: Joint Test and Evaluation (JT&E); Threat Systems (TS); and, the Center for Countermeasures (CCM).

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018
Title: Operational Test Activities and Analyses	45.763	52.631	67.897
<p>FY 2016 Accomplishments: Joint Test and Evaluation (JT&E)</p> <p>In FY 2016 four JT&E projects closed and four projects continued. One of the projects that closed was the Joint Base Architecture for Secure Industrial Control Systems Joint Test that tested joint industrial control systems network tactics, techniques, and procedures to better identify, mitigate, and recover from advanced, persistent cyber-attacks. Another project that closed was the Joint Tactical Air Picture Joint Test that developed tactics, techniques, and procedures to provide an improved tactical air picture that decreases the risk of hostile attacks and fratricide as well as increases the effective use of integrated air and missile defense systems.</p> <p>Three new feasibility studies were conducted in FY 2016, two of which were selected to conduct joint tests.</p> <p>Threat Systems</p> <p>Threat Systems continued test planning working group participation and performed technical analyses to identify threat shortfalls; conducted special studies and provided current intelligence support tailored to specific U.S. weapon systems acquisitions; continued managing intelligence “deep dives” to produce intelligence in sufficient detail to develop new threat test assets; operated and maintained the modeling and simulation configuration control board for threat models and simulation used in test facilities; and continued the development and implementation of a tri-Service and Allied threat M&S roadmap to ensure infrared countermeasure systems have sufficient threat test assets. Moreover, Threat Systems represented DOT&E concerns at the Threat Steering Group (TSG) through the transition from the System Threat Assessment Reports (STARS) to the new Validated Online Lifecycle Threat (VOLT) report process. Represented DOT&E interests on Acquisition/Intelligence/ Requirement Task</p>			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Operational Test and Evaluation, Defense		Date: May 2017	
Appropriation/Budget Activity 0460 / 6	R-1 Program Element (Number/Name) PE 0605814OTE / <i>Operational Test Activities and Analyses</i>	Project (Number/Name) 0605814OTE / OTA&A	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
<p>Force (AIRTF) and Executive Steering Group (AIRESG) and provided access to the Intelligence Mission Data Management Analysis & Reporting System (IMARS). Threat Systems proposed, managed, and oversaw threat test assets funded by the Test Resource Management Center that support DOT&E-identified threat shortfalls, identified candidate threat systems from the various intelligence agencies for possible development of models for use in test and evaluation. Initiated actions to embrace the growing and evolving DOT&E Cyber Threat requirements and analyzing the convergence of Cyber and Electronic Warfare effecting the baseline required for OT. Threat Systems also continued efforts to maintain a standard set of threat performance models.</p> <p>These activities helped DOT&E carry out its Title 10 responsibilities to assess test adequacy and determine whether testing is realistic and suitable, and promotes common solutions to Service threat representation needs.</p> <p>The Center</p> <p>The Center completed 32 T&E activities and analyzed and reported on more than 30 different systems, with special emphasis on rotary wing survivability, CM/CCM employment, warning and targeting systems, and PGWs. Several programs the Center supported received an independent assessment of our data/findings and test support for their CM/CCM evaluations. Our support was distributed across all the Services.</p> <p>Approximately 40% of the Center's efforts were spent on aircraft survivability equipment (ASE) testing, with the majority of these efforts in support of Joint Urgent Operational Need Statement (JUONS) and Urgent Universal Needs Statement (UUNS). About 22% of the Center's efforts were spent on PGW, foreign systems, and other types of field testing not related to ASE. Approximately 8% of the Center's efforts were dedicated to CM-based, pre-deployment training for rotary wing units.</p> <p>Twenty-six percent of the Center's efforts were spent on internal programs to improve test capabilities and to develop test methodologies for new types of T&E activities. These internal programs include the, Joint Standard Instrumentation Suite (JSIS) and Multi-Spectral Sea and Land Target Simulator (MSALTS) upgrades, a new test van to support the Remote Launcher system (RLS), and upgrades to existing equipment. The Center is expanding its presence/expertise in the electronic warfare (EW) realm with an internally funded threat radar stimulation capability. These systems will be used in support of testing for both Title 10 programs and ASE urgent operational needs.</p> <p>About 4% of the Center's efforts consisted of providing subject matter expertise and other support not directly related to scheduled test activities. The Center provided expertise to many organizations and was actively involved in the following panels: Joint Expendable Countermeasures (JECM) Integrated Product Team, Joint Infrared Countermeasures Multi Sensing Symposia Working Group (MSS IRCM WG), Joint Aircraft Survivability Program (JASP), Foreign Material Exploitation Working Group,</p>			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Operational Test and Evaluation, Defense		Date: May 2017	
Appropriation/Budget Activity 0460 / 6	R-1 Program Element (Number/Name) PE 0605814OTE / <i>Operational Test Activities and Analyses</i>	Project (Number/Name) 0605814OTE / OTA&A	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
<p>Foreign Material Program T&E Subcommittee, Joint Countermeasures T&E Working Group (JCMT&E WG), and JCMT&E WG Hostile Fire Indicator (HFI) subgroup lead.</p> <p>FY 2017 Plans: Joint Test and Evaluation (JT&E)</p> <p>In FY 2017 JT&E plans on closing two projects that were started in FY 2015. One, the Joint Pre-/Post-Attack Operations Supporting Survivability & Endurability Joint Test, expected to close in February 2017, will develop and test procedures for protective posturing and mobile support that will mitigate the effects of an electromagnetic-pulse on mission critical functions. The other project to close in FY 2017 is the Joint Advanced Sensor to Shooter Joint Test, which is looking to develop, test and evaluate tactics, techniques, and procedures to more efficiently and effectively gain and maintain battle space awareness through integration of rapidly developed capabilities to support combat operations in anti-access and active denial environments</p> <p>Two projects that started in FY 2016 will continue through FY 2017.</p> <p>Four new feasibility studies are expected to be conducted in FY 2017, two of which will be selected to conduct joint tests.</p> <p>Threat Systems</p> <p>In FY 2017, Threat Systems will continue test planning working group participation and perform technical analyses to identify threat shortfalls; conduct special studies and provide current intelligence support tailored to specific U.S. weapon systems acquisitions based on the availability of funding. Threat Systems will:</p> <ul style="list-style-type: none"> - Provide intelligence support to DOT&E staff to address specific questions on threat systems affecting programs on the OSD T&E Oversight list and provide briefings and special intelligence reports when necessary. - Provide DOT&E representative support at the Threat Steering Group (TSG) in the transitioning of the System Threat Assessment Reports (STARS) to the new Validated Online Lifecycle Threat (VOLT) report process. - Continue to represent DOT&E interests on Acquisition/Intelligence/ Requirement Task Force (AIRTF) and Executive Steering Group (AIRESG) and provide access to the Intelligence Mission Data Management Analysis & Reporting System (IMARS). - Support the US warfighter by providing threat intelligence to ensure operational and developmental testing occurs against realistic threat representations. - Sustain and manage threat M&S to support test and evaluation by overseeing and coordinating intelligence community developed threat models, performing threat model anomaly resolution resolving differences from live fire testing, integrating threat models into T&E facilities and distributing performance and signature models to T&E users. 			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Operational Test and Evaluation, Defense			Date: May 2017		
Appropriation/Budget Activity 0460 / 6		R-1 Program Element (Number/Name) PE 0605814OTE / <i>Operational Test Activities and Analyses</i>		Project (Number/Name) 0605814OTE / OTA&A	
B. Accomplishments/Planned Programs (\$ in Millions)			FY 2016	FY 2017	FY 2018
<ul style="list-style-type: none"> - Review validation reports to independently ensure that correct threat data and critical parameters are presented in the report to assessment the threat representation's capabilities to replicate a real world threat system. - Continue identifying initiatives to improve cyberspace threat representation and prediction, cyber-economic threats to DoD systems, representative threat offensive and defensive cyber operations capabilities, and scalable cyberspace threat test environments that can interface with cyber test networks. - Manage Integrated Technical Evaluation and Analysis of Multiple Sources (ITEAMS) efforts supporting programs on the OSD T&E Oversight List by conducting intelligence "deep dives" to produce intelligence in sufficient detail to develop new threat test assets. - Initiate new ITEAMS efforts leading to the development of new threat systems for T&E. - Represent DOT&E at foreign material exchanges, inter-agency coordinating groups, and non-proliferation groups to raise awareness of T&E needs for foreign material, coordinate service requirements, and de-conflict and prioritize foreign material requirements for T&E. - Represent DOT&E at the Intelligence Mission Data Oversight Board responsible for development, production and sharing issues affecting the intelligence data supporting weapons systems acquisition. - Oversee legacy DOT&E investments and continue management and oversight of legacy and new Test Resource Management Center-funded threat system investments. <p>These activities will ensure DOT&E carries out its Title 10 responsibilities to assess test adequacy and determine whether testing is realistic and suitable, and promotes common solutions to Service threat representation needs.</p> <p>The Center</p> <p>The Center has received 47 requests for support in FY17, which exceeds our capacity to support. The Center will assess the requests based on priority and schedule. The Center will test, analyze, and report on more than 30 systems, with emphasis on rotary wing survivability, CM/CCM employment, warning and targeting systems, and PGWs. Each program supported will receive an independent assessment of our data/findings and test support for CM/CCM evaluations. The Center will continue to emphasize support of the DOT&E enterprise, with a clear focus on Title 10 weapons systems, aircraft survivability and hostile fire initiatives. The Center will continue to conduct ongoing investigations towards determining and filling the gaps in EW and multimode system testing. In addition to these test activities, the Center will continue to provide CM expertise in pre-deployment events and training, as well as CM/CCM-focused tactics, techniques and procedures (TTP) development. Our support will be distributed across all the Services, as well as intelligence agencies and research and development activities.</p> <p>The Center will complete the initial development of JSIS and the High-Power Portable Radar Threat Simulator (HPRTS), which will be used in support of testing for both Title 10 programs and ASE urgent operational needs. The Center will complete the</p>					

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
<p>development of a new test van to support more remote threat live fire testing. The Center will continue working with the Threat Simulator Working Group (TSWG)-sponsored HSIG model.</p> <p>The Center will provide expertise to many organizations and will continue to be actively involved in the following panels: JECM Integrated Product Team, Joint Infrared Countermeasures Multi Sensing Symposia Working Group (MSS IRCM WG), JASP, Foreign Material Exploitation Working Group, Foreign Material Program T&E Subcommittee, JCMT&E WG, and JCMT&E WG HFI subgroup lead.</p> <p>5th Generation Aerial Target (5GAT)</p> <p>In FY17, the 5th Generation Aerial Target program will complete the government owned air vehicle and subsystems layout. The program will begin tooling and parts fabrication using carbon composite manufacturing methods. In addition, the program will begin the electronic attack equipment integration.</p> <p>FY 2018 Plans: Joint Test and Evaluation (JT&E)</p> <p>In FY2018 JT&E plans on closing two projects that were started in FY 2016. One, Digitally-Aided Close Air Support Joint Test, anticipated to close in May 2018, is developing and testing procedures so Joint Terminal Attack Controllers, Joint Fires Observers, and Close Air Support aircrew can realize the advantage of digital communications, including shared situational awareness, increased confidence prior to weapons release, and improved kill chain timeliness. The other project expected to close in FY 2018 is the Joint Cyber Insider Threat Joint Test, which is developing and testing procedures to proactively detect and respond to cyber insider threats before they have an adverse impact on military operations.</p> <p>Two projects that started in FY 2017 will continue through FY 2018.</p> <p>Four new feasibility studies are expected be conducted in FY 2018, two of which will be selected to conduct joint tests.</p> <p>Threat Systems</p> <p>In FY 2018, Threat Systems will continue test planning working group participation and perform technical analyses to identify threat shortfalls; conduct special studies and provide current intelligence support tailored to specific U.S. weapon systems acquisitions based on the availability of funding. Threat Systems will:</p>			
			FY 2018

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B. Accomplishments/Planned Programs (\$ in Millions)			FY 2016	FY 2017	FY 2018
<ul style="list-style-type: none"> - Continue to provide intelligence support to DOT&E staff to address specific questions on threat systems affecting programs on the OSD T&E Oversight list and provide briefings and special intelligence reports when necessary. - Continue providing DOT&E representative support at the Threat Steering Group (TSG) in the transitioning of the System Threat Assessment Reports (STARS) to the new Validated Online Lifecycle Threat (VOLT) Report process. - Continue to represent DOT&E interests on Acquisition/Intelligence/ Requirement Task Force (AIRTF) and Executive Steering Group (AIRESG) and provide access to the Intelligence Mission Data Management Analysis & Reporting System (IMARS). - Continue identifying initiatives to improve cyberspace threat representation and prediction, cyber-economic threats to DoD systems, and scalable cyberspace threat test environments that can interface with cyber test networks. - Continue identifying initiatives to conduct offensive cyber operations (OCO) and defensive cyber operations (DCO) without significantly impacting critical operational capabilities. - Continue initiatives to improve satellite and space threat representations. - Support the US warfighter by providing threat intelligence to ensure operational and developmental testing occurs against realistic threat representations. - Sustain and manage threat M&S to support test and evaluation by overseeing and coordinating intelligence community developed threat models, performing threat model anomaly resolution resolving differences from live fire testing, integrating threat models into T&E facilities and distributing performance and signature models to T&E users. - Manage Integrated Technical Evaluation and Analysis of Multiple Sources (ITEAMS) efforts supporting programs on the OSD Oversight T&E List by conducting intelligence “deep dives” to produce intelligence in sufficient detail to develop new threat test assets. - Represent DOT&E at foreign material exchanges, inter-agency coordinating groups, and non-proliferation groups to raise awareness of T&E needs for foreign material, coordinate service requirements, and de-conflict and prioritize foreign material requirements for T&E. - Review validation reports to independently ensure that correct threat data and critical parameters are presented in the report to assessment the threat representation’s capabilities to replicate a real world threat system. - Represent DOT&E at the Intelligence Mission Data Oversight Board responsible for development, production and sharing issues affecting the intelligence data supporting weapons systems acquisition. - Oversee legacy DOT&E investments and continue management and oversight of legacy and new Test Resource Management Center-funded threat system investments. - Continue ITEAMS efforts leading to the development of new threat systems for T&E. <p>These activities will ensure DOT&E carries out its Title 10 responsibilities to assess test adequacy and determine whether testing is realistic and suitable, and promotes common solutions to Service threat representation needs.</p> <p>The Center</p>					

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
<p>The Center will test, analyze, and report on more than 30 systems, with special emphasis on aircraft survivability, CM/CCM employment, warning and targeting systems, and PGWs. Each program supported will receive an independent assessment of our data/findings and test support for CM/ CCM evaluations. The Center will continue to emphasize support of the DOT&E enterprise, with a clear focus on Title 10 weapons systems, aircraft survivability and hostile fire initiatives. Furthermore, the Center will continue to provide CM expertise in pre-deployment events and training, as well as CM/CCM-focused TTP development. Our support will be distributed across all the Services, as well as intelligence agencies and research and development activities.</p> <p>The Center will continue Improvement and Modernization (I&M) efforts to improve our T&E capabilities. The Center will continue to work with the HSI&G model. The Center plans to continue upgrades to the JSIS system.</p> <p>The Center will provide expertise to many organizations and will continue to be actively involved in the following panels: JECM Integrated Product Team, Joint Infrared Countermeasures Multi Sensing Symposia Working Group (MSS IRCM WG), JASP, Foreign Material Exploitation Working Group, Foreign Material Program T&E Subcommittee, JCMT&E WG, and JCMT&E WG HFI subgroup lead.</p>			
Accomplishments/Planned Programs Subtotals		45.763	52.631
		FY 2016	FY 2017
Congressional Add: Joint Test and Evaluation		10.000	-
FY 2016 Accomplishments: Funding provided nine additional Quick Reaction Tests.			
Congressional Add: Threat Resource Analysis		8.000	-
FY 2016 Accomplishments: Funds were used to improve threat realism for testing. Specifically, increase cyber intelligence support to improve emerging cyberspace threat representation, prediction and threat environments; validate electronic warfare/cyber convergence efforts; and standardize approach for cyber threat folder creation. Funds were also used to extend validation support, improve automated tools that provide intelligence support, and improve the fidelity and availability of models and simulations needed for Test & Evaluation.			
Congressional Adds Subtotals		18.000	-
C. Other Program Funding Summary (\$ in Millions)			
N/A			
Remarks			

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Operational Test and Evaluation, Defense		Date: May 2017
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D. Acquisition Strategy

Not Applicable

E. Performance Metrics

Performance Measure: Percentage of required products, such as test planning documents, tactics, techniques, procedures, threat characteristics, assessments, and reports that are developed and delivered to program managers and customers on time. The on-time completion rate was computed on the basis of the number of required products that were submitted within established time standards relative to the total number of such products that fell due during the fiscal year.