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**Department of Defense  
Fiscal Year (FY) 2011 President's Budget**

February 2010



**Defense-Wide**

*Justification Book Volume 5B*

***Research, Development, Test & Evaluation, Defense-Wide***

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Defense-Wide  
 FY 2011 President's Budget  
 Exhibit R-1 FY 2011 Base and Overseas Contingency Operations (OCO) Request  
 Summary  
 (Dollars in Thousands)

22 Jan 2010

Summary Recap of Budget Activities	FY 2009 (Base & OCO)	FY 2010 Base & OCO Enacted	FY 2010 Supplemental Request	FY 2010 Total	FY 2011 Base	FY 2011 OCO	FY 2011 Total Request
Basic Research	361,931	409,621		409,621	535,026		535,026
Applied Research	1,798,748	1,761,150		1,761,150	1,774,358		1,774,358
Advanced Technology Development (ATD)	3,342,554	3,580,032		3,580,032	3,412,934		3,412,934
Advanced Component Development & Prototypes	8,221,593	7,346,241		7,346,241	7,713,094		7,713,094
System Development and Demonstration (SDD)	792,012	856,756		856,756	1,029,323		1,029,323
RDT&E Management Support	1,492,598	1,302,375	6,438	1,308,813	1,213,027		1,213,027
Operational Systems Development	5,651,742	5,481,116		5,496,816	4,983,838	157,240	5,141,078
Total Research, Development, Test & Eval, DW	21,661,178	20,737,291	22,138	20,759,429	20,661,600	157,240	20,818,840
Summary Recap of FYDP Programs							
General Purpose Forces	83,806	78,297		78,297	99,392		99,392
Intelligence and Communications	888,001	800,498		800,498	732,169	23,875	756,044
Research and Development	15,539,339	14,841,760	6,438	14,848,198	15,350,323		15,350,323
Central Supply and Maintenance	55,723	49,054		49,054	24,611		24,611
Training Medical and Other	15,645	41,971		41,971	93,843		93,843
Administration and Associated Activities	115,708	80,623		80,623	53,321		53,321
Support of Other Nations	22,471	68,923		68,923	93,885		93,885
Special Operations Forces	462,974	434,542		434,542	320,460	9,440	329,900
Classified Programs	4,477,511	4,341,623	15,700	4,357,323	3,893,596	123,925	4,017,521
Total Research, Development, Test & Eval, DW	21,661,178	20,737,291	22,138	20,759,429	20,661,600	157,240	20,818,840

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Summary Recap of Defensewide	FY 2009 (Base & OCO)	FY 2010 Base & OCO Enacted	FY 2010 Supplemental Request	FY 2010 Total	FY 2011 Base	FY 2011 OCO	FY 2011 Total Request
Defense Business Transformation Agency	187,953	210,337		210,337	195,931		195,931
Chemical and Biological Defense Program	1,081,036	1,225,071		1,225,071	1,207,761		1,207,761
Counter Intelligence Field Activity							
Defense Adv Research Projects Agcy	3,014,664	2,991,239		2,991,239	3,103,271		3,103,271
Defense Contract Management Agency	11,569	14,444		14,444	11,937		11,937
Defense Human Resources Activity	31,907	33,630		33,630	79,114		79,114
Defense Intelligence Agency							
Defense Information Systems Agency	307,202	231,392		231,392	249,611	23,125	272,736
Defense Logistics Agency	201,033	200,705		200,705	101,890		101,890
Defense Security Cooperation Agency	4,510	2,269		2,269	2,429		2,429
Defense Security Service	10,914	1,378		1,378	5,522		5,522
Defense Technical Information Center	53,450	49,205		49,205	61,054		61,054
Defense Threat Reduction Agency	490,888	510,295		510,295	562,624		562,624
Missile Defense Agency	8,247,341	7,060,931		7,060,931	7,454,634		7,454,634
National Geospatial Intelligence Agency							
National Security Agency							
Office of Secretary Of Defense	2,486,869	2,821,519	6,438	2,827,957	2,825,165		2,825,165
Special Operations Command						9,440	
The Joint Staff	71,667	111,945		111,945	125,014		125,014
Washington Headquarters Service	564	976		976	278		278
Total Research, Development, Test & Evaluation	21,661,178	20,737,291	22,138	20,759,429	20,661,600	157,240	20,818,840

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 (Dollars in Thousands)

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

Date: 22 Jan 2010

Line No	Program Element Number	Item	Act	FY 2009 (Base & OCO)	FY 2010 Base & OCO Enacted	FY 2010 Supplemental Request	FY 2010 Total	FY 2011 Base	FY 2011 OCO	FY 2011 Total Request	Se c
1	0601000BR	DTRA Basic Research Initiative	01	28,798	40,848		40,848	47,412		47,412	U
2	0601101E	Defense Research Sciences	01	187,157	205,915		205,915	328,195		328,195	U
3	0601111D8Z	Government/Industry Cosponsorship of University Research	01	4,254	4,761		4,761				U
4	0601114D8Z	Defense Experimental Program to Stimulate Competitive Research	01	14,259							U
5	0601120D8Z	National Defense Education Program	01	67,108	79,333		79,333	109,911		109,911	U
6	0601384BP	Chemical and Biological Defense Program	01	60,355	78,764		78,764	49,508		49,508	U
		Basic Research		361,931	409,621		409,621	535,026		535,026	
7	0602000D8Z	Joint Munitions Technology	02	14,820	18,808		18,808	22,448		22,448	U
8	0602228D8Z	Historically Black Colleges and Universities (HBCU) Science	02	4,527	66,553		66,553	15,067		15,067	U
9	0602234D8Z	Lincoln Laboratory Research Program	02	29,244	33,759		33,759	32,830		32,830	U
10	0602303E	Information & Communications Technology	02	236,531	272,191		272,191	281,262		281,262	U
11	0602304E	Cognitive Computing Systems	02	122,810	144,236		144,236	90,143		90,143	U
12	0602305E	Machine Intelligence	02					44,682		44,682	U
13	0602383E	Biological Warfare Defense	02	163,993	40,418		40,418	32,692		32,692	U

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14	0602384BP	Chemical and Biological Defense Program	02	231,331	224,830		224,830	169,287		169,287	U
15	0602663D8Z	Joint Data Management Advanced Development	02					3,261		3,261	U
16	0602668D8Z	Cyber Security Research	02					10,000		10,000	U
17	0602670D8Z	Human, Social and Culture Behavior Modeling (HSCB) Applied Research	02	8,063	7,882		7,882	9,499		9,499	U
18	0602702E	Tactical Technology	02	316,166	248,683		248,683	224,378		224,378	U
19	0602715E	Materials and Biological Technology	02	238,172	270,207		270,207	312,586		312,586	U
20	0602716E	Electronics Technology	02	181,519	179,402		179,402	286,936		286,936	U
21	0602718BR	Weapons of Mass Destruction Defeat Technologies	02	217,044	221,185		221,185	212,742		212,742	U
22	1160401BB	Special Operations Technology Development	02	32,167	30,606		30,606	26,545		26,545	U
23	1160407BB	SOF Medical Technology Development	02	2,361	2,390		2,390				U
		Applied Research		1,798,748	1,761,150		1,761,150	1,774,358		1,774,358	
24	0603000D8Z	Joint Munitions Advanced Technology	03	9,176	13,534		13,534	20,556		20,556	U
25	0603121D8Z	SO/LIC Advanced Development	03	32,314	43,453		43,453	44,423		44,423	U
26	0603122D8Z	Combating Terrorism Technology Support	03	114,990	117,153		117,153	85,299		85,299	U

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27	0603160BR	Counterproliferation Initiatives - Proliferation Prevention and Defeat	03	221,471	238,773		238,773	295,163		295,163	U
28	0603175C	Ballistic Missile Defense Technology	03	117,602	189,229		189,229	132,220		132,220	U
29	0603200D8Z	Joint Advanced Concepts	03		3,878		3,878	6,808		6,808	U
30	0603225D8Z	Joint DoD-DoE Munitions Technology Development	03	21,678	23,088		23,088	22,700		22,700	U
31	0603264S	Agile Transportation for the 21st Century (AT21) - Theater Capability	03					750		750	U
32	0603286E	Advanced Aerospace Systems	03	38,252	258,278		258,278	303,078		303,078	U
33	0603287E	Space Programs and Technology	03	226,369	183,477		183,477	98,130		98,130	U
34	0603384BP	Chemical and Biological Defense Program - Advanced Development	03	307,351	299,680		299,680	177,113		177,113	U
35	0603618D8Z	Joint Electronic Advanced Technology	03	8,757	10,751		10,751	8,386		8,386	U
36	0603648D8Z	Joint Capability Technology Demonstrations	03	196,076	168,577		168,577	206,917		206,917	U
37	0603662D8Z	Networked Communications Capabilities	03	27,826	27,984		27,984	30,035		30,035	U
38	0603663D8Z	Joint Data Management Research	03		4,895		4,895	6,289		6,289	U
39	0603665D8Z	Biometrics Science and Technology	03	9,651	10,904		10,904	11,416		11,416	U

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40	0603668D8Z	Cyber Security Advanced Research	03					10,000		10,000	U
41	0603670D8Z	Human, Social and Culture Behavior Modeling (HSCB) Advanced Development	03	8,443	10,395		10,395	11,510		11,510	U
42	0603680D8Z	Defense-Wide Manufacturing Science and Technology Program	03	17,142	23,546		23,546	18,916		18,916	U
43	0603711D8Z	Joint Robotics Program/ Autonomous Systems	03	8,385	11,020		11,020	9,943		9,943	U
44	0603712S	Generic Logistics R&D Technology Demonstrations	03	72,541	51,851		51,851	20,542		20,542	U
45	0603713S	Deployment and Distribution Enterprise Technology	03	28,414	29,203		29,203	29,109		29,109	U
46	0603716D8Z	Strategic Environmental Research Program	03	63,914	67,128		67,128	68,021		68,021	U
47	0603720S	Microelectronics Technology Development and Support	03	36,392	70,597		70,597	26,878		26,878	U
48	0603727D8Z	Joint Warfighting Program	03	10,244	11,045		11,045	10,966		10,966	U
49	0603739E	Advanced Electronics Technologies	03	192,686	194,094		194,094	197,098		197,098	U
50	0603745D8Z	Synthetic Aperture Radar (SAR) Coherent Change Detection (CDD)	03	7,296	4,825		4,825				U
51	0603750D8Z	Advanced Concept Technology Demonstrations	03	1,169							U

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52	0603755D8Z	High Performance Computing Modernization Program	03	209,164	235,486		235,486	200,986		200,986	U
53	0603760E	Command, Control and Communications Systems	03	297,643	269,198		269,198	219,809		219,809	U
54	0603765E	Classified DARPA Programs	03	193,690	177,582		177,582	167,008		167,008	U
55	0603766E	Network-Centric Warfare Technology	03	133,138	138,361		138,361	234,985		234,985	U
56	0603767E	Sensor Technology	03	182,583	222,866		222,866	205,032		205,032	U
57	0603768E	Guidance Technology	03	93,720	36,886		36,886				U
58	0603769SE	Distributed Learning Advanced Technology Development	03	13,323	13,765		13,765	13,986		13,986	U
59	0603781D8Z	Software Engineering Institute	03	29,056	31,044		31,044	30,910		30,910	U
60	0603805S	Dual Use Technology	03	4,000							U
61	0603826D8Z	Quick Reaction Special Projects	03	93,802	73,583		73,583	78,244		78,244	U
62	0603828D8Z	Joint Experimentation	03	100,253	105,936		105,936	111,946		111,946	U
63	0603832D8Z	DoD Modeling and Simulation Management Office	03	30,302	34,226		34,226	38,140		38,140	U
64	0603901C	Directed Energy Research	03					98,688		98,688	U
65	0603941D8Z	Test & Evaluation Science & Technology	03	90,467	94,960		94,960	97,642		97,642	U
66	0603942D8Z	Technology Transfer	03	6,033	13,558		13,558	23,310		23,310	U

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67	1160402BB	Special Operations Advanced Technology Development	03	78,836	56,727		56,727	30,806		30,806	U
68	1160422BB	Aviation Engineering Analysis	03		3,529		3,529	4,234		4,234	U
69	1160472BB	SOF Information and Broadcast Systems Advanced Technology	03	8,405	4,967		4,967	4,942		4,942	U
		Advanced Technology Development (ATD)		3,342,554	3,580,032		3,580,032	3,412,934		3,412,934	
70	0603161D8Z	Nuclear and Conventional Physical Security Equipment RDT&E ADC&P	04	46,786	45,805		45,805	32,132		32,132	U
71	0603527D8Z	RETRACT LARCH	04	21,368	21,542		21,542	21,592		21,592	U
72	0603709D8Z	Joint Robotics Program	04	11,086	15,279		15,279	9,878		9,878	U
73	0603714D8Z	Advanced Sensor Applications Program	04	15,912	17,627		17,627	18,060		18,060	U
74	0603851D8Z	Environmental Security Technical Certification Program	04	36,616	40,780		40,780	30,419		30,419	U
75	0603881C	Ballistic Missile Defense Terminal Defense Segment	04	951,414	715,732		715,732	436,482		436,482	U
76	0603882C	Ballistic Missile Defense Midcourse Defense Segment	04	1,472,683	1,027,371		1,027,371	1,346,181		1,346,181	U
77	0603883C	Ballistic Missile Defense Boost Defense Segment	04	384,365	182,317		182,317				U
78	0603884BP	Chemical and Biological Defense Program	04	69,793	209,275		209,275	277,062		277,062	U

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79	0603884C	Ballistic Missile Defense Sensors	04	682,754	621,017		621,017	454,859		454,859	U
80	0603886C	Ballistic Missile Defense System Interceptor	04	308,869							U
81	0603888C	Ballistic Missile Defense Test & Targets	04	906,952	823,333		823,333	1,113,425		1,113,425	U
82	0603890C	BMD Enabling Programs	04	402,776	358,751		358,751	402,769		402,769	U
83	0603891C	Special Programs - MDA	04	182,998	250,185		250,185	270,189		270,189	U
84	0603892C	AEGIS BMD	04	1,054,323	1,435,717		1,435,717	1,467,278		1,467,278	U
85	0603893C	Space Tracking & Surveillance System	04	209,831	161,609		161,609	112,678		112,678	U
86	0603894C	Multiple Kill Vehicle	04	226,027							U
87	0603895C	Ballistic Missile Defense System Space Programs	04	23,250	12,492		12,492	10,942		10,942	U
88	0603896C	Ballistic Missile Defense Command and Control, Battle Management and Communicati	04	275,174	334,734		334,734	342,625		342,625	U
89	0603897C	Ballistic Missile Defense Hercules	04	51,629	47,932		47,932				U
90	0603898C	Ballistic Missile Defense Joint Warfighter Support	04	66,283	61,098		61,098	68,726		68,726	U
91	0603904C	Missile Defense Integration & Operations Center (MDIOC)	04	102,823	86,483		86,483	86,198		86,198	U
92	0603906C	Regarding Trench	04	3,159	6,130		6,130	7,529		7,529	U

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93	0603907C	Sea Based X-Band Radar (SBX)	04	143,878	167,153		167,153	153,056		153,056	U
94	0603908C	BMD European Interceptor Site	04	348,722							U
95	0603909C	BMD European Midcourse Radar	04	73,728							U
96	0603911C	BMD European Capability	04		50,226		50,226				U
97	0603912C	BMD European Communications Support	04	26,016							U
98	0603913C	Israeli Cooperative Programs	04		201,323		201,323	121,735		121,735	U
99	0603920D8Z	Humanitarian Demining	04	13,993	14,568		14,568	14,735		14,735	U
100	0603923D8Z	Coalition Warfare	04	12,482	13,773		13,773	13,786		13,786	U
101	0604016D8Z	Department of Defense Corrosion Program	04	18,387	22,107		22,107	4,802		4,802	U
102	0604400D8Z	Department of Defense (DoD) Unmanned Aircraft System (UAS) Common Development	04		60,792		60,792	49,292		49,292	U
103	0604648D8Z	Joint Capability Technology Demonstrations	04	10,829	10,988		10,988				U
104	0604670D8Z	Human, Social and Culture Behavior Modeling (HSCB) Research and Engineering	04	5,392	6,950		6,950	7,459		7,459	U
105	0604787D8Z	Joint Systems Integration Command (JSIC)	04	18,083	19,585		19,585	19,413		19,413	U
106	0604828D8Z	Joint FIRES Integration and Interoperability Team	04	15,446	16,835		16,835	16,637		16,637	U

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107	0604880C	Land-Based SM-3 (LBSM3)	04					281,378		281,378	U
108	0604881C	AEGIS SM-3 Block IIA Co-Development	04		255,987		255,987	318,800		318,800	U
109	0604883C	Precision Tracking Space System RDT&E	04					66,969		66,969	U
110	0604884C	Airborne Infrared (ABIR)	04					111,671		111,671	U
111	0605017D8Z	Reduction Of Total Ownership Cost	04	23,113	24,447		24,447	20,310		20,310	U
112	0303191D8Z	Joint Electromagnetic Technology (JET) Program	04	4,653	6,298		6,298	4,027		4,027	U
		Advanced Component Development & Prot		8,221,593	7,346,241		7,346,241	7,713,094		7,713,094	
113	0604051D8Z	Defense Acquisition Challenge Program (DACP)	05	26,979	28,629		28,629	24,344		24,344	U
114	0604161D8Z	Nuclear and Conventional Physical Security Equipment RDT&E SDD	05	4,106	7,566		7,566	7,973		7,973	U
115	0604165D8Z	Prompt Global Strike Capability Development	05	69,636	165,563		165,563	239,861		239,861	U
116	0604384BP	Chemical and Biological Defense Program	05	286,529	300,317		300,317	407,162		407,162	U
117	0604709D8Z	Joint Robotics Program	05	5,420	5,086		5,086	4,155		4,155	U
118	0604764K	Advanced IT Services Joint Program Office (AITS-JPO)	05	28,441	14,831		14,831	49,364		49,364	U
119	0604771D8Z	Joint Tactical Information Distribution System (JTIDS)	05	19,873	20,466		20,466	20,954		20,954	U

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120	0605000BR	Weapons of Mass Destruction Defeat Capabilities	05	15,499	9,489		9,489	7,307		7,307	U
121	0605013BL	Information Technology Development	05	11,569	14,444		14,444	11,937		11,937	U
122	0605018BTA	Defense Integrated Military Human Resources System (DIMHRS)	05	43,379	18,710		18,710	11,800		11,800	U
123	0605020BTA	Business Transformation Agency R&D Activities	05	144,574	191,627		191,627	184,131		184,131	U
124	0605021SE	Homeland Personnel Security Initiative	05	399	393		393	391		391	U
125	0605027D8Z	OUSD(C) IT Development Initiatives	05		4,961		4,961	5,000		5,000	U
126	0605140D8Z	Trusted Foundry	05	39,464	50,808		50,808	35,512		35,512	U
127	0605648D8Z	Defense Acquisition Executive (DAE) Pilot Program	05	5,392	4,232		4,232				U
128	0303141K	Global Combat Support System	05	17,946	18,038		18,038	17,842		17,842	U
129	0303158K	Joint Command and Control Program (JC2)	05	57,161							U
130	0807708D8Z	Wounded Ill and Injured Senior Oversight Committee (WII-SOC) Staff Office	05	15,645	1,596		1,596	1,590		1,590	U
		System Development and Demonstration		792,012	856,756		856,756	1,029,323		1,029,323	
131	0603757D8Z	Training Transformation (T2)	06	54,380							U

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132	0604774D8Z	Defense Readiness Reporting System (DRRS)	06	11,300	15,247		15,247	5,113		5,113	U
133	0604875D8Z	Joint Systems Architecture Development	06	18,027	11,248		11,248	8,052		8,052	U
134	0604940D8Z	Central Test and Evaluation Investment Development (CTEIP)	06	143,612	160,959		160,959	162,286		162,286	U
135	0604942D8Z	Assessments and Evaluations	06					2,500		2,500	U
136	0604943D8Z	Thermal Vicar	06	9,452	11,352		11,352	8,851		8,851	U
137	0605100D8Z	Joint Mission Environment Test Capability (JMETC)	06	8,286	9,379		9,379	10,287		10,287	U
138	0605104D8Z	Technical Studies, Support and Analysis	06	34,073	44,398		44,398	49,282		49,282	U
139	0605110D8Z	USD(A&T)--Critical Technology Support	06	4,151	4,874		4,874	4,743		4,743	U
140	0605117D8Z	Foreign Material Acquisition and Exploitation	06	62,348	94,152		94,152	95,520		95,520	U
141	0605126J	Joint Integrated Air and Missile Defense Organization (JIAMDO)	06	55,282	96,505		96,505	94,577		94,577	U
142	0605128D8Z	Classified Program USD(P)	06	99,622	94,864		94,864				U
143	0605130D8Z	Foreign Comparative Testing	06	32,050	34,771		34,771	32,755		32,755	U
144	0605142D8Z	Systems Engineering	06					29,824		29,824	U
145	0605161D8Z	Nuclear Matters-Physical Security	06	4,331	6,422		6,422	6,264		6,264	U

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146	0605170D8Z	Support to Networks and Information Integration	06	13,707	14,796		14,796	15,091		15,091	U
147	0605200D8Z	General Support to USD (Intelligence)	06	16,361	5,840		5,840	6,227		6,227	U
148	0605384BP	Chemical and Biological Defense Program	06	100,470	106,033		106,033	120,995		120,995	U
149	0605502BP	Small Business Innovative Research - Chemical Biological Def	06	12,713							U
150	0605502BR	Small Business Innovation Research	06	8,076							U
151	0605502C	Small Business Innovative Research - MDA	06	124,788							U
152	0605502D8Z	Small Business Innovative Research	06	52,812							U
153	0605502E	Small Business Innovative Research	06	78,877							U
154	0605502S	Small Business Innovative Research	06	3,230							U
155	0605790D8Z	Small Business Innovation Research (SBIR)/ Small Business Technology Transfer (S	06	5,568	4,645		4,645	2,189		2,189	U
156	0605798D8Z	Defense Technology Analysis	06	9,503	11,710		11,710	13,858		13,858	U
157	0605799D8Z	Force Transformation Directorate	06	21,421	23,787		23,787	19,701		19,701	U
158	0605801KA	Defense Technical Information Center (DTIC)	06	53,450	49,205		49,205	61,054		61,054	U

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159	0605803SE	R&D in Support of DoD Enlistment, Testing and Evaluation	06	18,185	19,472		19,472	64,737		64,737	U
160	0605804D8Z	Development Test and Evaluation	06	22,208	23,322	6,438	29,760	18,688		18,688	U
161	0605897E	DARPA Agency Relocation	06	27,924	44,812		44,812	11,000		11,000	U
162	0605898E	Management HQ - R&D	06	53,569	54,842		54,842	56,257		56,257	U
163	0606100D8Z	Budget and Program Assessments	06	5,453	5,881		5,881	6,099		6,099	U
164	0606301D8Z	Aviation Safety Technologies	06		7,936		7,936	10,900		10,900	U
165	0204571J	Joint Staff Analytical Support	06		1,654		1,654	23,081		23,081	U
168	0303166D8Z	Support to Information Operations (IO) Capabilities	06	32,801	30,376		30,376	31,500		31,500	U
169	0303169D8Z	Information Technology Rapid Acquisition	06	4,517	4,630		4,630	5,135		5,135	U
170	0305103E	Cyber Security Initiative	06	49,865	49,791		49,791	10,000		10,000	U
171	0305193D8Z	Intelligence Support to Information Operations (IO)	06	17,493	20,481		20,481	21,272		21,272	U
173	0305400D8Z	Warfighting and Intelligence-Related Support	06	824	823		823	845		845	U
174	0804767D8Z	COCOM Exercise Engagement and Training Transformation (CE2T2)	06		40,375		40,375	92,253		92,253	U
175	0901585C	Pentagon Reservation	06	20,146	19,709		19,709	20,482		20,482	U

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176	0901598C	Management HQ - MDA	06	87,151	52,403		52,403	29,754		29,754	U
177	0901598D8W	IT Software Dev Initiatives	06	564	976		976	278		278	U
9999	9999999999	Classified Programs		114,008	124,705		124,705	61,577		61,577	U
		RDT&E Management Support		1,492,598	1,302,375	6,438	1,308,813	1,213,027		1,213,027	
178	0604130V	Defense Information System for Security (DISS)	07	10,914	1,378		1,378	5,522		5,522	U
179	0605127T	Regional International Outreach (RIO) and Partnership for Peace Information Mana	07	4,037	1,977		1,977	2,139		2,139	U
180	0605147T	Overseas Humanitarian Assistance Shared Information System (OHAISIS)	07	473	292		292	290		290	U
181	0607384BP	Chemical and Biological Defense (Operational Systems Development)	07	12,494	6,172		6,172	6,634		6,634	U
182	0607713S	Deployment and Distribution Enterprise Technology	07	733							U
183	0607828D8Z	Joint Integration and Interoperability	07	45,795	45,840		45,840	44,139		44,139	U
184	0204571J	Joint Staff Analytical Support	07	7,618							U
185	0208043J	Classified Programs	07	1,723	2,170		2,170	2,288		2,288	U
186	0208045K	C4I Interoperability	07	74,465	74,473		74,473	74,023		74,023	U
188	0301144K	Joint/Allied Coalition Information Sharing	07	15,723	10,722		10,722	9,379		9,379	U

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195	0302016K	National Military Command System-Wide Support	07	613	546		546	467		467	U
196	0302019K	Defense Info Infrastructure Engineering and Integration	07	16,002	16,435		16,435	16,629		16,629	U
197	0303126K	Long-Haul Communications - DCS	07	8,108	9,157		9,157	9,130	23,125	32,255	U
198	0303131K	Minimum Essential Emergency Communications Network (MEECN)	07	9,615	9,789		9,789	9,529		9,529	U
199	0303135G	Public Key Infrastructure (PKI)	07	15,532	8,073		8,073	8,881		8,881	U
200	0303136G	Key Management Infrastructure (KMI)	07	55,435	40,782		40,782	45,941		45,941	U
201	0303140D8Z	Information Systems Security Program	07	13,041	14,955		14,955	14,077		14,077	U
202	0303140G	Information Systems Security Program	07	410,734	409,709		409,709	388,827	750	389,577	U
204	0303148K	DISA Mission Support Operations	07	2,252	1,200		1,200				U
205	0303149J	C4I for the Warrior	07	3,652	4,081		4,081	2,261		2,261	U
206	0303150K	Global Command and Control System	07	34,213	37,161		37,161	26,247		26,247	U
207	0303153K	Defense Spectrum Organization	07	19,162	18,865		18,865	20,991		20,991	U
208	0303170K	Net-Centric Enterprise Services (NCES)	07	5,429	1,775		1,775	3,366		3,366	U

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209	0303260D8Z	Joint Military Deception Initiative	07		934		934	1,161		1,161	U
210	0303610K	Teleport Program	07	2,054	5,217		5,217	6,880		6,880	U
211	0304210BB	Special Applications for Contingencies	07	23,020	27,467		27,467	16,272		16,272	U
214	0305103D8Z	Cyber Security Initiative	07	992	985		985	501		501	U
216	0305103K	Cyber Security Initiative	07	12,800	10,038		10,038	2,251		2,251	U
217	0305125D8Z	Critical Infrastructure Protection (CIP)	07	15,594	16,590		16,590	10,486		10,486	U
221	0305186D8Z	Policy R&D Programs	07	8,870	6,892		6,892	9,136		9,136	U
223	0305199D8Z	Net Centricity	07	12,277	1,467		1,467	29,831		29,831	U
227	0305208BB	Distributed Common Ground/Surface Systems	07	763	7,701		7,701	1,290		1,290	U
230	0305208K	Distributed Common Ground/Surface Systems	07	3,218	3,145		3,145	3,513		3,513	U
232	0305219BB	MQ-1 Predator A UAV	07	13,642	2,058		2,058	98		98	U
234	0305387D8Z	Homeland Defense Technology Transfer Program	07		2,939		2,939	2,988		2,988	U
235	0305600D8Z	International Intelligence Technology Assessment, Advancement and Integration	07		1,378		1,378	1,416		1,416	U
245	0708011S	Industrial Preparedness	07	53,040	46,271		46,271	21,798		21,798	U
246	0708012S	Logistics Support Activities	07	2,683	2,783		2,783	2,813		2,813	U
247	0902298J	Management Headquarters (JCS)	07	3,392	7,535		7,535	2,807		2,807	U

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248	0909999D8Z	Financing for Cancelled Account Adjustments	07	4,455							U
249	1001018D8Z	NATO AGS	07	22,471	68,923		68,923	93,885		93,885	U
250	1105219BB	MQ-9 UAV	07		4,362		4,362	98		98	U
251	1160279BB	Small Business Innovative Research/ Small Bus Tech Transfer Pilot Prog	07	10,206							U
252	1160403BB	Special Operations Aviation Systems Advanced Development	07	72,225	72,308		72,308	68,691		68,691	U
253	1160404BB	Special Operations Tactical Systems Development	07	15,143	6,845		6,845	1,582		1,582	U
254	1160405BB	Special Operations Intelligence Systems Development	07	39,866	41,223		41,223	23,879	9,440	33,319	U
255	1160408BB	SOF Operational Enhancements	07	53,672	63,045		63,045	62,592		62,592	U
256	1160421BB	Special Operations CV-22 Development	07	30,970	12,634		12,634	14,406		14,406	U
257	1160423BB	Joint Multi-Mission Submersible	07		33,273		33,273	14,924		14,924	U
258	1160426BB	Operations Advanced Seal Delivery System (ASDS) Development	07	5,643	3,485		3,485				U
259	1160427BB	Mission Training and Preparation Systems (MTPS)	07	5,496	3,178		3,178	2,915		2,915	U
260	1160428BB	Unmanned Vehicles (UV)	07	41,352	996		996				U

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261	1160429BB	MCL130J SOF Tanker Recapitalization	07	4,474	5,932		5,932	7,624		7,624	U
262	1160474BB	SOF Communications Equipment and Electronics Systems	07		730		730	1,922		1,922	U
263	1160476BB	SOF Tactical Radio Systems	07		2,358		2,358	2,347		2,347	U
264	1160477BB	SOF Weapons Systems	07	3,857	1,077		1,077	479		479	U
265	1160478BB	SOF Soldier Protection and Survival Systems	07	3,040	594		594	593		593	U
266	1160479BB	SOF Visual Augmentation, Lasers and Sensor Systems	07	6,485	8,533		8,533				U
267	1160480BB	SOF Tactical Vehicles	07	1,600	1,965		1,965	1,994		1,994	U
268	1160482BB	SOF Rotary Wing Aviation	07	3,202	18,784		18,784	14,473		14,473	U
269	1160483BB	SOF Underwater Systems	07	8,572	18,774		18,774	13,986		13,986	U
270	1160484BB	SOF Surface Craft	07	6,232	9,959		9,959	2,933		2,933	U
271	1160488BB	SOF PSYOP	07	8,251	9,846		9,846	4,193		4,193	U
272	1160489BB	SOF Global Video Surveillance Activities	07	13,914	4,923		4,923	5,135		5,135	U
273	1160490BB	SOF Operational Enhancements Intelligence	07	7,005	11,499		11,499	9,167		9,167	U
9999	9999999999	Classified Programs		4,363,503	4,216,918	15,700	4,232,618	3,832,019	123,925	3,955,944	U
		Operational Systems Development		5,651,742	5,481,116		5,496,816	4,983,838	157,240	5,141,078	
Total Research, Development, Test & Eval, DW				21,661,178	20,737,291	22,138	20,759,429	20,661,600	157,240	20,818,840	

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Summary Recap of Budget Activities -----	FY 2009 (Base & OCO)	FY 2010 Base & OCO Enacted	FY 2010 Supplemental Request	FY 2010 Total	FY 2011 Base	FY 2011 OCO	FY 2011 Total Request -----
Applied Research	1,944						
Advanced Technology Development (ATD)	51,698						
Advanced Component Development & Prototypes	19,297						
Management Support	2,061						
Total Research, Development, Test & Eval,DW, RA	75,000						
Summary Recap of FYDP Programs -----							
Research and Development	75,000						
Total Research, Development, Test & Eval,DW, RA	75,000						

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1	0632012D8Z	Plasma Fusion (Polywell)	02	1,944							U
		Applied Research		1,944							
2	0633002D8Z	Energy Modeling	03	1,600							U
3	0633006D8Z	Materials - Ceramic matrix composites	03	4,860							U
4	0633007D8Z	Wind Lift Power Generator	03	972							U
5	0633009S	Mobile Waste to Energy	03	7,311							U
6	0633010D8Z	HPCM Maui Energy Improvement Initiative	03	3,888							U
7	0633011S	Algal Derived Biofuel Program	03	5,851							U
8	0633013D8Z	Fuel Cells	03	18,468							U
9	0633017D8Z	Fuel Efficient Ground Vehicle Demonstrator	03	8,748							U
		Advanced Technology Development (ATD)		51,698							
10	0634003D8Z	Continuous Building Commissioning	04	6,804							U
11	0634004D8Z	Energy Enterprise Management	04	1,944							U
12	0634005D8Z	Solid Waste Gasification	04	2,916							U
13	0634006D8Z	Anaerobic Digester Technology	04	1,944							U
14	0634007D8Z	Landfill Gas Energy Capture	04	2,429							U

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15	0634014D8Z	Tactical, Deployable Micro-Grid	04	3,260							U
		Advanced Component Development & Prot		19,297							
16	0605502S	Small Business Innovative Research	06	338							U
17	0636016D8Z	SBIR/STTR	06	1,723							U
		Management Support		2,061							
Total Research, Development, Test & Eval,DW, RA				75,000							

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Defense-Wide  
 FY 2011 President's Budget  
 Exhibit R-1 FY 2011 Base and Overseas Contingency Operations (OCO) Request  
 Summary  
 (Dollars in Thousands)

22 Jan 2010

Summary Recap of Budget Activities	FY 2009 (Base & OCO)	FY 2010 Base & OCO Enacted	FY 2010 Supplemental Request	FY 2010 Total	FY 2011 Base	FY 2011 OCO	FY 2011 Total Request
RDT&E Management Support	185,202	188,237		188,237	194,910		194,910
Total Operational Test & Eval, Defense	185,202	188,237		188,237	194,910		194,910
Summary Recap of FYDP Programs							
Research and Development	185,202	188,237		188,237	194,910		194,910
Total Operational Test & Eval, Defense	185,202	188,237		188,237	194,910		194,910

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Defense-Wide  
 FY 2011 President's Budget  
 Exhibit R-1 FY 2011 Base and Overseas Contingency Operations (OCO) Request  
 (Dollars in Thousands)

Date: 22 Jan 2010

Appropriation: 0460D Operational Test & Eval, Defense

Line No	Program Element Number	Item	Act	FY 2009 (Base & OCO)	FY 2010 Base & OCO Enacted	FY 2010 Supplemental Request	FY 2010 Total	FY 2011 Base	FY 2011 OCO	FY 2011 Total Request	S e c
1	0605118OTE	Operational Test and Evaluation	06	53,052	57,902		57,902	59,430		59,430	U
2	0605131OTE	Live Fire Test and Evaluation	06	11,541	12,234		12,234	12,899		12,899	U
3	0605814OTE	Operational Test Activities and Analyses	06	120,609	118,101		118,101	122,581		122,581	U
		RDT&E Management Support		185,202	188,237		188,237	194,910		194,910	
Total Operational Test & Eval, Defense				185,202	188,237		188,237	194,910		194,910	

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Defense-Wide • President's Budget FY 2011 • RDT&E Program

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

***Budget Activity 01: Basic Research***  
***Appropriation 0400: Research, Development, Test & Evaluation, Defense-Wide***

.....

<b>Line Item</b>	<b>Budget Activity</b>	<b>Program Element Number</b>	<b>Program Element Title</b>	<b>Page</b>
01	01	0601000BR	DTRA Basic Research Initiative.....	Volume 5B - 93

***Budget Activity 02: Applied Research***  
***Appropriation 0400: Research, Development, Test & Evaluation, Defense-Wide***

.....

<b>Line Item</b>	<b>Budget Activity</b>	<b>Program Element Number</b>	<b>Program Element Title</b>	<b>Page</b>
21	02	0602718BR	WMD Defeat Technologies.....	Volume 5B - 101
22	02	1160401BB	Special Operations Technology Development/S100 .....	Volume 5B - 291
23	02	1160407BB	Special Operations Forces (SOF) Medical Technology Development/S275 .....	Volume 5B - 301

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*Budget Activity 03: Advanced Technology Development (ATD)*  
*Appropriation 0400: Research, Development, Test & Evaluation, Defense-Wide*

.....

<b>Line Item</b>	<b>Budget Activity</b>	<b>Program Element Number</b>	<b>Program Element Title</b>	<b>Page</b>
27	03	0603160BR	Counterproliferation Initiatives - Proliferation, Prevention and Defeat.....	Volume 5B - 141
31	03	0603264S	Agile Transportation for the 21st Century (AT21) Theater Capability .....	Volume 5A - 469
44	03	0603712S	Logistics Research and Development Technology (Log R&D).....	Volume 5A - 473
45	03	0603713S	Deployment and Distribution Enterprise Technology (USTRANSCOM).....	Volume 5A - 509
47	03	0603720S	Microelectronics Technology Development and Support (DMEA).....	Volume 5A - 527
58	03	0603769SE	Distributed Learning Advanced Technology Development (ADL).....	Volume 5A - 163
60	03	0603805S	Dual Use Technology (DUAP) /Commercial Technology for Maintenance Activities (CTMA).....	Volume 5A - 551
67	03	1160402BB	Special Operations Advanced Technology Development/S200.....	Volume 5B - 307
68	03	1160422BB	Aviation Engineering Analysis/SF101.....	Volume 5B - 323
69	03	1160472BB	Information and Broadcast Systems Advanced Technology/S225.....	Volume 5B - 327

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***Budget Activity 05: Development & Demonstration (SDD)***  
***Appropriation 0400: Research, Development, Test & Evaluation, Defense-Wide***  
.....

<b>Line Item</b>	<b>Budget Activity</b>	<b>Program Element Number</b>	<b>Program Element Title</b>	<b>Page</b>
118	05	0604764K	Advance IT Services Joint Program Office.....	Volume 5A - 215
120	05	0605000BR	WMD Defeat Capabilities.....	Volume 5B - 181
121	05	0605013BL	Information Technology Development.....	Volume 5A - 139
122	05	0605018BTA	Defense Integrated Military Human Resources System.....	Volume 5A - 11
123	05	0605020BTA	Business Transformation Agency.....	Volume 5A - 19
124	05	0605021SE	Homeland Personnel Security Directive (HSPD-12) Initiative.....	Volume 5A - 169
128	05	0303141K	Global Combat Support System.....	Volume 5A - 239
129	05	0303158K	Joint Command and Control Program (JC2).....	Volume 5A - 249

***Budget Activity 06: RDT&E Management Support***  
***Appropriation 0400: Research, Development, Test & Evaluation, Defense-Wide***  
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<b>Line Item</b>	<b>Budget Activity</b>	<b>Program Element Number</b>	<b>Program Element Title</b>	<b>Page</b>
141	06	0605126J	Joint Integrated Air & Missile Defense Organization (JIAMDO).....	Volume 5B - 211
150	06	0605502BR	Small Business Innovation Research.....	Volume 5B - 195

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

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154	06	0605502S	Small Business Innovative Research (SBIR).....	Volume 5A - 555
158	06	0605801KA	Defense Technical Information Center.....	Volume 5B - 57
159	06	0605803SE	R&D in Support of DOD Enlistment, Testing and Evaluation .....	Volume 5A - 175
165	06	0204571J	Joint Staff Analytical Support (JSAS).....	Volume 5B - 229
177	06	0901598D8W	IT Software Development Initiatives.....	Volume 5B - 537

***Budget Activity 07: Operational Systems Development  
Appropriation 0400: Research, Development, Test & Evaluation, Defense-Wide***

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<b>Line Item</b>	<b>Budget Activity</b>	<b>Program Element Number</b>	<b>Program Element Title</b>	<b>Page</b>
**	07	1105233BB	RQ-7 UAV/S852.....	Volume 5B - 333
178	07	0604130V	Enterprise Security System (Formerly Defense Information System for Security).....	Volume 5B - 39
179	07	0605127T	Regional International Outreach (RIO) - Partnership for Peace Information Management Systems (PIMS).....	Volume 5B - 11
180	07	0605147T	Overseas Humanitarian Assistance Shared Information System (OHASIS).....	Volume 5B - 23
182	07	0607713S	Joint Air Logistics Information System- Next Generation (JALIS-NG).....	Volume 5A - 559
185	07	0208043J	Planning and Decision Aid System (PDAS).....	Volume 5B - 237

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***Budget Activity 07: Operational Systems Development  
Appropriation 0400: Research, Development, Test & Evaluation, Defense-Wide***

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186	07	0208045K	C4I Interoperability.....	Volume 5A - 263
188	07	0301144K	Joint/Allied Coalition Information Sharing.....	Volume 5A - 283
195	07	0302016K	National Military Command System-Wide Support.....	Volume 5A - 297
196	07	0302019K	Defense Info. Infrastructure Engineering and Integration.....	Volume 5A - 305
197	07	0303126K	Long Haul Communications .....	Volume 5A - 337
198	07	0303131K	Minimum Essential Emergency Communications Network (MEECN).....	Volume 5A - 361
204	07	0303148K	DISA Mission Support Operations.....	Volume 5A - 373
205	07	0303149J	Command, Control, Communications, Computers, and Intelligence for the Warrior (C4IFTW).....	Volume 5B - 239
206	07	0303150K	Global Command and Control System.....	Volume 5A - 381
207	07	0303153K	Joint Spectrum Center/JS1.....	Volume 5A - 403
208	07	0303170K	Net-Centric Enterprise Services.....	Volume 5A - 417
210	07	0303610K	Teleport Program.....	Volume 5A - 431
211	07	0304210BB	Applications for Contingencies (SAFC)/9999.....	Volume 5B - 335
216	07	0305103K	Cyber Security Initiative.....	Volume 5A - 441
227	07	0305208BB	Distributed Common Ground/Surface Systems/S400A.....	Volume 5B - 345
230	07	0305208K	Distributed Common Ground/Surface System.....	Volume 5A - 445
232	07	0305219BB	MQ-1 Predator A UAV/S400B.....	Volume 5B - 355

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***Budget Activity 07: Operational Systems Development  
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245	07	0708011S	Industrial Preparedness Manufacturing Technology (IP ManTech).....	Volume 5A - 563
246	07	0708012S	Logistics Support Activities (LSA).....	Volume 5A - 605
247	07	0902298J	Management Headquarters.....	Volume 5B - 253
250	07	1150219BB	MQ-9 UAV/S851.....	Volume 5B - 359
251	07	1160279BB	Small Business Innovative Research (SBIR)/S050.....	Volume 5B - 361
252	07	1160403BB	Special Operations Aviation Systems Advanced Development/SF100.....	Volume 5B - 365
253	07	1160404BB	Special Operations (SO) Tactical Systems (Automation) Development/S710.....	Volume 5B - 381
254	07	1160405BB	Special Operations (SO) Intelligence Systems Development/S400 .....	Volume 5B - 393
256	07	1160421BB	Special Operations CV-22 Development/SF200 .....	Volume 5B - 413
257	07	1160423BB	Joint Multi-Mission Submersible/S0419.....	Volume 5B - 421
258	07	1160426BB	SO Advanced SEAL Delivery System Dev/S0418.....	Volume 5B - 429
259	07	1160427BB	Mission Training and Preparation Systems (MTPS)/S750.....	Volume 5B - 433
260	07	1160428BB	Unmanned Vehicles/S850.....	Volume 5B - 443
261	07	1160429BB	MC-130J SOF Tanker Recapitalization/S875.....	Volume 5B - 447
262	07	1160474BB	SOF Communications Equipment and Electronics Systems/S225.....	Volume 5B - 455
263	07	1160476BB	SOF Tactical Radio Systems/S725.....	Volume 5B - 463
264	07	1160477BB	SOF Weapon Systems/S375.....	Volume 5B - 471
265	07	1160478BB	SOF Soldier Protection and Survival Systems/S385.....	Volume 5B - 473

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267	07	1160480BB	SOF Tactical Vehicles/S910.....	Volume 5B - 479
268	07	1160482BB	SOF Rotary Wing Aviation/D615.....	Volume 5B - 489
269	07	1160483BB	SOF Underwater Systems/S0417.....	Volume 5B - 497
270	07	1160484BB	SOF Surface Craft/S1684.....	Volume 5B - 509
271	07	1160488BB	SOF PSYOP/D476.....	Volume 5B - 519

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02	06	0605131OTE	Live Fire Test and Evaluation .....	Volume 5B - 565
03	06	0605814OTE	Operational Test Activities and Analyses.....	Volume 5B - 573

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Distributed Common Ground/Surface System	0305208K	230	07..... Volume 5A - 445	
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Global Combat Support System	0303141K	128	05.....	Volume 5A - 239
Global Command and Control System	0303150K	206	07.....	Volume 5A - 381
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Information and Broadcast Systems Advanced Technology/S225	1160472BB	69	03.....	Volume 5B - 327
Information Technology Development	0605013BL	121	05.....	Volume 5A - 139
IT Software Development Initiatives	0901598D8W	177	06.....	Volume 5B - 537
Joint/Allied Coalition Information Sharing	0301144K	188	07.....	Volume 5A - 283
Joint Air Logistics Information System- Next Generation (JALIS-NG)	0607713S	182	07.....	Volume 5A - 559
Joint Command and Control Program (JC2)	0303158K	129	05.....	Volume 5A - 249
Joint Integrated Air & Missile Defense Organization (JIAMDO)	0605126J	141	06.....	Volume 5B - 211
Joint Multi-Mission Submersible/S0419	1160423BB	257	07.....	Volume 5B - 421
Joint Spectrum Center/JS1	0303153K	207	07.....	Volume 5A - 403
Joint Staff Analytical Support (JSAS)	0204571J	165	06.....	Volume 5B - 229
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SOF Underwater Systems/S0417	1160483BB	269	07..... Volume 5B - 497	
SOF Visual Augmentation, Lasers and Sensor Systems/S395	1160479BB	266	07..... Volume 5B - 475	
SOF Weapon Systems/S375	1160477BB	264	07..... Volume 5B - 471	
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**Department of Defense  
Fiscal Year (FY) 2011 President's Budget**

February 2010



**Defense Security Cooperation Agency**

*Justification Book Volume 5B*

***Research, Development, Test & Evaluation, Defense-Wide***

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Defense Security Cooperation Agency  
 FY 2011 President's Budget  
 Exhibit R-1 FY 2011 Base and Overseas Contingency Operations (OCO) Request  
 (Dollars in Thousands)

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

Date: 21 Jan 2010

Line No	Program Element Number	Item	Act	FY 2009 (Base & OCO)	FY 2010 Base & OCO Enacted	FY 2010 Supplemental Request	FY 2010 Total	FY 2011 Base	FY 2011 OCO	FY 2011 Total Request	Se
179	0605127T	Regional International Outreach (RIO) and Partnership for Peace Information Mana	07	4,037	1,977		1,977	2,139		2,139	U
180	0605147T	Overseas Humanitarian Assistance Shared Information System (OHASIS)	07	473	292		292	290		290	U
Operational Systems Development				4,510	2,269		2,269	2,429		2,429	
Total Defense Security Cooperation Agency				4,510	2,269		2,269	2,429		2,429	

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**Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Defense Security Cooperation Agency** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0605127T: <i>Regional International Outreach (RIO) - Partnership for Peace Information Management Systems (PIMS)</i>
---	---

COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	4.510	1.977	2.139	0.000	2.139	2.169	2.199	2.231	2.263	Continuing	Continuing
000000: <i>Regional International Outreach - Partnership for Peace Information Management Systems</i>	4.037	1.977	2.139	0.000	2.139	2.169	2.199	2.231	2.263	Continuing	Continuing
000204: <i>Overseas Humanitarian Assistance Shared Information System</i>	0.473	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

**Note**

Funding for OHASIS moved to PE 0605147T in FY 2010.

**A. Mission Description and Budget Item Justification**

Regional International Outreach (RIO) and Partnership for Peace (PfP) Information Management System (PIMS) is an Office of the Secretary of Defense (OSD) initiative to deploy a common information technology platform to improve international partner outreach and collaboration efforts in a federated environment. A federated environment – characterized by the capacity of DoD institutions to directly share participants and content across websites - fosters networks of partner influencers and enables better use of DoD resources through collaboration among the Regional Centers for Security Studies, PfP allies, and other DoD educational institutions and partners as required. The program uses a spiral methodology (making available capabilities as developed), to speed the delivery of open source collaboration technologies the user community. DSCA oversees execution of the research and development of the RIO-PIMS 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.

FY 2010 will be the first year combining the RIO and PIMS projects to leverage management, integration, and funding resources. This unification streamlines the research and development funds into one information sharing and collaboration technology platform.

The RIO effort focuses on improving collaboration among international outreach efforts of the Regional Centers for Security Studies (Africa Center for Strategic Studies, Asia-Pacific Center for Security Studies, Center for Hemispheric Defense Studies, George C. Marshall European Center for Security Studies, Near East South Asia Center for Strategic Studies), the Combatant Commanders, the Defense Security Cooperation Agency (DSCA), OUSD (Policy), and other designated DoD educational institutions. It provides DoD and international partner security practitioners a platform to share information, collaborate on projects, and improve administrative activities. It also provides the ability to form collaborative communities of interest around security issues.

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 Defense Security Cooperation Agency **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b>	<b>R-1 ITEM NOMENCLATURE</b>
0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	PE 0605127T: <i>Regional International Outreach (RIO) - Partnership for Peace Information Management Systems (PIMS)</i>

The PIMS technology effort enables EUCOM and CENTCOM partnership for peace missions by providing technology and management support/practices to the PfP countries. Through bilateral and multilateral security cooperation, PIMS facilitates information sharing and knowledge management concepts in accordance with U.S. policy. PIMS is a part of the North Atlantic Treaty Organization (NATO) Enlargement Facilitation Act of 1996 and implements the Congressional endorsement for the modernization of Defense capabilities in eligible PfP countries relative to their telecommunications infrastructure. The PIMS program provides allies and partner countries the ability to collaborate in critical cooperative activities that underpin the spirit of the PfP program. PIMS supports PfP coalition initiatives through development of distributive collaboration tools to support aspects of U.S. and NATO-approved PfP cooperative activities. PIMS also develops special capabilities such as mapping and imagery, multinational digitized imagery, and data derived from remote sensing technologies. This support is critical to achieve the interoperability/integration outlined in the Guidance for the Employment of the Force. PIMS supports an Internet-based education and collaboration environment via a Consortium of Defense Academies and Security Institutes; an exercise simulation network; and a cooperative network of nationally sponsored PfP training centers. PIMS is also used to support an electronic crisis information exchange capability among the countries of Southeastern Europe.

**B. Program Change Summary (\$ in Millions)**

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	2.485	2.001	0.000	0.000	0.000
Current President's Budget	4.510	1.977	2.139	0.000	2.139
Total Adjustments	2.025	-0.024	2.139	0.000	2.139
• Congressional General Reductions		-0.024			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	2.025	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other	0.000	0.000	2.139	0.000	2.139

**Change Summary Explanation**

FY 2009: OMNIBUS reprogramming reduced program by \$75K. RIO-PIMS was reduced by \$50K and OHASIS was reduced by \$25K. Received 2.1M UFR funding for Regional International Outreach.

FY 2010: Funds for OHASIS moved to PE 0605147T.

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 Defense Security Cooperation Agency **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b>	<b>R-1 ITEM NOMENCLATURE</b>
0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	PE 0605127T: <i>Regional International Outreach (RIO) - Partnership for Peace Information Management Systems (PIMS)</i>

FY 2011: The FY 2010 PB did not have any outyear data. In FY 2011 Regional International Outreach - Partnership for Peace Information Management Systems requires \$2.1M to continue to deploy a common information technology platform to improve international partner outreach and collaboration efforts.

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Defense Security Cooperation Agency								<b>DATE:</b> February 2010			
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0605127T: <i>Regional International Outreach (RIO) - Partnership for Peace Information Management Systems (PIMS)</i>				<b>PROJECT</b> 000000: <i>Regional International Outreach - Partnership for Peace Information Management Systems</i>			
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
000000: <i>Regional International Outreach - Partnership for Peace Information Management Systems</i>	4.037	1.977	2.139	0.000	2.139	2.169	2.199	2.231	2.263	Continuing	Continuing
Quantity of RDT&E Articles											

**A. Mission Description and Budget Item Justification**

Regional International Outreach (RIO) and Partnership for Peace (PfP) Information Management System (PIMS) is an Office of the Secretary of Defense (OSD) initiative to deploy a common information technology platform to improve international partner outreach and collaboration efforts in a federated environment. A federated environment – characterized by the capacity of DoD institutions to directly share participants and content across websites - fosters networks of partner influencers and enables better use of DoD resources through collaboration among the Regional Centers for Security Studies, PfP allies, and other DoD educational institutions and partners as required. The program uses a spiral methodology (making available capabilities as developed), to speed the delivery of open source collaboration technologies the user community. DSCA oversees execution of the research and development of the RIO-PIMS 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.

FY 2010 will be the first year combining the RIO and PIMS projects to leverage management, integration, and funding resources. This unification streamlines the research and development funds into one information sharing and collaboration technology platform.

The RIO effort focuses on improving collaboration among international outreach efforts of the Regional Centers for Security Studies (Africa Center for Strategic Studies, Asia-Pacific Center for Security Studies, Center for Hemispheric Defense Studies, George C. Marshall European Center for Security Studies, Near East South Asia Center for Strategic Studies), the Combatant Commanders, the Defense Security Cooperation Agency (DSCA), OUSD (Policy), and other designated DoD educational institutions.

It provides DoD and international partner security practitioners a platform to share information, collaborate on projects, and improve administrative activities. It also provides the ability to form collaborative communities of interest around security issues.

The PIMS technology effort enables EUCOM and CENTCOM partnership for peace missions by providing technology and management support/practices to the PfP countries. Through bilateral and multilateral security cooperation, PIMS facilitates information sharing and knowledge management concepts in accordance with

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 Defense Security Cooperation Agency **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0605127T: <i>Regional International Outreach (RIO) - Partnership for Peace Information Management Systems (PIMS)</i>	<b>PROJECT</b> 000000: <i>Regional International Outreach - Partnership for Peace Information Management Systems</i>
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U.S. policy. PIMS is a part of the North Atlantic Treaty Organization (NATO) Enlargement Facilitation Act of 1996 and implements the Congressional endorsement for the modernization of Defense capabilities in eligible PfP countries relative to their telecommunications infrastructure. The PIMS program provides allies and partner countries the ability to collaborate in critical cooperative activities that underpin the spirit of the PfP program. PIMS supports PfP coalition initiatives through development of distributive collaboration tools to support aspects of U.S. and NATO-approved PfP cooperative activities. PIMS also develops special capabilities such as mapping and imagery, multinational digitized imagery, and data derived from remote sensing technologies. This support is critical to achieve the interoperability/integration outlined in the Guidance for the Employment of the Force. PIMS supports an Internet-based education and collaboration environment via a Consortium of Defense Academies and Security Institutes; an exercise simulation network; and a cooperative network of nationally sponsored PfP training centers. PIMS is also used to support an electronic crisis information exchange capability among the countries of Southeastern Europe.

**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Regional International Outreach and Partnership for Peace Information Management System  <i>FY 2009 Accomplishments:</i> Completed the development effort to federate multiple portals – allowing users to search across sites (i.e. each individual Regional Center web site with different URLs) that are federated with single sign-on (allows an international participant to go from one password-protected website to another seamlessly). Completed the developmental testing and two technical evaluations of the next RIO-PIMS release. Operational testing completed in December 2009. Incorporated additional identified requirements from validations into development upgrades for next release.  Started preparatory process for FY 2011 recertification of security accreditation process. Began developing the integration plan and effort to federate the Regional Centers information systems. Began the planning for and integration of the Regional Center student management systems with RIO and the Defense Security Assistance Management System (DSAMS) to ensure accurate data across the DoD security cooperation information spectrum. Began the development of multimedia content annotation capabilities to enable effective discovery of and rich collaboration around image, audio, and video materials.	4.037	1.977	2.139	0.000	2.139

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 Defense Security Cooperation Agency **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0605127T: <i>Regional International Outreach (RIO) - Partnership for Peace Information Management Systems (PIMS)</i>	<b>PROJECT</b> 000000: <i>Regional International Outreach - Partnership for Peace Information Management Systems</i>
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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p>Continued developing the Capabilities Development Document (CDD) for the Joint Staff's Joint Capabilities Integration and Development System (JCIDS) process. Continued research of NATO interoperable technology that integrates with OSD-initiatives for information sharing and extends the technology to partner nations. Continued to expand operational capabilities in order to enhance the interoperability of PfP personnel in building capacity and operations. Continued to upgrade the RIO-PIMS sites with new software development releases. Continued efforts to integrate additional DoD educational organizations into RIO-PIMS.</p> <p><i>FY 2010 Plans:</i> Implement the federation capability to share users and information across multiple portals. Complete the Capabilities Development Document (CDD); Capabilities Production Document (CPD); and Information Support Plan (ISP) required for Joint Capabilities Integration and Development System (JCIDS) process. Update security accreditation package to reflect newly integrated educational organizations in order to maintain Mission Assurance Category (MAC) Level 3, Common Criteria EAL-2, and Federal Information Process Standards (FIPS) Security Level 2; and continue the preparation for the 2011 security accreditation recertification. Conduct developmental and operational testing of latest software release. Release latest validated software version into production. Complete development of the integration plan and effort to federate the Regional Centers information systems. Complete the development and integration of the Regional Center student management systems with RIO and the Defense Security Assistance Management System (DSAMS) to ensure accurate data across the information spectrum.</p> <p>Begin the integration of exercise and scenario-based workflow processes into the RIO-PIMS system. Begin development of direct data exchange links with relevant information systems to remove the technical limitations to information sharing across PfP nations. Begin development of expertise and social connections analysis and modeling based on a combination of natural language analysis tools, domain-specific language support, and statistical and behavioral metrics.</p>					

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Defense Security Cooperation Agency	<b>DATE:</b> February 2010
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<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0605127T: <i>Regional International Outreach (RIO) - Partnership for Peace Information Management Systems (PIMS)</i>	<b>PROJECT</b> 000000: <i>Regional International Outreach - Partnership for Peace Information Management Systems</i>
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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p>Continue to upgrade the federated RIO-PIMS sites with new software development releases. Continue to integrate additional DoD educational organizations into RIO-PIMS. Improve the platform's capabilities focused on managing large data sets by developing and integrating rich interactive statistical analysis and visualization tools. Utilize visualization to assist with management of user-generated data, such as surveys and polls, as well as with tracking of information sharing and collaboration trends, social network dynamics, and content exchange across domain boundaries.</p> <p><i>FY 2011 Base Plans:</i> Complete 2011 recertification of security accreditation process that also reflects the new and updated software capabilities as well newly integrated educational organizations. Conduct developmental and operational testing of latest software release. Release latest validated software release into production.</p> <p>Begin the development effort to integrate identified partner country collaborative sites.</p> <p>Continue the development of expertise and social connections analysis and modeling based on a combination of natural language analysis tools, domain-specific language support, and statistical and behavioral metrics. Continue the integration of exercise and scenario-based workflow processes into the RIO-PIMS system. Continue the development of direct data exchange links with relevant information systems to remove the technical limitations to information sharing across PfP nations. Continue to upgrade the federated RIO-PIMS sites with new software development releases. Continue to integrate additional DoD educational organizations into RIO-PIMS. Continue to improve the platform's capabilities focused on managing large data sets by developing and integrating rich interactive statistical analysis and visualization tools. Continue to utilize visualization to assist with management of user-generated data, such as surveys and polls, as well as with tracking of information</p>					

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 Defense Security Cooperation Agency **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0605127T: <i>Regional International Outreach (RIO) - Partnership for Peace Information Management Systems (PIMS)</i>	<b>PROJECT</b> 000000: <i>Regional International Outreach - Partnership for Peace Information Management Systems</i>
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<b>B. Accomplishments/Planned Program (\$ in Millions)</b>					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
sharing and collaboration trends, social network dynamics, and content exchange across domain boundaries.					
Accomplishments/Planned Programs Subtotals	4.037	1.977	2.139	0.000	2.139

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

N/A

**D. Acquisition Strategy**

RIO-PIMS employs a spiral acquisition strategy to ensure 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 agencies, existing assets are leveraged to preserve U.S. investments, avoid duplication of effort between agencies, and offer economically prudent solutions to improve information sharing and achieve U.S. security cooperation goals.

**E. Performance Metrics**

RIO-PIMS 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; 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.

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 Defense Security Cooperation Agency **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0605127T: <i>Regional International Outreach (RIO) - Partnership for Peace Information Management Systems (PIMS)</i>	<b>PROJECT</b> 000204: <i>Overseas Humanitarian Assistance Shared Information System</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
000204: <i>Overseas Humanitarian Assistance Shared Information System</i>	0.473	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles											

**Note**

Funding for OHASIS moved to PE 0605147T in FY 2010.

**A. Mission Description and Budget Item Justification**

Overseas Humanitarian Assistance Shared Information System (OHASIS) enables Humanitarian Assistance (HA) offices, including embassy staff, country team members, Combatant Command leads, and DSCA to visualize HA projects on a web-based map display, automate report generation, and perform a variety of analysis. The U.S. Army Corps of Engineers, Topographic Engineer Center (TEC) initially developed this system for U.S. Central Command (USCENTCOM). This system is critical to the full lifecycle management of Humanitarian Assistance projects. As a result, OHASIS has been provided to all of the Geographic Combatant Commands (GCC) for their use in monitoring HA projects and to Country Team members throughout the world for nominating projects. The OHASIS system is currently used to manage the full life cycle of over 1,000 Overseas Humanitarian Disaster and Civic Aid (OHDACA) projects, 500 Denton and Funded Shipments, and three warehouses maintaining humanitarian excess property per fiscal year. Research, Development Test and Evaluation funding is being requested to upgrade and modernize the current OHASIS system.

**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Overseas Humanitarian Assistance Shared Information System	0.473	0.000	0.000	0.000	0.000
<i>FY 2009 Accomplishments:</i> Primary focus developed additional OHASIS modules to better support, maintain, and leverage information technology in all OHDACA aspects. The start point was the redevelopment of the Excess					

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 Defense Security Cooperation Agency **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0605127T: <i>Regional International Outreach (RIO) - Partnership for Peace Information Management Systems (PIMS)</i>	<b>PROJECT</b> 000204: <i>Overseas Humanitarian Assistance Shared Information System</i>
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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p>Property Warehouse system, which is currently a stand-alone system, based on outdated and unsupported technology. OHASIS will leverage the current system begin migration to a new platform. Also, the Denton and Funded Transportation modules modernized and leverage the same benefits by being built on one framework and hosted on the same server.</p> <p>The analytical and modeling capability was expanded to provide the functionality to determine where projects should be designed and analysis to gain insight into the project impacts. Begin the development of a measure of effectiveness (MOE) module: definition, development, testing, and integration to become part of the full life cycle of OHDACA project management.</p> <p><i>FY 2010 Plans:</i> Funds moved to PE 0605147T.</p> <p><i>FY 2011 Base Plans:</i> Funds moved to PE 0605147T.</p>					
<b>Accomplishments/Planned Programs Subtotals</b>	0.473	0.000	0.000	0.000	0.000

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

N/A

**D. Acquisition Strategy**

The program employees 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.

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Defense Security Cooperation Agency		<b>DATE:</b> February 2010
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0605127T: <i>Regional International Outreach (RIO) - Partnership for Peace Information Management Systems (PIMS)</i>	<b>PROJECT</b> 000204: <i>Overseas Humanitarian Assistance Shared Information System</i>

**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.

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 Defense Security Cooperation Agency **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0605147T: <i>Overseas Humanitarian Assistance Shared Information System (OHASIS)</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	0.000	0.292	0.290	0.000	0.290	0.288	0.288	0.287	0.286	Continuing	Continuing
000204: <i>Overseas Humanitarian Assistance Shared Information System</i>	0.000	0.292	0.290	0.000	0.290	0.288	0.288	0.287	0.286	Continuing	Continuing

**Note**

FY 2009 OHASIS funds were in PE 0605127T. FY 2009 funding for the OHASIS modernization was initially included in the Overseas Humanitarian Disaster and Civic Aid (OHDACA) budget. Therefore, there is no impact to the overall OHDACA HA program to realign these funds to RDT&E.

**A. Mission Description and Budget Item Justification**

Overseas Humanitarian Assistance Shared Information System (OHASIS) allows Humanitarian Assistance (HA) offices to visualize HA projects on a web-based map display, automate report generation, and perform analysis for project suitability. The U.S. Army Corps of Engineers, Topographic Engineer Center (TEC) initially developed this system for United States Central Command (USCENTCOM).

This system provides a tremendous benefit to the lifecycle management of Humanitarian Assistance projects. As a result, OHASIS has been provided to all of the Geographic Combatant Commands (GCC) for their use in monitoring HA projects. The OHASIS system is used to manage the full life cycle of over 1,000 Overseas Humanitarian Disaster and Civic Aid (OHDACA) projects, 500 Denton and Funded Shipments, and three warehouses maintaining humanitarian excess property. Research, Development Test and Evaluation funding is being requested to upgrade and modernize the current OHASIS system.

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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2011 Defense Security Cooperation Agency	<b>DATE:</b> February 2010
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<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0605147T: <i>Overseas Humanitarian Assistance Shared Information System (OHASIS)</i>
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**B. Program Change Summary (\$ in Millions)**

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	0.000	0.292	0.000	0.000	0.000
Current President's Budget	0.000	0.292	0.290	0.000	0.290
Total Adjustments	0.000	0.000	0.290	0.000	0.290
• Congressional General Reductions		0.000			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other	0.000	0.000	0.290	0.000	0.290

**Change Summary Explanation**

FY 2010: New PE was established for OHASIS.

FY 2011: The FY 2010 PB did not have any outyear data. In FY 2011 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:** PB 2011 Defense Security Cooperation Agency **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0605147T: <i>Overseas Humanitarian Assistance Shared Information System (OHASIS)</i>	<b>PROJECT</b> 000204: <i>Overseas Humanitarian Assistance Shared Information System</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
000204: <i>Overseas Humanitarian Assistance Shared Information System</i>	0.000	0.292	0.290	0.000	0.290	0.288	0.288	0.287	0.286	Continuing	Continuing
Quantity of RDT&E Articles											

**Note**

FY 2009 OHASIS funds in PE 0605127T.

**A. Mission Description and Budget Item Justification**

Overseas Humanitarian Assistance Shared Information System (OHASIS) enables Humanitarian Assistance (HA) offices, including embassy staff, country team members, Combatant Command leads, and DSCA to visualize HA projects on a web-based map display, automate report generation, and perform a variety of analysis. The U.S. Army Corps of Engineers, Topographic Engineer Center (TEC) initially developed this system for U.S. Central Command (USCENTCOM). This system is critical to the full lifecycle management of Humanitarian Assistance projects. As a result, OHASIS has been provided to all of the Geographic Combatant Commands (GCC) for their use in monitoring HA projects and to Country Team members throughout the world for nominating projects. The OHASIS system is currently used to manage the full life cycle of over 1,000 Overseas Humanitarian Disaster and Civic Aid (OHDACA) projects, 500 Denton and Funded Shipments, and three warehouses maintaining humanitarian excess property per fiscal year. Research, Development Test and Evaluation funding is being requested to upgrade and modernize the current OHASIS system.

**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Overseas Humanitarian Assistance Shared Information System <i>FY 2009 Accomplishments:</i> Funds in PE 0605127T	0.000	0.292	0.290	0.000	0.290

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 Defense Security Cooperation Agency **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0605147T: <i>Overseas Humanitarian Assistance Shared Information System (OHASIS)</i>	<b>PROJECT</b> 000204: <i>Overseas Humanitarian Assistance Shared Information System</i>
---	---	---

**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p><i>FY 2010 Plans:</i>                      Complete the integration of the remaining FY 2009 plans into the RDT&amp;E 2010 budget and then begin reevaluation of the system performance and scale it appropriately to the number of users and modules. It will include enhancements to capture new advances in the Geographic Information System (GIS) enterprise technology domain and continued refinements and additions to the suite of GIS models and analytical capability. Develop a disconnected capability to support operations worldwide in zero and reduced bandwidth environments. This will allow for a disconnected data collection capability for laptops and personal digital assistants (PDAs). OHASIS will leverage commercial off the shelf development frameworks.</p> <p>Additional developments and enhancements include:</p> <ul style="list-style-type: none"> <li>• Full integration into the Theater Security Cooperation Management Information System (TSCMIS) for all COCOMs</li> <li>• Further refinement and development to the Measures of Effectiveness (MOE) module</li> <li>• Continued report refinement</li> <li>• Project assessment module to capture post project completion information and qualification</li> <li>• Enhance the continuity of operation plans and enabling technology</li> <li>• New analytical models leveraging the Geographic Information System capability</li> </ul> <p><i>FY 2011 Base Plans:</i>                      Enhance the prototype disconnected data collection capability into a full operation capacity. This full operational capability will include better situational awareness for the user, enhanced analytical capability from a connected and disconnected environment, and dynamic data collection. Additionally, data services will be developed to exchange data with external organizations to begin with USAID.</p>					
<b>Accomplishments/Planned Programs Subtotals</b>	0.000	0.292	0.290	0.000	0.290

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Defense Security Cooperation Agency		<b>DATE:</b> February 2010
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0605147T: <i>Overseas Humanitarian Assistance Shared Information System (OHASIS)</i>	<b>PROJECT</b> 000204: <i>Overseas Humanitarian Assistance Shared Information System</i>

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

N/A

**D. Acquisition Strategy**

The program employees 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.

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**Department of Defense  
Fiscal Year (FY) 2011 President's Budget**

February 2010



**Defense Security Service**

*Justification Book Volume 5B*

***Research, Development, Test & Evaluation, Defense-Wide***

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Defense Security Service • President's Budget FY 2011 • RDT&E Program

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Defense Security Service  
 FY 2011 President's Budget  
 Exhibit R-1 FY 2011 Base and Overseas Contingency Operations (OCO) Request  
 (Dollars in Thousands)

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

Date: 21 Jan 2010

Line No	Program Element Number	Item	Act	FY 2009 (Base & OCO)	FY 2010 Base & OCO Enacted	FY 2010 Supplemental Request	FY 2010 Total	FY 2011 Base	FY 2011 OCO	FY 2011 Total Request	Se c
178	0604130V	Defense Information System for Security (DISS)	07	10,914	1,378		1,378	5,522		5,522	U
		Operational Systems Development		10,914	1,378		1,378	5,522		5,522	
Total Defense Security Service				10,914	1,378		1,378	5,522		5,522	

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Defense Security Service • President's Budget FY 2011 • RDT&E Program

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<b>Line Item</b>	<b>Budget Activity</b>	<b>Program Element Number</b>	<b>Program Element Title</b>	<b>Page</b>
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Defense Security Service • President's Budget FY 2011 • RDT&E Program

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**Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Defense Security Service** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0604130V: <i>Enterprise Security System (Formerly Defense Information System for Security)</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	10.914	1.378	5.522	0.000	5.522	8.720	7.021	6.031	6.127	Continuing	Continuing
000: <i>Enterprise Security System</i>	10.914	1.378	5.522	0.000	5.522	8.720	7.021	6.031	6.127	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

The Defense Security Service (DSS) manages the Enterprise Security System (ESS) to provide an effective, real-time, security support capability for the Military Departments, DoD Agencies, the National Industrial Security Program, 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.

DSS Information Technology (IT) systems provide service critical to three major mission areas: Personnel Security; Industrial Security; and, Security Education. DSS performs this critical function through operation of its production systems named the Enterprise Security System (ESS): the Industrial Security Facilities Database (ISFD); the DSS Gateway; and, the Electronic Network Registration and Online Learning system (ENROL).

**B. Program Change Summary (\$ in Millions)**

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	11.518	1.384	0.000	0.000	0.000
Current President's Budget	10.914	1.378	5.522	0.000	5.522
Total Adjustments	-0.604	-0.006	5.522	0.000	5.522
• Congressional General Reductions		0.000			
• Congressional Directed Reductions		-0.006			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	-0.604	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Program Adjustments	0.000	0.000	5.522	0.000	5.522

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 Defense Security Service

**DATE:** February 2010

**APPROPRIATION/BUDGET ACTIVITY**

0400: *Research, Development, Test & Evaluation, Defense-Wide*  
BA 7: *Operational Systems Development*

**R-1 ITEM NOMENCLATURE**

PE 0604130V: *Enterprise Security System (Formerly Defense Information System for Security)*

**Change Summary Explanation**

Funds reprogrammed in FY2009 were available due to program efficiencies.

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 Defense Security Service **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0604130V: <i>Enterprise Security System (Formerly Defense Information System for Security)</i>	<b>PROJECT</b> 000: <i>Enterprise Security System</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
000: <i>Enterprise Security System</i>	10.914	1.378	5.522	0.000	5.522	8.720	7.021	6.031	6.127	Continuing	Continuing
Quantity of RDT&E Articles											

**A. Mission Description and Budget Item Justification**

The Defense Security Service (DSS) manages the Enterprise Security System (ESS) to provide an effective, real-time, security support capability for the Military Departments, DoD Agencies, the National Industrial Security Program, 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.

DSS Information Technology (IT) systems provide service critical to three major mission areas: Personnel Security; Industrial Security; and, Security Education. DSS performs this critical function through operation of its production systems named the Enterprise Security System (ESS): the Industrial Security Facilities Database (ISFD); the DSS Gateway; and, the Electronic Network Registration and Online Learning system (ENROL).

**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Systems Enhancement  RDT&E for ESS primarily includes pre-planned product improvements (P3I) to the ESS applications, researching and improving assured information sharing, better posturing systems and networks against vulnerabilities, ensuring self defense of systems and networks, and safeguarding data at all stages. These RDT&E enhancements will permit DSS OCIO to increase the efficiency, capabilities, and security of the ESS Applications.	10.914	1.378	5.522	0.000	5.522

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Defense Security Service	<b>DATE:</b> February 2010
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<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0604130V: <i>Enterprise Security System</i> <i>(Formerly Defense Information System for Security)</i>	<b>PROJECT</b> 000: <i>Enterprise Security System</i>
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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p><i>FY 2009 Accomplishments:</i> Accomplishments include completion of an analysis of the Joint Personnel Adjudication System (JPAS) system architecture and design, hardware/infrastructure configuration, database design, disaster recovery viability and information assurance/data integrity posture. Implemented required Agency Use block codes to reflect requirements for extra coverage and federal investigations processing center codes for special processing needs of the eQIP and a collaborative adjudication facility designation for the National Geospatial Intelligence Agency (NGA) to input adjudicative decisions on NGA personnel. Established a DCII Batch Query Interface that will allow the Army CAF's system (CATS) to query investigative information for person records.</p> <p><i>FY 2010 Plans:</i> 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. ESS RDT&amp;E enhancements are needed to support the decrease in investigation timeline, safeguard systems and data, and keep the ESS applications compliant with statutory and regulatory requirements.</p> <p>RDT&amp;E for ESS primarily includes pre-planned product improvements (P3I) to the ESS applications, researching and improving assured information sharing, better posturing systems and networks against vulnerabilities, ensuring self defense of systems and networks, and safeguarding data at all stages.</p> <p>These RDT&amp;E enhancements will permit DSS OCIO to increase the efficiency, capabilities, and security of the ESS Applications. Pre-Planned Product Improvements (P3I) to the ESS Applications, as well as securing the ESS through Assured Information Sharing, Highly Available Enterprise, Cyber-Situational Awareness and Network Defense, and Assured Enterprise Management and Control will be</p>					

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 Defense Security Service **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0604130V: <i>Enterprise Security System (Formerly Defense Information System for Security)</i>	<b>PROJECT</b> 000: <i>Enterprise Security System</i>
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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p>accomplished. DSS will be able to meet the new DoD mandate for Controlled Unclassified Information (CUI). Further, it is paramount for the Agency to protect the privacy rights associated with nearly eight million person-records to ensure that the enterprise is resistant to privacy act violations and personal information loss; a total loss of which could cost upwards of \$1 billion in terms of notifications and credit-monitoring services, as well as an incalculable loss in Agency reputation.</p> <p><i>FY 2011 Base Plans:</i> 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. ESS RDT&amp;E enhancements are needed to support the decrease in investigation timeline, safeguard systems and data, and keep the ESS applications compliant with statutory and regulatory requirements. RDT&amp;E for ESS primarily includes pre-planned product improvements (P3I) to the ESS applications, researching and improving assured information sharing, better posturing systems and networks against vulnerabilities, ensuring self defense of systems and networks, and safeguarding data at all stages. These RDT&amp;E enhancements will permit DSS OCIO to increase the efficiency, capabilities, and security of the ESS Applications. Pre-Planned Product Improvements (P3I) to the ESS Applications, as well as securing the ESS through Assured Information Sharing, Highly Available Enterprise, Cyber-Situational Awareness and Network Defense, and Assured Enterprise Management and Control will be accomplished. DSS will be able to meet the new DoD mandate for Controlled Unclassified Information (CUI).</p>					
<b>Accomplishments/Planned Programs Subtotals</b>	10.914	1.378	5.522	0.000	5.522

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 Defense Security Service **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0604130V: <i>Enterprise Security System</i> <i>(Formerly Defense Information System for Security)</i>	<b>PROJECT</b> 000: <i>Enterprise Security System</i>
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**C. Other Program Funding Summary (\$ in Millions)**

N/A

**D. Acquisition Strategy**

DSS awarded an Enterprise Security System (ESS) Development Blanket Purchase Agreement (BPA) in February 2008. Enhancements to the ESS applications will be issued as Task Orders under this BPA.

**E. Performance Metrics**

N/A

**F. Major Performers**

Name	Description:	Location:	Award Date	Funding
SAIC, Northrop Grumman, EDS	Enhancement Developer	Herndon, VA and Columbia, MD	Feb 2008	1.378

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Defense Security Service** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0604130V: <i>Enterprise Security System (Formerly Defense Information System for Security)</i>	<b>PROJECT</b> 000: <i>Enterprise Security System</i>
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**Product Development (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Enterprise Security System (Formerly Defense Information System for Security)	BPA	SAIC, Northrop Grumman, EDS Herndon, VA and Columbia, MD	12.200	1.378	Feb 2008	5.522		0.000		5.522	Continuing	Continuing	Continuing
<b>Subtotal</b>			12.200	1.378		5.522		0.000		5.522			

**Remarks**  
Total PY & FY Costs exceeds funding profile in some FYs due to use of PY RDT&E to fund current year requirements. Specific Task Orders to be issued on DSS Development BPA are TBD.

Project Cost Totals	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
<b>Project Cost Totals</b>	12.200	1.378		5.522		0.000		5.522			

**Remarks**

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**Exhibit R-4, RDT&E Schedule Profile: PB 2011 Defense Security Service** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0604130V: <i>Enterprise Security System (Formerly Defense Information System for Security)</i>	<b>PROJECT</b> 000: <i>Enterprise Security System</i>
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Fiscal Year	FY 2008				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	1	2	3	4
Technology Development of ESS Applications																																
Production and Deployment of Enhancements					▲		▲	▲	▲	▲	▲	▲	▲	▲	▲	▲																
O&M																																
Remarks:																																

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**Department of Defense  
Fiscal Year (FY) 2011 President's Budget**

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**Defense Technical Information Center**

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Defense Technical Information Center  
 FY 2011 President's Budget  
 Exhibit R-1 FY 2011 Base and Overseas Contingency Operations (OCO) Request  
 (Dollars in Thousands)

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

Line No	Program Element Number	Item	Act	FY 2009 (Base & OCO)	FY 2010 Base & OCO Enacted	FY 2010 Supplemental Request	FY 2010 Total	FY 2011 Base	FY 2011 OCO	FY 2011 Total Request
158	0605801KA	Defense Technical Information Center (DTIC)	06	53,450	49,205		49,205	61,054		61,054
		RD&E Management Support		53,450	49,205		49,205	61,054		61,054
Total Defense Technical Information Center				53,450	49,205		49,205	61,054		61,054

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 Defense Technical Information Center **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 6: <i>RDT&amp;E Management Support</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0605801KA: <i>Defense Technical Information Center</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	53.450	49.205	61.054	0.000	61.054	61.677	62.776	63.387	64.002	Continuing	Continuing
001: <i>Defense Technical Information Center</i>	48.636	44.391	56.240	0.000	56.240	56.863	57.962	58.573	59.188	Continuing	Continuing
002: <i>Information Analysis Centers</i>	4.814	4.814	4.814	0.000	4.814	4.814	4.814	4.814	4.814	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

The Defense Technical Information Center (DTIC) leverages DoD's substantial investment in scientific and technical research and development by facilitating the transfer of scientific, technical and program information throughout the national defense community. Employing efficient information organization, discovery, and delivery processes, DTIC reduces research costs, supports effective acquisition decision-making and ultimately improves the technological superiority of the American warfighter.

DTIC develops and maintains centralized information systems that collect, process, retrieve, and disseminate scientific and technical (S&T) information. By combining advanced knowledge management techniques with new information technologies, DTIC serves as the Department's agile information provider, delivering innovative discovery, collaboration and analysis products and services that support DoD program managers, acquisition professionals, warfighters, scientists, and engineers, as well as other government agencies, US allies, and DoD's academic and private sector partners.

Recent innovative products and services include:

- "DoDTechipedia Limited and Classified Wikis" - The limited-access wiki supports collaborative research and knowledge sharing within the DoD and throughout the Federal research and acquisitions communities. Launched October 1, 2008, it currently serves over 10,500 registered users and grows daily. The classified wiki also supports capability gap discussions in a more restricted environment.
- "DefenseSolutions.gov Website," - This public-access Website solicits breakthrough technology ideas from non-traditional technology providers and is the third tool in the DoDTechipedia Suite of Services. The first solicitation on battlefield forensics was launched in 2009 and produced several ideas of interest. Both the Limited Wiki and DefenseSolutions.gov have been featured on the White House Innovations Gallery and selected for the 2009 Government Computer News Outstanding Information Technology Award.
- "DTIC Online Access Controlled and Classified Interfaces," - The recently launched Access Controlled interface and the newly designed Classified version of the DTIC Online customer interface provide users one-stop authentication and searching of DTIC's access controlled resources and classified resources.

Approximately 30,000 organizations and eligible individuals are active users registered to access DTIC's information. DTIC's public and access controlled Websites average 44 million page requests per month. DTIC develops and hosts over 100 Websites, collaboration tools and other applications for DoD Component organizations

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 Defense Technical Information Center **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b>	<b>R-1 ITEM NOMENCLATURE</b>
0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i>	PE 0605801KA: <i>Defense Technical Information Center</i>
BA 6: <i>RDT&amp;E Management Support</i>	

including the Joint Chiefs of Staff, the Director, Defense Research and Engineering (DDR&E), Defense Logistics Agency (DLA) and several Combatant Commands. The Information Analysis Centers (IAC) Program Office at DTIC provides core funding, management and oversight for 10 IACs. The IACs are chartered by DoD to collect, analyze, and disseminate worldwide scientific and technical information in specialized fields such as information assurance, chemical/biological defense, and weapons systems technology. IACs support the acquisition community, prevent unnecessary duplication of research and promote standardization of research methods and processes.

In this current budget submission, the Department's FY 2011 DTIC budget program is described and justified against a backdrop of two projects. These projects include 001, Defense Technical Information Center, and 002, Information Analysis Centers (IAC). This expanded project structure provides the Department with greater transparency of the budget formulation and execution of the Program Element. The eight core activity areas performed by DTIC are embedded within the two newly-developed project lines, as described in the narratives below.

**B. Program Change Summary (\$ in Millions)**

	<b><u>FY 2009</u></b>	<b><u>FY 2010</u></b>	<b><u>FY 2011 Base</u></b>	<b><u>FY 2011 OCO</u></b>	<b><u>FY 2011 Total</u></b>
Previous President's Budget	52.553	54.411	0.000	0.000	0.000
Current President's Budget	53.450	49.205	61.054	0.000	61.054
Total Adjustments	0.897	-5.206	61.054	0.000	61.054
• Congressional General Reductions		0.000			
• Congressional Directed Reductions		-5.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Program Changes	0.000	0.000	61.054	0.000	61.054
• Reprogramming Initiative for XML R-2	0.897	0.000	0.000	0.000	0.000
• Economic Assumptions	0.000	-0.206	0.000	0.000	0.000

**Change Summary Explanation**

FY 2009 Reprogramming Initiative for eXtensible Markup Language (XML) R-2 Project. (\$0.897)

Funding reflects a \$0.897 transfer from the Office of the Secretary of Defense in support of the XML R-2 project, an ongoing initiative to standardize and automate budget submission materials within the Department.

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 Defense Technical Information Center **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 6: <i>RDT&amp;E Management Support</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0605801KA: <i>Defense Technical Information Center</i>
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FY 2010 Congressional Program Reductions (-\$5.000)

FY 2010 Economic Assumptions (\$-0.206). Funding reduction reflects revised economic assumptions.

FY 2011 Other Program Changes

The FY 2011 Base (\$61.054) includes the following program changes from the current FY 2010 position:

1. FY 2011 Defense Technical Information Center (DTIC) Mission Support (\$5.000) to DTIC customers, to include the Military Services, DoD Agencies, the Joint Staff, Combatant Commands, and other Federal agencies. The specific efforts are outlined below:

a) Component Information Support: Funding provides for planned upgrades supporting continuity of operations and the implementation of new commercial business process management tools, thereby decreasing risk of DoD Component site failure, bolstering the capability to respond to Component requirements in a timely manner, and decreasing system repair times.

b) Format/Process/Preserve Information: Efforts are aimed at processing technical information into DTIC's Research and Engineering database and to ensure long-term preservation and reliable access to such data. The effort will decrease the real risks related to potential permanent loss of vital technical data, customer access and availability of data, as well as continuity of operations.

c) Customer Information Assistance: This effort supports the quality and level of Information Sharing Operations focused on the DoD Acquisition community and the Combatant Commanders, to ensure the timely transfer of scientific and technical information required to meet customer mission requirements.

2. The FY 2011 Base also includes Program Transfers (\$4.500), to include the following activities:

a) DoDTechipedia. FY 2011 funding transfer of \$4.000 from the Office of the Secretary of Defense supports the Department's DoDTechipedia program. The adjustment to the DTIC program supports the expansion of communication and collaboration capabilities provided by DoDTechipedia. DoDTechipedia provides a solution vehicle which addresses the issue of how to best facilitate and expand technology access, information awareness, and collaborative opportunities

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 Defense Technical Information Center **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 6: <i>RDT&amp;E Management Support</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0605801KA: <i>Defense Technical Information Center</i>
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across the DoD community. This added capability strengthens the vital connection among technology customers, to include warfighters, Combatant Commands, Acquisition, and Logistics communities, and technology providers within the Science and Technology (S&T) and Research, Development, Test and Evaluation (RDT&E) communities. Additionally, the solution expands the user community beyond DoD elements, bringing other government and industry laboratories and researchers into the community of technologists, scientists, and researchers. DoDTechipedia is targeted at the four imperatives of the Director, Defense Research and Engineering (DDR&E):

- Accelerate delivery of technical capabilities to win the current fight
- Prepare for an uncertain future
- Reduce the cost, acquisition time and risk of major programs
- Develop world class science, technology, engineering, and mathematical capabilities for the DoD and the Nation

b) Global Content Delivery Service (GCDS). The \$0.500 funding transfer to DTIC, from Defense Information Systems Agency (DISA) Working Capital Fund Computing Services, supports GCDS customer services provided to DTIC.

3. NSPS Termination and Conversion (\$0.194). Increase of \$0.194 supports conversion of all National Security Personnel System (NSPS) personnel back to their previous personnel system consistent with the direction in the FY 2010 National Defense Authorization Act.

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 Defense Technical Information Center **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b>				<b>R-1 ITEM NOMENCLATURE</b>				<b>PROJECT</b>			
0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 6: <i>RDT&amp;E Management Support</i>				PE 0605801KA: <i>Defense Technical Information Center</i>				001: <i>Defense Technical Information Center</i>			
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
001: <i>Defense Technical Information Center</i>	48.636	44.391	56.240	0.000	56.240	56.863	57.962	58.573	59.188	Continuing	Continuing
Quantity of RDT&E Articles											

**A. Mission Description and Budget Item Justification**

DTIC accomplishes its mission to provide essential scientific, technical and related program information by performing the activities described in the seven core activity areas below:

A. COLLECT INFORMATION: Activities managing the acquisition and receipt of Scientific and Technical documents/summaries/records that meet the criteria for input to the Research & Engineering (R&E) databases that DTIC holds as a central DoD repository.

B. FORMAT/PROCESS/PRESERVE INFORMATION: Activities adding value to documents, processing them into DTIC's R&E databases and preserving their research accessibility for future use. These include: creating descriptive, subject, classification, and distribution limitation metadata for retrieval and dissemination purposes, converting paper, microform and digital information to online searchable formats, and preserving copies of digital documents off-site. Continuity of Operations functions are performed to back-up data and create processes for emergency off-site operations.

C. DISSEMINATE INFORMATION: Activities providing information to users in the DoD, the DoD contractor community, and the Federal Government and its contractor community. Activities include: developing and maintaining DTIC's R&E databases, registering users for the access-controlled databases and maintaining their current access permissions, providing information in various formats (online, digital or paper) to users.

D. CUSTOMER INFORMATION ASSISTANCE: Activities providing support to DTIC users, outreach, and general marketing services. These include: providing information reference, retrieval, referral, current awareness, document delivery, and billing services; managing Regional Offices that provide direct support to customers in the field; directing and managing marketing services; assessing user satisfaction and needs; supporting DoD special programs; developing and providing user training programs and assistance publications; and conducting seminars, exhibits, briefings, user conferences, and conferences for special interest groups including Combatant Commanders and the Acquisition community.

E. INFORMATION SCIENCE AND TECHNOLOGY: Investigates, prototypes, evaluates, and implements advanced information science and knowledge management concepts/technology. Advises and partners with DoD and Federal organizations in applying these concepts and techniques. Conceptualizes, formulates, develops,

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 Defense Technical Information Center **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 6: <i>RDT&amp;E Management Support</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0605801KA: <i>Defense Technical Information Center</i>	<b>PROJECT</b> 001: <i>Defense Technical Information Center</i>
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tests, and evaluates new and enhanced Scientific and Technical Information (STI) systems, products, and services. Participates in information standards organizations, as well as interagency and professional information organizations.

F. COMPONENT INFORMATION SUPPORT (CIS): Develops customized information solutions and hosts applications that support the DoD Components. The jointly developed information collection, collaboration and analysis projects facilitate components' goals to improve DoD acquisition decision-making, increase collaborative research and development efforts, facilitate business processes, and provide improved support for the warfighter. CIS hosts over 100 public, limited and classified web-based information systems for the DoD Components. Customers include such organizations as: Joint Chief of Staff (JCS), Director Defense, Research & Engineering (DDR&E), Office of the Under Secretary of Defense (Comptroller) (OUSD(C)), Defense Logistics Agency (DLA), and the Combatant Commands.

G. SCIENCE & TECHNOLOGY (S&T) INFORMATION PARTNERSHIP ACTIVITIES: As the central repository for DoD technical information, DTIC participates in interagency and professional information organizations, to learn new techniques and share processes, for interoperability and efficiency. Organizations include Commerce, Energy, NASA, National Library of Medicine, Defense, Interior Information (CENDI); International Council for Scientific and Technical Information (ICSTI); and NATO. Through coordination with Acquisition, Technology, & Logistics (AT&L), DTIC negotiates Memoranda of Understanding (MOUs) and foreign agreements for the exchange of STI, and participates in standards organizations such as the International Standards Organization (ISO) and the National Information Standards Organization (NISO), as well as special programs for the University Research Initiative (URI) and the Small Business Innovation Research (SBIR).

**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Defense Technical Information Center  <i>FY 2009 Accomplishments:</i> A. Collect Information:  - Identified and acquired government information collections for dissemination and preservation in the DTIC technical report collection. (28,707 technical reports collected to date) - Harvested documents online from Internet/NIPRNET/SIPRNET. (197 Websites being harvested; 9,050 harvested documents processed) - Advised and helped contributors send research and engineering (R&E) information to the central repository in digital form. (Conducted 25 site visits, attended 15 conferences)	48.636	44.391	56.240	0.000	56.240

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Defense Technical Information Center		<b>DATE:</b> February 2010
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 6: <i>RDT&amp;E Management Support</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0605801KA: <i>Defense Technical Information Center</i>	<b>PROJECT</b> 001: <i>Defense Technical Information Center</i>

**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<ul style="list-style-type: none"> <li>- Expand the audience of registrants eligible for access to DTIC Online Access Controlled resources to include all Federal employees and contractors.</li> <li>- Continue to disseminate research and engineering information electronically, phasing out hardcopy.</li> <li>- Continue to monitor customers' ongoing eligibility for access to DTIC's array of information products.</li> <li>- Continue to develop information products and services that will enhance dissemination of DoD Research &amp; Engineering (R&amp;E) information.</li> <li>- Continue to monitor the classification and distribution limitations of R&amp;E documents for official downgrades, to facilitate dissemination to the public when permitted.</li> <li>- Prepare for the implementation of the new government-wide Controlled Unclassified Information (CUI) markings.</li> </ul> <p>D. Customer Information Assistance</p> <ul style="list-style-type: none"> <li>- Hold 2nd biennial conference to benefit the Program Executive Office/Program Management Office in the Acquisition community.</li> <li>- Continue to hold annual DTIC Conference for the purpose of ascertaining participants' information needs, introducing current and new products and services to the DoD community, and providing a forum for exchange of information on new technologies and initiatives.</li> <li>- Continue to respond to technical queries received via numerous channels; maintain a customer call center; and offer reference/customer service through DTIC Online Public, Access Controlled and Classified sites as well as through virtual reference/customer service consortia.</li> <li>- Maintain content for DTIC Online Public, Access Controlled, and Classified versions.</li> <li>- Continue to operate Regional Offices for local service to the DoD community.</li> <li>- Continue to offer training classes, conduct briefings, and staff exhibits at an increasing number of conferences.</li> <li>- Continue conducting customer satisfaction surveys on DTIC's overall success at fulfilling its mission and on the utility and usability of specific information tools.</li> <li>- Continue to expand marketing efforts to grow the number of DTIC registered users.</li> </ul>					

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Defense Technical Information Center				<b>DATE:</b> February 2010				
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 6: <i>RDT&amp;E Management Support</i>		<b>R-1 ITEM NOMENCLATURE</b> PE 0605801KA: <i>Defense Technical Information Center</i>		<b>PROJECT</b> 001: <i>Defense Technical Information Center</i>				
<b>B. Accomplishments/Planned Program (\$ in Millions)</b>								
				<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
<ul style="list-style-type: none"> <li>- Serve as information management consultants to DoD activities and to other government agencies and repositories.</li> <li>- Receive, process and disseminate information from foreign STI organizations as agreed through Memoranda of Understanding.</li> <li>- Serve as the DoD voting member for the American National Standards Institute (ANSI) Z committee, also called the National Information Standards Organization (NISO).</li> </ul>								
Accomplishments/Planned Programs Subtotals				48.636	44.391	56.240	0.000	56.240
<b>C. Other Program Funding Summary (\$ in Millions)</b>								
N/A								
<b>D. Acquisition Strategy</b>								
N/A								
<b>E. Performance Metrics</b>								
<p>Collect Information: Total Science &amp; Technology Information (STI) records collected and selected.            Format/Process/Preserve Information: STI records formatted/processed/preserved.            Disseminate Information: Total STI records disseminated.            Customer Information Assistance: DTIC Code of Service Composite Score.            Information Science and Technology: Percent of Research &amp; Development (R&amp;D) goals achieved.            Component Information Support: Product delivery.            S&amp;T Information Partnership Activities: Full Time Equivalent (FTE) utilization of STI partnerships.</p>								

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Defense Technical Information Center									<b>DATE:</b> February 2010			
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 6: <i>RDT&amp;E Management Support</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0605801KA: <i>Defense Technical Information Center</i>				<b>PROJECT</b> 002: <i>Information Analysis Centers</i>				
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	
002: <i>Information Analysis Centers</i>	4.814	4.814	4.814	0.000	4.814	4.814	4.814	4.814	4.814	Continuing	Continuing	
Quantity of RDT&E Articles												
<b>A. Mission Description and Budget Item Justification</b>												
Information Analysis Center (IAC) Program accomplishes its mission to provide activities that contribute towards operation of the IAC Program Management Office (PMO) and management of the DoD-chartered IACs, which provide technical and analytical services to DoD customers. The IAC PMO performs contract acquisition, management, and operational support for core IAC contract operations and deliverables. Core IAC contract services include: information collection and processing; information analysis and dissemination; and core contract management and support.												
<b>B. Accomplishments/Planned Program (\$ in Millions)</b>												
						<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>		
Information Analysis Centers						4.814	4.814	4.814	0.000	4.814		
<i>FY 2009 Accomplishments:</i> - Provided basic core contract operations for 10 DoD IACs to collect, analyze, synthesize and disseminate worldwide Scientific and Technical Information (STI) in support of DoD's critical technologies and the warfighter. - Provided In-depth analysis services and created Scientific and Technical Information (STI) products. (4,764 STI products produced) - Responded to over 7,100 technical inquiries; prepared state-of-the-art reports, handbooks and databooks, performed technology assessments; and supported the exchange of information among the respective communities. (8.6 million accesses of scientific and technical information on Information Analysis Centers' websites; over 1,200 technical training events held) - Continued executing acquisition plan for Software, Networks, Information Assurance, and Modeling & Simulation (SNIM) Indefinite Delivery Indefinite Quantity Multiple Award Contract (IDIQ MAC).												

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 Defense Technical Information Center **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 6: <i>RDT&amp;E Management Support</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0605801KA: <i>Defense Technical Information Center</i>	<b>PROJECT</b> 002: <i>Information Analysis Centers</i>
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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p><i>FY 2011 Base Plans:</i></p> <ul style="list-style-type: none"> <li>- Provide basic core contract operations for 10 DoD IACs to collect, analyze, synthesize and disseminate worldwide Scientific and Technical Information (STI) in support of DoD's critical technologies and the warfighter.</li> <li>- Provide in-depth analysis services and create STI products.</li> <li>- Respond to technical inquiries; prepare state-of-the-art reports, handbooks and databooks; perform technology assessments; and support the exchange of information among the respective communities.</li> <li>- Award Modeling &amp; Simulation Information Analysis Center (MSIAC), Weapons Systems Technology Information Analysis Center (WSTIAC), and Reliability Information Analysis Center (RIAC) Basic Center Operations contracts.</li> <li>- Establish and begin executing acquisition plan for Chemical, Biological, Radiological, and Nuclear Defense Information Analysis Center (CBRNIAC) Basic Center Operations contract.</li> <li>- Award Defense Systems Indefinite Delivery Indefinite Quantity Multiple Award Contract (IDIQ MAC).</li> <li>- Establish and begin executing acquisition plan for Homeland Defense Indefinite Delivery Indefinite Quantity Multiple Award Contract (IDIQ MAC).</li> <li>- Manage and support Technical Area Tasks (TATs) efforts ordered by the DoD and non-DoD customers.</li> </ul>					
<b>Accomplishments/Planned Programs Subtotals</b>	4.814	4.814	4.814	0.000	4.814

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

N/A

**D. Acquisition Strategy**

N/A

**E. Performance Metrics**

Information Analysis Centers: Number of IAC technical inquiries.

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**Department of Defense  
Fiscal Year (FY) 2011 President's Budget**

February 2010



**Defense Threat Reduction Agency**

*Justification Book Volume 5B*

***Research, Development, Test & Evaluation, Defense-Wide***

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Defense Threat Reduction Agency • President's Budget FY 2011 • RDT&E Program

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Exhibit R-1, RDT&E Programs  
Defense Threat Reduction Agency

**Appropriation: RDT&E, Defense-Wide**

**Date: February 2010**

**OVERVIEW**

The mission of the Defense Threat Reduction Agency (DTRA) is to safeguard the United States and its allies from Weapons of Mass Destruction (WMD) (Chemical, Biological, Radiological, Nuclear, and High Yield Explosives) by providing capabilities to reduce, eliminate, and counter the threat and mitigate its effects.

The DTRA is the only DoD agency focused fulltime on the Countering of WMD threats (C-WMD). The agency is the DoD Combat Support Agency for the C-WMD mission; executes national missions in arms control monitoring and verification, and threat reduction; builds and leverages DoD, US Government, and international partnerships; performs related science and technology development including the Science and Technology portion of the DoD Chemical-Biological Defense Program; develops and provides capabilities that make strategic differences in countering WMD; and provides unique support to the US nuclear deterrent. The DTRA Director concurrently serves as the Director for the US Strategic Command's Center for Combating WMD that maintains WMD situational awareness, establishes technical support and interagency relationships, conducts C-WMD planning activities, synchronizes C-WMD activities among the Combatant Commanders, and advocates for C-WMD capabilities.

The DTRA, in partnership with other US Government agencies, is embarked on a global strategy to increase security cooperation with friends, allies, and other partners to dramatically reduce WMD worldwide. While this strategy requires coordinated action across the US Government, DoD brings to the table a range of expertise, experience, and capabilities from its successes with the Nunn-Lugar Cooperative Threat Reduction (CTR) Program and its arms control monitoring and verification activities, as well as other similar security cooperation programs instituted over the past decade.

This new model for global security engagement, called Nunn-Lugar Global Cooperation, emphasizes greater program agility, flexibility, and responsiveness; expanded interagency and international partnerships; expanded roles for the Combatant Commanders and increased DTRA support to their Theater Security Engagement; and integration of other threat reduction activities such as the Proliferation Security Initiative, Global Initiative to Combat Nuclear Terrorism, and the G8 Global Partnership.

The Defense Threat Reduction Agency (DTRA) has one of the most challenging missions of any Department of Defense (DoD) Agency--- combating weapons of mass destruction (CWMD). Our investment strategy and the difficult funding choices made regarding specific Agency priorities for the FY 2011 budget request responds directly to DoD, Presidential CWMD strategic priorities, and seeks to fill critical investment and sustainment gaps across the DTRA CWMD spectrum in the areas of Arms Control & Verification Technology,

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Exhibit R-1, RDT&E Programs  
Defense Threat Reduction Agency

**Appropriation: RDT&E, Defense-Wide**

**Date: February 2010**

**OVERVIEW (continued)**

Biological Threat Reduction Program, Combating WMD-Terrorism, Global Nuclear Lockdown, Nimble Elder, Joint Intelligence Preparation of the Operating Environment, National Technical Nuclear Forensics, Reachback, and the Counter-WMD Analysis Center (CWAC). The DTRA and Cooperative Threat Reduction FY 2011 budget requests reflect programmatic increases totaling more than \$239 million to support these priorities: (Research & Development: \$65 million; Operation & Maintenance: \$49.8 million; Procurement, Defense-wide: \$5.7 million; Cooperative Threat Reduction Program: \$118.7 million).

The agency's Research, Development, Test and Evaluation (RDT&E) program is designed to meet the most pressing WMD challenges and to reduce the time needed to close WMD capability gaps. RDT&E priorities include: the nexus of WMD and terrorism; countering engineered pathogens; non-traditional agents; denying safe refuge; comprehensive assessments of WMD consequences; post-attack forensics; nuclear and biological detection; engagement with the Intelligence Community; and bolstering Basic Science and University engagements.



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Defense Threat Reduction Agency  
 FY 2011 President's Budget  
 Exhibit R-1 FY 2011 Base and Overseas Contingency Operations (OCO) Request  
 (Dollars in Thousands)

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

Date: 20 Jan 2010

Line No	Program Element Number	Item	Act	FY 2009 (Base & OCO)	FY 2010 Base & OCO Enacted	FY 2010 Supplemental Request	FY 2010 Total	FY 2011 Base	FY 2011 OCO	FY 2011 Total Request	Sec
1	0601000BR	DTRA Basic Research Initiative	01	28,798	40,848		40,848	47,412		47,412	U
	Basic Research			28,798	40,848		40,848	47,412		47,412	
21	0602718BR	Weapons of Mass Destruction Defeat Technologies	02	217,044	221,185		221,185	212,742		212,742	U
	Applied Research			217,044	221,185		221,185	212,742		212,742	
27	0603160BR	Counterproliferation Initiatives - Proliferation Prevention and Defeat	03	221,471	238,773		238,773	295,163		295,163	U
	Advanced Technology Development (ATD)			221,471	238,773		238,773	295,163		295,163	
120	0605000BR	Weapons of Mass Destruction Defeat Capabilities	05	15,499	9,489		9,489	7,307		7,307	U
	System Development and Demonstration (SDD)			15,499	9,489		9,489	7,307		7,307	
150	0605502BR	Small Business Innovation Research	06	8,076							U
	RDT&E Management Support			8,076							
Total Defense Threat Reduction Agency				490,888	510,295		510,295	562,624		562,624	

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Defense Threat Reduction Agency • President's Budget FY 2011 • RDT&E Program

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

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

.....

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

.....

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Defense Threat Reduction Agency • President's Budget FY 2011 • RDT&E Program

***Budget Activity 05: Development & Demonstration (SDD)***  
***Appropriation 0400: Research, Development, Test & Evaluation, Defense-Wide***  
.....

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Defense Threat Reduction Agency • President's Budget FY 2011 • RDT&E Program

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**Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Defense Threat Reduction Agency** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b>			<b>R-1 ITEM NOMENCLATURE</b>								
0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 1: <i>Basic Research</i>			PE 0601000BR: <i>DTRA Basic Research Initiative</i>								
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
Total Program Element	28.798	40.848	47.412	0.000	47.412	47.737	48.071	48.493	48.925	Continuing	Continuing
RU: <i>*Fundamental Research for Combating WMD</i>	28.798	40.848	47.412	0.000	47.412	47.737	48.071	48.493	48.925	Continuing	Continuing

**Note**

\*Project title change from Basic Research for WMD Knowledge Gaps starting in FY 2010

**A. Mission Description and Budget Item Justification**

The Defense Threat Reduction Agency (DTRA) safeguards America and its allies from Weapons of Mass Destruction (chemical, biological, radiological, nuclear, and high explosives) by providing capabilities to reduce, eliminate, and counter the threat, and mitigate its effects. The Basic Research Initiative program provides for the discovery and development of fundamental knowledge and understanding by research performers drawn primarily from academia and world-class research institutions in government and industry. This leverages Department of Defense's \$1 billion annual investment in basic research by ensuring a motivation within the scientific community to conduct research benefiting Weapons of Mass Destruction-related defense missions and by improving Agency knowledge of other research efforts of potential benefit to DTRA nonproliferation, counterproliferation and consequence management efforts.

These efforts are closely coordinated with the Chem-Bio Technology portfolio which executes a basic research program under the joint Chem-Bio Defense Program. Agency research interests are coordinated with those of Defense Advanced Research Projects Agency and Service basic research programs through the Defense Basic Research Advisory Group. DTRA reviews research interests annually to focus on technology areas not clearly addressed by other basic research efforts.

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**Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Defense Threat Reduction Agency** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b>	<b>R-1 ITEM NOMENCLATURE</b>
0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i>	PE 0601000BR: <i>DTRA Basic Research Initiative</i>
BA 1: <i>Basic Research</i>	

**B. Program Change Summary (\$ in Millions)**

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	22.329	48.544	0.000	0.000	0.000
Current President's Budget	28.798	40.848	47.412	0.000	47.412
Total Adjustments	6.469	-7.696	47.412	0.000	47.412
• Congressional General Reductions		-0.196			
• Congressional Directed Reductions		-7.500			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	-0.531	0.000			
• Realignment / Internal Functional Transfer	7.000	0.000	-0.210	0.000	-0.210
• Inflation Reduction	0.000	0.000	-0.266	0.000	-0.266
• Other Program Adjustments	0.000	0.000	47.888	0.000	47.888

**Congressional Add Details (\$ in Millions, and Includes General Reductions)**

**Project:** RU: *\*Fundamental Research for Combating WMD*

    Congressional Add: *Dual Use Technologies for Bio-Defense Drug & Novel Therapeutics*

    Congressional Add: *University Strategic Partnership*

Congressional Add Subtotals for Project: RU

Congressional Add Totals for all Projects

	<u>FY 2009</u>	<u>FY 2010</u>
	1.200	0.000
	3.200	0.000
	4.400	0.000
	4.400	0.000

**Change Summary Explanation**

The increase of \$12 million between FY 2009 and FY 2010 reflect the Agency's commitment to realign research efforts to achieve the Department of Defense's investment norm of 10-12% of total obligation authority for Basic Research. The Defense Threat Reduction Agency's basic research program supports high-payoff, novel research that will provide benefits to the warfighter in important areas of the Combating Weapons of Mass Destruction (CWMD) mission. Three exemplary areas are: (1) remote detection of fissile material; (2) defeat of WMD-related facilities and materials with acceptable collateral damage; and (3) advances in physical and social network analyses that fosters the means for countering electromagnetic pulse attacks and terrorism. Another very important

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 Defense Threat Reduction Agency **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b>	<b>R-1 ITEM NOMENCLATURE</b>
0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 1: <i>Basic Research</i>	PE 0601000BR: <i>DTRA Basic Research Initiative</i>

benefit of basic research is the training of the next generation of scientists, who will be needed to support the warfighter in future operations against emerging WMD threats. The realignment in funding to basic research and systems engineering is to grow the scientific community in support of WMD research to provide far sighted, high payoff research to reduce, eliminate, and mitigate the effects of WMD. The FY 2010 congressional reduction was levied for excessive growth ahead of program assessment.

The DoD did not estimate FY 2011 costs when the FY 2010 President's Budget was prepared. There is a FY 2011 decrease that reflects the internal functional transfer of advisory and assistance services from DTRA's Research, Development, Test & Evaluation, Defense-Wide account to the Operation and Maintenance, Defense-Wide account (\$.210 million). This transfer reflects the internal functional realignment of advisory and assistance services and other business-related costs that were formerly captured under DTRA's Research, Development, Test & Evaluation, Defense-Wide account to the Operation and Maintenance, Defense-Wide account. As part of DTRA's continued effort to integrate and refine its functions and activities, this transfer more appropriately aligns this funding to the proper appropriation. At the Agency level, this functional transfer between appropriations will have a zero sum impact to these budget line items. An additional decrease of \$.266 million is associated with changes in the inflation rates and therefore is a price change, not a program change.

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Defense Threat Reduction Agency								<b>DATE:</b> February 2010			
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 1: <i>Basic Research</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0601000BR: <i>DTRA Basic Research Initiative</i>				<b>PROJECT</b> RU: <i>*Fundamental Research for Combating WMD</i>			
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
RU: <i>*Fundamental Research for Combating WMD</i>	28.798	40.848	47.412	0.000	47.412	47.737	48.071	48.493	48.925	Continuing	Continuing

**Note**

\*Project title change from Basic Research for WMD Knowledge Gaps starting in FY 2010

**A. Mission Description and Budget Item Justification**

This project provides for the discovery and development of fundamental knowledge and understanding by research performers drawn primarily from academia and world-class research institutions in government and industry. This leverages the Department of Defense's (DoD) \$1 billion annual investment in basic research by ensuring a motivation within the scientific community to conduct research benefiting Weapons of Mass Destruction-related defense missions and by improving Agency knowledge of other research efforts of potential benefit to Defense Threat Reduction Agency (DTRA) nonproliferation, counterproliferation and consequence management efforts. The increase in FY 2010 reflects the DTRA corporate decision to fund the 6.1 Basic Research program at the DoD investment norm of 10-12% of Total Obligation Authority.

These efforts are closely coordinated with the Chem-Bio Technology Portfolio which executes a basic research program under the joint Chem-Bio Defense Program. Agency research interests are coordinated with those of Defense Advanced Research Projects Agency and Service basic research programs through the Defense Basic Research Advisory Group. DTRA reviews research interests annually to focus on technology areas not clearly addressed by other basic research efforts.

**B. Accomplishments/Planned Program (\$ in Millions)**

	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
Project RU: Fundamental Research for Combating WMD	24.398	40.848	47.412	0.000	47.412
<p><i>FY 2009 Accomplishments:</i></p> <ul style="list-style-type: none"> <li>- Expanded the FY 2008 basic research portfolio to 100 basic research initiatives dedicated to developing better and new understanding of science principles that can underwrite science and technology to meet strategic challenges. Expanded opportunities to include foreign universities. The overall research goal to build a 6.1 portfolio that represents approximately 10-12% of the Defense</li> </ul>					

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 Defense Threat Reduction Agency **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 1: <i>Basic Research</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0601000BR: <i>DTRA Basic Research Initiative</i>	<b>PROJECT</b> RU: <i>*Fundamental Research for Combating WMD</i>
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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
and to assess the coordination of CWMD basic research across DoD mission space and across the broader basic research community to avoid unintended duplication and ensure successful partnerships.					
Accomplishments/Planned Programs Subtotals	24.398	40.848	47.412	0.000	47.412

	FY 2009	FY 2010
Congressional Add: Dual Use Technologies for Bio-Defense Drug & Novel Therapeutics <i>FY 2009 Accomplishments:</i> - Basic research will focus on containment and renewal of viral threats.	1.200	0.000
Congressional Add: University Strategic Partnership <i>FY 2009 Accomplishments:</i> - Congressional Add funded 3 full and open competition grants to the University of New Mexico. - Basic research will focus on increasing fundamental understanding in the Counter WMD space.	3.200	0.000
Congressional Adds Subtotals	4.400	0.000

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 Defense Threat Reduction Agency **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 1: <i>Basic Research</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0601000BR: <i>DTRA Basic Research Initiative</i>	<b>PROJECT</b> RU: <i>*Fundamental Research for Combating WMD</i>
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**C. Other Program Funding Summary (\$ in Millions)**

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u> <u>Base</u>	<u>FY 2011</u> <u>OCO</u>	<u>FY 2011</u> <u>Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• 20/0602718BR: <i>WMD Defeat Technologies</i>	14.711	13.484	10.385		10.385	10.160	10.011	9.846	9.690	Continuing	Continuing

**D. Acquisition Strategy**

Procurement methods include in-scope award through Defense Threat Reduction Agency University Strategic Partnership, collaborative funding through other organizations, and competitive award through Broad Agency Announcement.

**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 research organizations participating, and percentage of participating universities on the US News & World Report "Best Colleges" list.

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**Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Defense Threat Reduction Agency** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 2: <i>Applied Research</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0602718BR: <i>WMD Defeat Technologies</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	217.044	221.185	212.742	0.000	212.742	206.170	202.610	203.558	207.252	Continuing	Continuing
RA: <i>Systems Engineering and Innovation</i>	55.281	55.857	53.464	0.000	53.464	53.231	52.905	51.754	53.164	Continuing	Continuing
RF: <i>Detection Technology</i>	38.766	47.008	52.649	0.000	52.649	48.406	45.660	46.345	47.046	Continuing	Continuing
RG: <i>Advanced Energetics &amp; Counter WMD Weapons</i>	21.265	32.381	29.139	0.000	29.139	27.522	26.483	26.883	27.282	Continuing	Continuing
RI: <i>Nuclear Survivability</i>	29.359	18.660	17.902	0.000	17.902	17.788	17.695	17.962	18.250	Continuing	Continuing
RL: <i>Nuclear &amp; Radiological Effects</i>	15.041	19.704	16.776	0.000	16.776	17.323	17.067	17.336	17.612	Continuing	Continuing
RM: <i>WMD Battle Management</i>	25.210	14.440	10.899	0.000	10.899	10.303	11.435	11.727	12.107	Continuing	Continuing
RR: <i>Test Infrastructure</i>	17.411	19.651	21.528	0.000	21.528	21.437	21.354	21.705	22.101	Continuing	Continuing
RU: <i>*Fundamental Research for Combating WMD</i>	14.711	13.484	10.385	0.000	10.385	10.160	10.011	9.846	9.690	Continuing	Continuing

**Note**

\*Project title change from Basic Research for WMD Knowledge Gaps starting in FY 2010

**A. Mission Description and Budget Item Justification**

The mission of the Defense Threat Reduction Agency (DTRA) is to safeguard America and its allies from Weapons of Mass Destruction (WMD) by reducing the present threat and preparing for the future threat. This mission directly reflects several national and Department of Defense level guidance/vision documents to include the National Security Strategy, Unified Command Plan, National Strategy to Combat WMD, Counterproliferation Interdiction, National Strategy for Combating Terrorism, National Military Strategy, Global Development of Forces, Global Employment of Forces, National Military Strategy for Combating WMD, National Military Strategic Plan for the War on Terrorism, Joint Strategic Capabilities Plan (including the Nuclear Annex), and Nuclear Posture Review. To achieve this mission, DTRA has identified principal objectives along with strategies and tasks to ensure the objectives are met. Three of these objectives are to deter the use of WMD, reduce the present threat and prepare for the future threat. A focused, strong threat reduction technology base is critical to achieving these objectives and is closely tied with the operational support programs that make up its combat support mission. DTRA has taken the steps to develop this technology base and provide a foundation for transformational activities within the WMD arena.

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 Defense Threat Reduction Agency **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b>	<b>R-1 ITEM NOMENCLATURE</b>
0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 2: <i>Applied Research</i>	PE 0602718BR: <i>WMD Defeat Technologies</i>

Project RA provides the research and development both for systems engineering and analysis support across all other projects and innovative counterproliferation research and technical reachback support.

Project RF develops technologies, systems and procedures to detect, identify, track, tag, locate, monitor and interdict strategic and improvised nuclear and radiological weapons, components, or materials in support of Department of Defense (DoD) requirements for combating terrorism, counterproliferation and nonproliferation, homeland defense, and international initiatives and agreements.

Project RG develops advanced technologies and weapon concepts and validates their applicability as counter Weapons of Mass Destruction (WMD) weapon systems.

Project RI provides the capability for DoD nuclear forces and their associated control and support systems and facilities in wartime to avoid, repel, or withstand attack or other hostile action, to the extent that essential functions can continue or be resumed after the onset of hostile action. Funding in this project reflects a rebalancing of efforts within the program element to augment the Radiation Hardened Microelectronics Program and enabling technologies to enhance Nuclear Weapons Effects (NWE) experimentation capability.

Project RL develops nuclear and radiological assessment modeling tools to support military operational planning, weapon effects predictions, and strategic system design decisions.

Project RM provides (1) full scale testing of counter WMD weapon effects, sensor performance, and weapon delivery optimization, (2) weapon effects modeling, and (3) the Defense Threat Reduction Agency Experimentation Lab.

Project RR provides a unique national test bed capability for simulated 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 DoD, the 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.

Project RU provides (1) strategic studies to support DoD, (2) Decision support tools and analysis to support combating WMD research and development investments, and (3) early applied research for technology development.

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**Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Defense Threat Reduction Agency** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b>	<b>R-1 ITEM NOMENCLATURE</b>
0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i>	PE 0602718BR: <i>WMD Defeat Technologies</i>
BA 2: <i>Applied Research</i>	

**B. Program Change Summary (\$ in Millions)**

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	213.606	219.130	0.000	0.000	0.000
Current President's Budget	217.044	221.185	212.742	0.000	212.742
Total Adjustments	3.438	2.055	212.742	0.000	212.742
• Congressional General Reductions		-1.065			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		3.120			
• Congressional Directed Transfers		0.000			
• Reprogrammings	8.783	0.000			
• SBIR/STTR Transfer	-3.845	0.000			
• Realignment / Internal Functional Transfer	-1.500	0.000	-4.233	0.000	-4.233
• Inflation Reduction	0.000	0.000	-1.116	0.000	-1.116
• Other Program Adjustment	0.000	0.000	218.091	0.000	218.091

**Congressional Add Details (\$ in Millions, and Includes General Reductions)**

**Project:** RA: *Systems Engineering and Innovation*

    Congressional Add: *Comprehensive National Incident Management System*

Congressional Add Subtotals for Project: RA

**Project:** RM: *WMD Battle Management*

    Congressional Add: *National Center for Blast Mitigation & Protection*

Congressional Add Subtotals for Project: RM

**Project:** RU: *\*Fundamental Research for Combating WMD*

    Congressional Add: *Center for Nonproliferation Studies, Monterey Institute for International Affairs*

    Congressional Add: *University Strategic Partnership*

	<u>FY 2009</u>	<u>FY 2010</u>
	2.000	0.000
Congressional Add Subtotals for Project: RA	2.000	0.000
	0.000	1.200
Congressional Add Subtotals for Project: RM	0.000	1.200
	1.200	0.000
	0.000	1.920

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 Defense Threat Reduction Agency **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 2: <i>Applied Research</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0602718BR: <i>WMD Defeat Technologies</i>
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<b><u>Congressional Add Details (\$ in Millions, and Includes General Reductions)</u></b>	<b>FY 2009</b>	<b>FY 2010</b>
Congressional Add Subtotals for Project: RU	1.200	1.920
Congressional Add Totals for all Projects	3.200	3.120

**Change Summary Explanation**

The FY 2009 increase from the previous budget submission reflects the net effect of two reprogramming actions. The FY09-04 PA reprogramming action to accelerate ongoing DTRA research in active interrogation technologies and to accelerate ongoing efforts to identify and develop the technologies necessary to provide an advanced nuclear weapon neutralization capability and the FY 09-26 PA reprogramming action in support of higher priority Department needs.

The DoD did not estimate FY 2011 costs when the FY 2010 President's Budget was prepared. The FY2011 budget reflects an increase for Near Real Time Reachback Support (NRTRS) Demonstration to investigate remote warfighter decision making in WMD Operations using high performance computational tools, visualization, user input and network accessible DTRA Subject Matter Expertise (SME). The demonstration will provide a platform within the Commander's decision cycle time in support of courses of action and tactical decisions related to WMD operations.

The FY 2011 increase is offset by the internal functional transfer of advisory and assistance services from DTRA's Research, Development, Test & Evaluation, Defense-Wide account to the Operation and Maintenance, Defense-Wide account. This transfer reflects the internal functional realignment of advisory and assistance services and other business-related costs that were formerly captured under DTRA's Research, Development, Test & Evaluation, Defense-Wide account to the Operation and Maintenance, Defense-Wide account. As part of DTRA's continued effort to integrate and refine its functions and activities, this transfer more appropriately aligns this funding to the proper appropriation. At the Agency level, this functional transfer between appropriations will have a zero sum impact to these budget line items. An additional decrease of \$1.116 million is associated with changes in the inflation rates and therefore is a price change, not a program change.

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Defense Threat Reduction Agency								<b>DATE:</b> February 2010			
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 2: <i>Applied Research</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0602718BR: <i>WMD Defeat Technologies</i>				<b>PROJECT</b> RA: <i>Systems Engineering and Innovation</i>			
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
RA: <i>Systems Engineering and Innovation</i>	55.281	55.857	53.464	0.000	53.464	53.231	52.905	51.754	53.164	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

The Systems Engineering and Innovation project provides (1) systems engineering and analysis support across all other Projects, (2) innovative counterproliferation research, and (3) technical advisory reachback support on Weapons of Mass Destruction (WMD) effects and consequences. The systems engineering effort provides research and development with requirements, technology, architecture analyses and proof-of-principle capability necessary for making decisions on strategic planning, research and development investments, new initiatives, cooperation, ventures with new customers, and accomplishment of high-level, short notice special projects. It also conducts the development, validation and fielding of the Arms Control Information System as a part of the U.S. commitment under arms control treaties. The innovative counterproliferation effort conducts research and development to investigate, identify, develop and transition short term, high payoff technologies from Defense Threat Reduction Agency (DTRA), other government agencies, industry, academia and international Science and Technology partners into the respective DTRA research and development programs. The technical reachback effort provides 24 hours, 7 days per week information and analyses on potential impacts of a WMD event to Warfighters and First Responders in consult with DTRA's Combating WMD Research and Development subject matter experts. This project also provides technical support to the DTRA London Office.

**B. Accomplishments/Planned Program (\$ in Millions)**

	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
RA: Systems Engineering and Innovation  Project RA provides the research and development both for systems engineering and analysis support across all other projects and innovative counterproliferation research and technical reachback support.  <i>FY 2009 Accomplishments:</i> - Continued to provide support for requirements and gap analysis to enable program managers to identify, conduct, and deliver innovative Science and Technology to combat WMD. As a result of this support, DTRA deployed new constructive simulation trade space environment and supported requirement studies for efforts to prevent loose nukes experimentation campaign, efforts to control	53.281	55.857	53.464	0.000	53.464

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 Defense Threat Reduction Agency **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 2: <i>Applied Research</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0602718BR: <i>WMD Defeat Technologies</i>	<b>PROJECT</b> RA: <i>Systems Engineering and Innovation</i>
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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010
Congressional Add: Comprehensive National Incident Management System	2.000	0.000
<p><i>FY 2009 Accomplishments:</i></p> <ul style="list-style-type: none"> <li>- Continued baseline research and development on the underlying technology upon which each Comprehensive National Incident Management System (CNIMS) capability is based. Demonstrated capabilities for large-scale national and regional pandemic influenza studies. Investigated methodologies necessary to provide complex situational representation and Course of Action (CoA) analyses including public health interventions.</li> <li>- Employing the core research and development technologies, CNIMS provided working level, demonstrative studies supporting the Department of Health &amp; Human Services Assistant Secretary for Preparedness and Response (HHS/ASPR) Fusion Cell and USNORTHCOM (Surgeon General) in support of recent H1NI pandemic.</li> </ul>		
Congressional Adds Subtotals	2.000	0.000

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

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u> <u>Base</u>	<u>FY 2011</u> <u>OCO</u>	<u>FY 2011</u> <u>Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• 26/0603160BR: <i>Proliferation Prevention and Defeat</i>	17.447	7.314	7.270		7.270	7.342	7.346	5.937	5.859	Continuing	Continuing

**D. Acquisition Strategy**

Not Applicable

**E. Performance Metrics**

Number of customer requests for data analysis compared to historical level.

Number of changes to investments based on systems engineering analyses.

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Defense Threat Reduction Agency		<b>DATE:</b> February 2010
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 2: <i>Applied Research</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0602718BR: <i>WMD Defeat Technologies</i>	<b>PROJECT</b> RA: <i>Systems Engineering and Innovation</i>
<p>Number of exercise and operations supported.</p> <p>Number of Defense Acquisition Workforce Improvement Act certified systems engineers.</p> <p>New capabilities delivered and transitioned to operational capabilities.</p>		

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 Defense Threat Reduction Agency **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 2: <i>Applied Research</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0602718BR: <i>WMD Defeat Technologies</i>				<b>PROJECT</b> RF: <i>Detection Technology</i>			
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
RF: <i>Detection Technology</i>	38.766	47.008	52.649	0.000	52.649	48.406	45.660	46.345	47.046	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

The Detection Technology project develops technologies, systems and procedures to detect, identify, track, tag, locate, monitor and interdict strategic and improvised nuclear and radiological weapons, components, or materials in support of Department of Defense requirements for combating terrorism, counterproliferation and nonproliferation, homeland defense, and international initiatives and agreements. This project researches, develops, demonstrates, and transitions advanced technologies to improve: operational capability to detect and identify nuclear and radiological weapons; post-detonation National Technical Nuclear Forensics capabilities; and to support the attribution process. Efforts under this project also support international peacekeeping and nonproliferation objectives, on-site and aerial inspections and monitoring, on-site sampling and sample transport, and on- and off-site analysis to meet forensic, verification, monitoring and confidence-building requirements.

The Detection Technology project under Weapons of Mass Destruction Proliferation Prevention and Defeat emphasizes the advanced technology development and engineering portion of the overall effort.

**B. Accomplishments/Planned Program (\$ in Millions)**

	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
RF: Detection Technology  Project RF develops technologies, systems and procedures to detect, identify, track, tag, locate, monitor and interdict strategic and improvised nuclear and radiological weapons, components, or materials in support of Department of Defense (DoD) requirements for combating terrorism, counterproliferation and nonproliferation, homeland defense, and international initiatives and agreements.	38.766	47.008	52.649	0.000	52.649

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 Defense Threat Reduction Agency **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 2: <i>Applied Research</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0602718BR: <i>WMD Defeat Technologies</i>	<b>PROJECT</b> RF: <i>Detection Technology</i>
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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p>mono-static detector network to provide battle space awareness for hidden and shielded nuclear material for the theater commander.</p> <ul style="list-style-type: none"> <li>- Continued to investigate active interrogation as a safe method of standoff detection in situations where dosage to people and cargo are below the allowable limits.</li> <li>- Continued cooperation and acceptance of DTRA developed detection technologies for operational development.</li> <li>- Continued cooperation and acceptance of DTRA developed post nuclear event collection technologies for operational development.</li> <li>- Continued transitioning multiple near term technologies to generate prototypes and design packages to assist ground forces.</li> <li>- Exercised developmental collection capabilities with table top experiment, command post exercise, and field test experiment.</li> <li>- Continued enhancement/maintenance of the Sentry/Sniper databases. Integrated chemical and biological weapon information and a decision matrix into a comprehensive WMD database.</li> <li>- Continued robotic ground sample collection improvements.</li> <li>- Continued development techniques, tactics, and procedures of a nuclear forensics ground sample collection team.</li> <li>- Conducted modeling, simulation and experiments to evaluate the feasibility of using muons and protons to stimulate fissions in nuclear materials from standoff ranges.</li> </ul> <p><i>FY 2010 Plans:</i></p> <ul style="list-style-type: none"> <li>- Complete design for a baseline Department of Defense large standoff proton active interrogation system to provide a reference standard for evaluating progress and capabilities in standoff detection and warning of hidden and shielded nuclear material.</li> <li>- Continue the extensive effort begun in the standoff Bremsstrahlung active interrogation system Joint Capability Technology Demonstration to develop a standoff active interrogation system to detect hidden and shielded nuclear material.</li> </ul>					

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 Defense Threat Reduction Agency **DATE:** February 2010

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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<ul style="list-style-type: none"> <li>- Investigate the use of muon and proton beams for standoff stimulation of fission in nuclear materials. Conduct experiments to validate the feasibility of the approach.</li> <li>- Investigate alternative methods to stimulate fissions in nuclear materials from standoff ranges, including the use of high-energy lasers to generate beams of mono-energetic x-rays.</li> <li>- Develop methods to rapidly determine nuclear weapon yields post-event, by investigating alternative prompt nuclear weapons effects on the environment.</li> <li>- Develop improved correlation tools, signature databases, and modeling of device/production design space to increase confidence, decrease uncertainties and timelines, to better support production of consensus technical forensics results.</li> <li>- Transition alternative neutron detection materials and systems as an alternative to the use of helium-3.</li> </ul>					
<b>Accomplishments/Planned Programs Subtotals</b>	38.766	47.008	52.649	0.000	52.649

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

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• 26/0603160BR: <i>Proliferation Prevention and Defeat</i>	60.622	70.627	90.688		90.688	89.700	89.898	90.993	91.374	Continuing	Continuing

**D. Acquisition Strategy**

N/A

**E. Performance Metrics**

Successful completion of laboratory testing of the helium dimer Compton imager.

Successful completion of the individual digital dosimeter project.

Increase standoff detection distance using a mobile active interrogation system to stimulate characteristic neutron and gamma ray signals from nuclear material.

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Defense Threat Reduction Agency		<b>DATE:</b> February 2010
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<p>Successful acceptance and operational development of transitional detection technologies.</p> <p>Successful demonstrations of a ground sampling forensics capability to support attribution involving both Radiological Dispersal and Improvised Nuclear Devices.</p> <p>Deliver technical equipment prototypes to reduce their current gaps in technology, to locate, characterize and provide advanced diagnostics to defeat Weapons of Mass Destruction devices in support of a classified Chairman Joint Chiefs of Staff plan.</p> <p>Improve forensics tool capabilities.</p> <p>Support development of a National Technical Nuclear Forensics (NTNF) capability through development of technologies/prototypes addressing gaps and shortfalls in Department of Defense (DoD) NTNF capabilities, and through participation in the interagency process. Note: Specific metrics associated with NTNF are classified.</p> <p>Sustain readiness via lab exercises and Quality Control and Quality Assurance processes. Conduct successful separate collection exercises specific to DoD NTNF mission.</p> <p>Support completion of the Department of Defense (DoD) Directive promulgating DoD support to the National Technical Forensics Program. Draft strategic Concept of Operations for the Commander, U.S. Strategic Command Center for Combating Weapons of Mass Destruction that addresses post-detonation NTNF operational response.</p> <p>Continue to maintain/enhance the Sentry/Sniper databases and assist in populating the Sniper Chemical and Biological database.</p> <p>Use an active interrogation system to interrogate and differentiate Special Nuclear Materials and an inert material at extended ranges.</p>		

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Defense Threat Reduction Agency								<b>DATE:</b> February 2010			
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 2: <i>Applied Research</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0602718BR: <i>WMD Defeat Technologies</i>				<b>PROJECT</b> RG: <i>Advanced Energetics &amp; Counter WMD Weapons</i>			
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
RG: <i>Advanced Energetics &amp; Counter WMD Weapons</i>	21.265	32.381	29.139	0.000	29.139	27.522	26.483	26.883	27.282	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

The Advanced Energetics & Counter WMD Weapons project provides applied research supporting defeat of Weapons of Mass Destruction (WMD) targets (including facilities with biological and chemical agents) while minimizing collateral damage and release of those agents when using air, land and sea assets brought to the theater by the warfighters. The effort also focuses on accelerating the development of advanced energetics technology (highly novel chemical and non-chemical energy systems), integrating disruptive payloads and technologies into existing and next generation weapon systems, developing a Hard and Deeply Buried Target (HDBT) bunker buster capability that produces a threshold of five-fold in defeat capability over current bunker buster capability, ten-fold over current capability by FY 2013 and providing residual and transition support of these products. These objectives will be accomplished by a combination of developing and/or maturing technologies, weapon systems, weapon concepts and methods. Supported products are: (1) counter force weapons, fuzing technology, and robotics; (2) counter force agents and methods; and (3) disruptive payloads and delivery systems.

**B. Accomplishments/Planned Program (\$ in Millions)**

	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
RG: Advanced Energetics & Counter WMD Weapons  Project RG develops advanced technologies and weapon concepts and validates their applicability as counter Weapons of Mass Destruction (WMD) weapon systems.  <i>FY 2009 Accomplishments:</i> - Conducted two flight tests of the Massive Ordnance Penetrator (MOP), successfully demonstrating safe release from the B-52 aircraft, warhead and explosive survivability upon impact, and fuze functionality. - Continued development of technologies for counterforce agent defeat, advanced payloads, counter WMD payload delivery systems, and advanced counter WMD weapons.	21.265	32.381	29.139	0.000	29.139

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 Defense Threat Reduction Agency **DATE:** February 2010

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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<ul style="list-style-type: none"> <li>- Complete development of fuze/fuze module sub-scale survivability test protocol to further characterize breakthrough penetrator technologies.</li> <li>- Continue maturing advanced non-energetic countering WMD payload components.</li> <li>- Initiate advanced testing of countering WMD sub-munitions.</li> <li>- Explore transformational energetic fills by performing Sub-scale characterization of next generation survivable penetrator energetic material fill.</li> <li>- Demonstrate robust survivable 3" fuze instrumentation weapon data recorder package in sub-scale tests.</li> <li>- Continue Thermite Multi-effort Basic Research, trade studies, tests and Demos.</li> <li>- Initiate Singlet Oxygen Compatibility studies/tests.</li> <li>- Explore transformational energetic fills by performing Sub-scale characterization of next generation survivable penetrator energetic material fill</li> <li>- Demonstrate robust survivable 3" fuze instrumentation weapon data recorder package in sub-scale tests</li> <li>- Continue Thermite Multi-effort Basic Research, trade studies, tests and Demos.</li> <li>- Initiate Singlet Oxygen Compatibility studies/tests</li> </ul>					
<b>Accomplishments/Planned Programs Subtotals</b>	21.265	32.381	29.139	0.000	29.139

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

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• 26/0603160BR: <i>Proliferation Prevention and Defeat</i>	26.412	21.396	17.386		17.386	18.486	25.508	26.962	26.413	Continuing	Continuing

**D. Acquisition Strategy**

N/A

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Defense Threat Reduction Agency		<b>DATE:</b> February 2010
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**E. Performance Metrics**

Number of large scale tests completed.

Percent increase of countering WMD weapon performance compared to fielded weapons (e.g. Bomb, Live Unit (BLU)-109 and BLU-113).

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Defense Threat Reduction Agency								<b>DATE:</b> February 2010			
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 2: <i>Applied Research</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0602718BR: <i>WMD Defeat Technologies</i>				<b>PROJECT</b> RI: <i>Nuclear Survivability</i>			
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
RI: <i>Nuclear Survivability</i>	29.359	18.660	17.902	0.000	17.902	17.788	17.695	17.962	18.250	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

The Nuclear Survivability project provides enabling technologies for Department of Defense (DoD) nuclear forces and their associated control and support systems and facilities in wartime to avoid, repel, or withstand attack or other hostile action, to the extent that essential functions can continue or be resumed after the onset of hostile action. Emphasis is on ionizing radiation effects and Electromagnetic Pulse. The Nuclear Survivability project provides Radiation Hardened Microelectronics and Nuclear Weapons Effects (NWE) experimentation capabilities. Funding in this project also supports the expanding role of the Nuclear Test Personnel Review (NTPR) program into Science & Technology development.

The Simulation Technology area is operating under a new business model for the West Coast Facility, San Leandro, CA, that makes it a 100% customer funded facility. These NWE simulators are available to validate nuclear survivability requirements for DoD missile and space systems, conduct research in radiation effects, and validate computational models. The Nuclear Survivability Experimental Capabilities program is working with the National Nuclear Security Administration and the United Kingdom Atomic Weapons Establishment to jointly develop new, enabling technologies for improved NWE experimentation capabilities for x-rays, gamma rays and neutrons.

The Nuclear Technology Analysis Support provides support for the Joint Atomic Information Exchange Group and the international Weapon Effects Steering Committee (WESC) that was called the NWE Users' Group. The WESC establishes standards for nuclear weapons effects simulation codes and models as defined and prioritized by the nuclear community, and serves as a forum for sharing information on nuclear technologies, gaps and plans.

**B. Accomplishments/Planned Program (\$ in Millions)**

	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
RI: Nuclear Survivability	29.359	18.660	17.902	0.000	17.902
Project RI provides the capability for DoD nuclear forces and their associated control and support systems and facilities in wartime to avoid, repel, or withstand attack or other hostile action, to the extent that essential functions can continue or be resumed after the onset of hostile action. Funding in this project reflects a rebalancing of efforts within the program element to augment the Radiation Hardened					

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<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 2: <i>Applied Research</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0602718BR: <i>WMD Defeat Technologies</i>	<b>PROJECT</b> RI: <i>Nuclear Survivability</i>
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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p>Microelectronics Program and enabling technologies to enhance Nuclear Weapons Effects (NWE) experimentation capability.</p> <p><i>FY 2009 Accomplishments:</i></p> <ul style="list-style-type: none"> <li>- Characterized the warm x-ray sources at the West Coast Facility (WCF) using a time-resolved camera from the United Kingdom's Atomic Weapons Establishment.</li> <li>- Conducted warm x-ray source experiments on Saturn and matched the dose-rates produced at the WCF.</li> <li>- Initiated research &amp; development for enabling technology to improve small experimentation capability for high fidelity gamma effects and model validation.</li> <li>- Developed laser-driven cold x-ray source designs and experiment plans to investigate the potential Nuclear Weapons Effects (NWE) capabilities of the National Ignition Facility (NIF) in collaboration with Lawrence Livermore National Laboratory and the Missile Defense Agency.</li> <li>- Researched and published beta-particle radiation dose probabilistic uncertainty analysis.</li> </ul> <p><i>FY 2010 Plans:</i></p> <ul style="list-style-type: none"> <li>- Demonstrate final Radiation Hardened by Design 90 nanometer reconfigurable Field-Programmable Gate Array.</li> <li>- Complete disposition of excess government-owned WCF equipment.</li> <li>- Complete a joint x-ray source and effects demonstration experiment at the NIF with Sandia National Laboratory, Lawrence Livermore National Laboratory, United Kingdom Atomic Weapons Establishment, and the Missile Defense Agency.</li> <li>- Develop new, enabling technologies for improved NWE experimentation capabilities for x-rays, gamma rays, and neutrons.</li> <li>- Development of modeling for prompt radiation environment in urban settings, noting in particular canyon effects and shielding by structures.</li> </ul>					

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 Defense Threat Reduction Agency **DATE:** February 2010

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<b>B. Accomplishments/Planned Program (\$ in Millions)</b>	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p><i>FY 2011 Base Plans:</i></p> <ul style="list-style-type: none"> <li>- Demonstrate initial 45nm radiation hardened prototype circuits to develop radiation hardened by design methods.</li> <li>- Complete prototype demonstration of a high-temporal fidelity gamma small experimentation capability.</li> <li>- Continue investigation of NIF as a potential NWE experimentation capability.</li> <li>- Complete Warm X-ray source experiments on Saturn.</li> <li>- Improve operational models of secondary and tertiary blast effects.</li> </ul>					
<b>Accomplishments/Planned Programs Subtotals</b>	29.359	18.660	17.902	0.000	17.902

<b>C. Other Program Funding Summary (\$ in Millions)</b>										
<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To Complete Total Cost</u>
• 25/0603160BR: <i>Proliferation Prevention and Defeat</i>	9.749	13.935	14.052		14.052	13.962	13.878	14.062	14.252	Continuing Continuing

**D. Acquisition Strategy**

N/A

**E. Performance Metrics**

Reduce facility overhead costs by disposition of excess government-owned simulator hardware at the West Coast Facility (WCF).

Development of cold and warm x-ray capabilities on the Saturn machine at Sandia National Laboratory that meet or exceed the equivalent capabilities at the WCF.

Weapon Effects Steering Committee: Coordinate and integrate nuclear weapon effects needs, capabilities and programs across the United States and United Kingdom defense communities and provide accreditation authority for all nuclear-related modeling and simulation.

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Defense Threat Reduction Agency								<b>DATE:</b> February 2010			
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<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
RL: <i>Nuclear &amp; Radiological Effects</i>	15.041	19.704	16.776	0.000	16.776	17.323	17.067	17.336	17.612	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

The Nuclear and Radiological Effects project develops nuclear and radiological assessment modeling tools to support military operational planning, weapon effects predictions, and strategic system design decisions; consolidate validated Defense Threat Reduction Agency modeling tools into net-centric environment for integrated functionality; predict system response to nuclear and radiological weapons producing electromagnetic, thermal, blast, shock and radiation environments - key systems include Nuclear Command and Control System, Global Information Grid, missiles, structures, humans and environment; provide detailed adversary nuclear infrastructure characterization to enhance counterforce operations and hazard effects; conduct analyses in support of nuclear and radiological Science and Technology and address the priority needs of the Combatant Commands and the Department of Defense.

Changes from FY 2009 to 2010 reflect rebalancing of efforts in the areas of advanced modeling systems and survivability technology are rebalanced to increase corporate capabilities in systems engineering and analysis support across all other projects within the research and development portfolio. The impacts delay full 3-D modeling and simulation efforts for electromagnetic pulse (EMP) response and consequence management predictions, to include second and third order effects.

**B. Accomplishments/Planned Program (\$ in Millions)**

	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
RL: Nuclear & Radiological Effects	15.041	19.704	16.776	0.000	16.776
<p>Project RL develops nuclear and radiological assessment modeling tools to support military operational planning, weapon effects predictions, and strategic system design decisions.</p> <p><i>FY 2009 Accomplishments:</i></p> <ul style="list-style-type: none"> <li>- Continued to provide nuclear electromagnetic hardening and survivability support to the Joint Staff, Defense Information Systems Agency, and Missile Defense Agency. Focus areas anticipated include the Nuclear Command and Control System and Global Information Grid (GIG).</li> <li>- Completed development and integration of the electromagnetic pulse (EMP) prediction model and low equivalent dose radiation cancer algorithms.</li> </ul>					

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 Defense Threat Reduction Agency **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 2: <i>Applied Research</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0602718BR: <i>WMD Defeat Technologies</i>	<b>PROJECT</b> RL: <i>Nuclear &amp; Radiological Effects</i>
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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<ul style="list-style-type: none"> <li>- Continue development of models allowing the predictions and analysis of nuclear survivability for Nuclear Command and Control System.</li> <li>- Continue to validate code for system response to X-Rays; validate and integrate Modeling and Simulation (M&amp;S) capability to understand thermo-structural response to X-Rays; validate and integrate M&amp;S capability for satellite design.</li> </ul>					
<b>Accomplishments/Planned Programs Subtotals</b>	15.041	19.704	16.776	0.000	16.776

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

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• 115/0605000BR: <i>WMD Defeat Capabilities</i>	15.499	8.689	7.307		7.307	6.660	5.432	5.508	5.587	Continuing	Continuing

**D. Acquisition Strategy**

N/A

**E. Performance Metrics**

Complete transition of all hazard source terms to the Chemical and Biological (Chem-Bio) Defense Program's Joint Effects Model (JEM) Block II enhancing our ability to predict hazards associated with weapons of mass destruction.

Develop and integrate baseline database of 80% of current foreign nuclear reactors and enrichment facilities.

Provide Department of Defense the ability to predict the survival and mission impact of military critical systems exposed to nuclear weapon environments within acceptability criteria defined during the model accreditation process.

Transition required capabilities to the Chem-Bio Defense Program's JEM and Joint Operational Effects Federation, the Missile Defense Agency, U.S. Space Command, and U.S. Strategic Command's planning suite.

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Defense Threat Reduction Agency								<b>DATE:</b> February 2010			
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 2: <i>Applied Research</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0602718BR: <i>WMD Defeat Technologies</i>				<b>PROJECT</b> RM: <i>WMD Battle Management</i>			
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
RM: <i>WMD Battle Management</i>	25.210	14.440	10.899	0.000	10.899	10.303	11.435	11.727	12.107	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

The WMD Battle Management project provides applied research to support full and sub-scale testing required to investigate countering Weapons of Mass Destruction (WMD) weapon effects, sensor performance, and weapon delivery optimization; weapon effects modeling algorithm development; and the set-up of the Defense Threat Reduction Agency (DTRA) Experimentation Lab.

This project provides combatant commanders the prediction capability and the attack options to engage Hard & Deeply Buried Targets (HDBTs) as the proliferation and hardness of this class target increases. It develops new and enhanced capabilities at DTRA's WMD National Test Beds for integrating WMD defeat testing Department of Defense (DoD) wide and supports tests and demonstrations of new capabilities for the countering WMD offensive operations mission area. It develops, tests, and demonstrates innovative and optimized HDBT Defeat weapon delivery methods, leading to the Services implementation of optimized conventional weapon Tactics, Techniques and Procedures into warfighter operations. The project conducts weapon effects phenomenology tests, analyzes data, conducts high performance computer simulations, and creates/modifies software to more accurately model cratering effects, fragmentation (both primary & secondary), internal air blast, equipment/container damage, structural response, and penetration. These efforts will lead to advanced modeling capability in the countering WMD tools, Integrated Munitions Effects Assessment (weaponeering) and Vulnerability Assessment and Protection Option (force/structure protection).

The DTRA Experimentation Lab Capability is an Agency-wide capability that assures the timely acquisition, synchronization, correlation and delivery of Chemical, Biological, Radiological, Nuclear and Explosive (CBRNE) consequence management and mitigation data necessary in combating WMD. The DTRA Experimentation Lab will be the "key enabler" allowing the Agency to transform successfully into an interoperable DoD Science and Technology environment. Through the use of the DTRA Experimentation Lab, DTRA will be able to shape and improve military situational awareness independent of time or location, effectively shorten decision cycles in a CBRNE event, and extend DTRA's knowledge base externally through collaborative technologies.

Changes from FY 2009 to FY 2010 reflect a realignment of funds that were realigned from this project to fund the 6.1 Basic Research program at the DoD investment goal of 10-12% of Total Obligation Authority. Efforts in this project were rebalanced to increase corporate capabilities within Project RA - Systems Engineering and Innovation. Subprograms impacted are Weapons Effects Planning Tools, WMD Technology, and Counter WMD Weapons Effects modeling/testing. Planned tests supporting blast mitigation projects and recapitalization of test beds are delayed. Risk reduction testing is scaled back and technology demonstrations are reduced.

**B. Accomplishments/Planned Program (\$ in Millions)**

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 Defense Threat Reduction Agency **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 2: <i>Applied Research</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0602718BR: <i>WMD Defeat Technologies</i>	<b>PROJECT</b> RM: <i>WMD Battle Management</i>
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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p>RM: WMD Battle Management</p> <p>Project RM provides (1) full scale testing of counter WMD weapon effects, sensor performance, and weapon delivery optimization, (2) weapon effects modeling, and (3) the Defense Threat Reduction Agency Experimentation Lab.</p> <p><i>FY 2009 Accomplishments:</i></p> <ul style="list-style-type: none"> <li>- Conducted 70 material characterization tests on Ultra-High Performance Concrete (UHPC) which are used to develop high-fidelity computational models.</li> <li>- Conducted 9 small-scale penetration tests on UHPC with oblique angles of impact and multi-layers of UHPC and conventional concrete.</li> <li>- Conducted 3 contact and embedded detonation tests on UHPC.</li> <li>- Completed testing and model development for multi-hit attacks to hardened bunker roof slabs.</li> <li>- Conducted equipment fragility testing in 20 separate field events, for components of biological weapons facilities.</li> <li>- Conducted Internal Detonation (quasi static and dynamic pressure) testing and modify model.</li> <li>- Conducted testing and modeling improvements to the Weapons of Mass Destruction (WMD) Agent Release Model allowing agent release from user-specified fragments.</li> <li>- Completed 9 tests of contact and near-contact explosive charges against columns to improve analytical models (partnered with the Technical Support Working Group and Navy Facilities Engineering Service Center).</li> <li>- Conducted modifications to predictive models for two blast door types in order to capture more complex failure modes.</li> <li>- Conducted 6 tests examining blast propagation through failing walls from internal detonations to support model development.</li> <li>- Continued research and development supporting countering WMD weapons effect modeling &amp; testing and the Defense Threat Reduction Agency (DTRA) Experimentation Lab. Tunnel blast experiments, using a 1/3 scaled complex tunnel test facility, to validate tunnel blast models was not completed..</li> </ul>	25.210	13.240	10.899	0.000	10.899

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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<ul style="list-style-type: none"> <li>- Implemented multiple security levels across DTRA information domains to increase effectiveness of the DTRA Experimentation Lab.</li> <li>- Continued to provide leading technological integration capabilities to the Combating WMD (CWMD) mission through utilization of the DTRA Experimentation Lab (DEL).</li> <li>- Continued to support demonstrations and experimentation events for the CWMD Community of Interest to include participation in Noble Resolve, Coalition Warrior Interoperability Demonstration, Urban Resolve, and DTRA loose nukes experimentation campaigns. Integrated Technology Demonstration (ITD-1) Test/Demonstration facility design &amp; construction not started.</li> <li>- Continued facilitation of the internal Continuity of Operations Table Top Experiment through the DEL.</li> </ul> <p><i>FY 2010 Plans:</i></p> <ul style="list-style-type: none"> <li>- Conduct Ultra High Performance Concrete penetration tests and material analysis. Continue modeling.</li> <li>- Complete model for multi-hit attacks to hardened bunker roof slabs. Finalize or re-direct multi-hit research efforts.</li> <li>- Deliver 15 additional validated equipment fragility models.</li> <li>- Complete Quasi Static Pressure model.</li> <li>- Conduct testing and modeling improvements to the Weapons of Mass Destruction (WMD) Agent Release Model with emphasis on dry agents.</li> <li>- Complete column satchel charge model.</li> <li>- Conduct blast door model testing and model modifications.</li> <li>- Complete progressive collapse model.</li> <li>- Continue to provide leading technological integration capabilities to the combating WMD mission through utilization of the Defense Threat Reduction Agency (DTRA) Experimentation Lab (DEL).</li> <li>- Continue to support demonstrations and experimentation events for the Countering WMD Continuity of Interest to include participation in Noble Resolve, Coalition Warrior Interoperability Demonstration, Urban Resolve, and Campaign X experimentation campaigns.</li> <li>- Continue facilitation of the internal Continuity of Operations Table Top Experiment through the DEL.</li> </ul>					

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Defense Threat Reduction Agency				<b>DATE:</b> February 2010				
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 2: <i>Applied Research</i>		<b>R-1 ITEM NOMENCLATURE</b> PE 0602718BR: <i>WMD Defeat Technologies</i>		<b>PROJECT</b> RM: <i>WMD Battle Management</i>				
<b>B. Accomplishments/Planned Program (\$ in Millions)</b>								
				<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
<p><i>FY 2011 Base Plans:</i></p> <ul style="list-style-type: none"> <li>- Conduct Ultra High Performance Concrete penetration tests and material analysis. Continue modeling and finalize evaluation of current models.</li> <li>- Deliver 15 additional validated equipment fragility models.</li> <li>- Complete validation and verification on Internal Detonation (quasi-static and dynamic pressure) model.</li> <li>- Conduct testing and modeling improvements to the WMD Agent Release Model. Complete validation and verification of dry agent model.</li> <li>- Conduct blast door model testing and model modifications.</li> <li>- Complete progressive collapse testing and model development for concrete frame structures.</li> <li>- Continue to provide leading technological integration capabilities to the combating WMD mission through utilization of the DEL.</li> <li>- Continue to support demonstrations and experimentation events for the Countering WMD Community of Interest (COI) to include participation in Noble Resolve, Coalition Warrior Interoperability Demonstration, Urban Resolve, and efforts to prevent loose nukes experimentation campaigns.</li> <li>- Continue facilitation of the internal Continuity of Operations Table Top Experiment through the DEL.</li> </ul>								
Accomplishments/Planned Programs Subtotals				25.210	13.240	10.899	0.000	10.899
				<b>FY 2009</b>	<b>FY 2010</b>			
Congressional Add: National Center for Blast Mitigation & Protection				0.000	1.200			
<p><i>FY 2010 Plans:</i></p> <ul style="list-style-type: none"> <li>-Improve high fidelity analyses for internal blast environments and weapon-target interactions</li> <li>-Improve internal blast models to enhance DTRA's Vulnerability Assessment &amp; Protection Option (VAPO) and Integrated Munitions Effects Assessment (IMEA) planning tools.</li> </ul>								

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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010
-Enhance computational ability for the Agency to save time in generating target solutions.		
Congressional Adds Subtotals	0.000	1.200

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

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u> <u>Base</u>	<u>FY 2011</u> <u>OCO</u>	<u>FY 2011</u> <u>Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• 26/0603160BR: <i>Proliferation, Prevention and Defeat</i>	37.647	31.939	28.260		28.260	26.907	27.914	28.200	28.482	Continuing	Continuing

**D. Acquisition Strategy**

N/A

**E. Performance Metrics**

Percent confidence in engineering models.

Percent confidence in assessment solutions.

Number of targets successfully planned.

Time require to complete assessments.

The Defense Threat Reduction Agency Experimentation Lab is occupied by planning or execution efforts 75% of the year.

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Defense Threat Reduction Agency								<b>DATE:</b> February 2010			
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 2: <i>Applied Research</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0602718BR: <i>WMD Defeat Technologies</i>				<b>PROJECT</b> RR: <i>Test Infrastructure</i>			
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
RR: <i>Test Infrastructure</i>	17.411	19.651	21.528	0.000	21.528	21.437	21.354	21.705	22.101	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

The Test Infrastructure 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 to respond to operational needs by developing and maintaining test beds used by the Department of Defense (DoD), the 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. It leverages fifty years of testing expertise to investigate 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 (nuclear, biological and chemical). The project maintains testing infrastructure to support the testing requirements of warfighters, other government agencies, and friendly foreign countries on a cost reimbursable basis. Creates testing strategies and a WMD Test Bed infrastructure focusing on the structural response of buildings and Hard & Deeply Buried Targets that house nuclear, biological, and chemical facilities. It provides support for full and sub-scale tests that focus on weapon-target interaction with fixed soft and hardened facilities to include aboveground facilities, cut-and-cover facilities, and deep underground tunnels. This capability does not exist anywhere else within the DoD and supports the counterproliferation pillar of the National Strategy to Combat WMD.

**B. Accomplishments/Planned Program (\$ in Millions)**

	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
RR: Test Infrastructure  Project RR provides a unique national test bed capability for simulated 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 DoD, the 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.	17.411	19.651	21.528	0.000	21.528

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<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 2: <i>Applied Research</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0602718BR: <i>WMD Defeat Technologies</i>	<b>PROJECT</b> RR: <i>Test Infrastructure</i>
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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p>- Continue infrastructure and instrumentation upgrades to ensure test beds meet customers' advanced technology testing needs.</p> <p><i>FY 2011 Base Plans:</i></p> <ul style="list-style-type: none"> <li>- Complete construction of add on structures to Component Test Structure -3 to develop weapons effects and mitigation test data models for fire and blast in cooperation with the Singapore government with estimated start date for testing first quarter FY 2011.</li> <li>- Upgrade and integrate instrumentation mobile wireless "Mesh" infrastructure capabilities and improvements in support of the Department of Home Land Security (DHS/DNDO) tests conducted at DTRA and DHS/DNDO defined CONUS wide locations in support of DHS/DNSO Secure the Cities (STC), Lower Manhattan Security Initiative *(LMSI) and other functional tests as defined by DHS/ DNDO during the first quarter FY 2011.</li> <li>- Conduct Interagency Biological Restoration Demonstration (IBRD) testing in conjunction with DoD &amp; DHS to reduce the time and resources necessary to recover and restore wide urban areas, Military Installations, and critical infrastructure following a biological incident with estimated start date second quarter FY 2011.</li> <li>- Construct facility for Integrated Test Demonstration to defeat credible, threat-based scenarios with an estimated start date for testing third quarter FY 2011.</li> <li>- Conduct testing on Chemical, Biological, Radiological, Nuclear and Explosive sensors, WMD countermeasures, remote geological sensing, and battle management systems designed for surveillance and tracking targets used for WMD activities during the third and fourth quarters FY 2011.</li> <li>- Conduct WMD Aerial Collection System testing which is designed to meet U.S. Forces Korea's requirement of an "all-in-one" Chemical Biological Radiological &amp; Nuclear sensor system for post-strike assessment (Battle Damage Assessment) of suspected WMD facilities and mobile time-sensitive targets during third and fourth quarters FY 2011.</li> <li>- Conduct nuclear detection and forensics testing to prevent weapons grade material/dirty bombs from entering the U.S., U.S. Territories, and Allied Nations with estimated start date fourth quarter FY 2011.</li> </ul>					

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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<ul style="list-style-type: none"> <li>- Conduct Weapons of Mass Destruction sensor testing at the Technical Evaluation Assessment and Monitor Site to detect nuclear grade material from entering the U.S., U.S. Territories, and Allied Nations through rail, ship, and air ports with estimated start date fourth quarter FY 2011.</li> <li>- Continue environmental remediation and compliance activities at the Nevada Test Site, Dugway Proving Grounds, White Sands Missile Range, and Kirtland Air Force Base in accordance with EPA, Safety, &amp; Environmental guidelines throughout FY 2011.</li> <li>- Develop Cost Analysis Tool for Test Sites database to develop Rough Order of Magnitude estimates for different types of tests as well as different test beds during FY 2011.</li> <li>- Conduct tunnel work detection testing at Nevada Test Site for the Customs and Border Patrol to be able to detect tunnel work or tunnels along northern and southern borders of CONUS with estimated fourth quarter FY 2011.</li> <li>- Continue infrastructure and instrumentation upgrades to ensure test beds meet customers' advanced technology testing needs.</li> <li>- Document, prioritize, and support test infrastructure requirements.</li> </ul>					
<b>Accomplishments/Planned Programs Subtotals</b>	17.411	19.651	21.528	0.000	21.528

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

N/A

**D. Acquisition Strategy**

N/A

**E. Performance Metrics**

Number of tests executed safely, i.e., no loss of life or limb, no unintentional significant damage of property.

Number of tests that go through the milestone review process.

Number of tests that undergo environmental assessment consistent with existing Environmental Impact Statements.

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<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
RU: <i>*Fundamental Research for Combating WMD</i>	14.711	13.484	10.385	0.000	10.385	10.160	10.011	9.846	9.690	Continuing	Continuing

**Note**

\*Project title change from Basic Research for WMD Knowledge Gaps starting in FY 2010

**A. Mission Description and Budget Item Justification**

The Fundamental Research for Combating WMD project (1) conducts strategic studies to support Department of Defense, (2) develops decision support tools and conducts analyses to support combating Weapons of Mass Destruction (WMD) research and development investments, and (3) advances emerging technology and transitional science into viable applied technology development capabilities. The strategic studies address challenges in reducing the threat from WMD based on an assessment of the future national security environment. They also develop and maintain an evolving analytical vision of necessary and sufficient capabilities to protect the U.S. and allied forces and citizens from nuclear, biological, and chemical attack and identify gaps in these capabilities and initiate programs to fill them. The decision support tools identify key technology and performance parameters required for products generated under research and development investments. These tools also assess the expected impact on military missions and forces. The advancement of technology and science into applied technology development effort focus upon increasing the stability and utility of mid-to-long term, moderate risk but high payoff science and emerging technologies for transition to other Defense Threat Reduction Agency (DTRA) applied technology programs. This effort serves as the bridge between the bench scientist and the applied technologist.

Beginning in FY 2010, this project is rebalanced to transition the decision support tools efforts into Project RA - Systems Engineering and Innovation to enhance corporate capabilities across all projects.

**B. Accomplishments/Planned Program (\$ in Millions)**

	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
RU: Fundamental Research for Combating WMD  Project RU provides (1) strategic studies to support DoD, (2) Decision support tools and analysis to support combating WMD research and development investments, and (3) early applied research for technology development.	13.511	11.564	10.385	0.000	10.385

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<b>B. Accomplishments/Planned Program (\$ in Millions)</b>										
<ul style="list-style-type: none"> <li>- Final operational capability for pilot program to support Department of Defense effort to utilize a web-based system for research proposal submission, evaluation and status reporting.</li> <li>- Continue to provide technical expertise and advice to generate the new basic research topics in support of the semi-annual solicitation.</li> <li>- Continue examination of emerging technologies and underlying sciences applicable to combating WMD with increased emphasis on avoiding technical surprise.</li> <li>- Initiate new “bridging” projects for early applied development of combating WMD technologies.</li> <li>- Continue the mentoring, sponsorship, and education of the “Next Generation” of mission-critical scientific, technical and engineering expertise.</li> </ul> <p><i>FY 2011 Base Plans:</i></p> <ul style="list-style-type: none"> <li>- Identify and transition all suitable investigatory Science and Technology research and development projects to appropriate long-term sponsors for concept/design validation, prototype fabrication, testing, and fielding.</li> <li>- Identify and conduct strategic studies addressing challenges in reducing the threat from WMD.</li> <li>- Assess utility of continuing testbed; continue to exercise the testbed to assess promising technologies to quantify and mitigate large area nuclear effects on systems, networks and equipment.</li> <li>- Continue “bridging” projects for early applied development of combating WMD technologies.</li> <li>- Continue to provide technical expertise and advice to generate the new basic research topics in support of the semi-annual solicitation.</li> <li>- Continue the mentoring, sponsorship, and education of the “Next Generation” of mission-critical scientific, technical and engineering expertise.</li> </ul>						<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
Accomplishments/Planned Programs Subtotals						13.511	11.564	10.385	0.000	10.385
						<b>FY 2009</b>	<b>FY 2010</b>			
Congressional Add: Center for Nonproliferation Studies, Monterey Institute for International Affairs						1.200	0.000			

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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010
<p><i>FY 2009 Accomplishments:</i></p> <ul style="list-style-type: none"> <li>- The main focus of CNS is to help build the knowledge base for DTRA and DoD that will allow for better understanding, anticipation, and influence of the WMD-related behavior of adversaries and to help decision-makers avoid costly mistakes and achieve national security objectives.</li> <li>- Studies, analyses, databases, seminars, and training, that support the DTRA mission of understanding, anticipating, preparing for, and reducing the threat from Weapons of Mass Destruction (WMD).</li> </ul>		
<p>Congressional Add: University Strategic Partnership</p> <p><i>FY 2010 Plans:</i></p> <ul style="list-style-type: none"> <li>-Support early technology development for the Counter-WMD mission area across multiple science areas including new materials for radiation detectors, survivable electronics, and computational modeling.</li> <li>-Collaborate with universities to stimulate interest in cutting edge Counter-WMD research with a strategic goal for fostering the growth of scientific talent for the Counter-WMD workforce.</li> </ul>	0.000	1.920
<b>Congressional Adds Subtotals</b>	1.200	1.920

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

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• 1/0601000BR: <i>DTRA Basic Research Initiative</i>	28.798	40.848	47.412		47.412	47.737	48.071	48.493	48.925	Continuing	Continuing

**D. Acquisition Strategy**

N/A

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Defense Threat Reduction Agency		<b>DATE:</b> February 2010
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 2: <i>Applied Research</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0602718BR: <i>WMD Defeat Technologies</i>	<b>PROJECT</b> RU: <i>*Fundamental Research for Combating WMD</i>

**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's educational goals, number of research organizations participating, and percentage of participating universities on the US News & World Report "Best Colleges" list.

Minimum 10% increase in the number of new universities participating in the basic research grant program from FY 2008-2010.

Publication of an annual basic research technical and external programmatic review report.

Each study/project will commence within 3 months of customer request and results delivered within 3 months of completion.

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**Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Defense Threat Reduction Agency** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 3: <i>Advanced Technology Development (ATD)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0603160BR: <i>Counterproliferation Initiatives - Proliferation, Prevention and Defeat</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	221.471	238.773	295.163	0.000	295.163	302.977	312.230	313.098	314.580	Continuing	Continuing
RA: <i>Systems Engineering and Innovation</i>	17.447	7.314	7.270	0.000	7.270	7.342	7.346	5.937	5.859	Continuing	Continuing
RE: <i>Counter-Terrorism Technologies</i>	40.270	61.268	102.395	0.000	102.395	110.987	112.267	113.675	113.380	Continuing	Continuing
RF: <i>Detection Technology</i>	60.622	70.627	90.688	0.000	90.688	89.700	89.898	90.993	91.374	Continuing	Continuing
RG: <i>Advanced Energetics &amp; Counter WMD Weapons</i>	26.412	21.396	17.386	0.000	17.386	18.486	25.508	25.962	26.413	Continuing	Continuing
RI: <i>Nuclear Survivability</i>	9.749	13.935	14.052	0.000	14.052	13.962	13.878	14.062	14.252	Continuing	Continuing
RM: <i>WMD Battle Management</i>	37.647	31.939	28.260	0.000	28.260	26.907	27.914	28.200	28.482	Continuing	Continuing
RT: <i>Target Assessment Technologies</i>	29.324	32.294	35.112	0.000	35.112	35.593	35.419	34.269	34.820	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

The Proliferation, Prevention and Defeat program reduces Weapons of Mass Destruction (WMD) proliferation and enhances WMD defeat capabilities through advanced technology development. To accomplish this objective, seven project areas were developed: RA - Systems Engineering and Innovation, RE - Counter-Terrorism Technologies, RF - Detection Technology, RG - Advanced Energetics and Counter WMD Weapons, RI - Nuclear Survivability, RM - WMD Battle Management and RT - Target Assessment Technologies. This revision supports technology requirements in line with the Joint Functional Concepts (Chairman, Joint Chiefs of Staff Instruction 3170.01). The missions and plans of these projects are described below in the R-2a Budget Exhibits.

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**Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Defense Threat Reduction Agency** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b>	<b>R-1 ITEM NOMENCLATURE</b>
0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i>	PE 0603160BR: <i>Counterproliferation Initiatives - Proliferation, Prevention and Defeat</i>
BA 3: <i>Advanced Technology Development (ATD)</i>	

**B. Program Change Summary (\$ in Millions)**

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	218.958	233.203	0.000	0.000	0.000
Current President's Budget	221.471	238.773	295.163	0.000	295.163
Total Adjustments	2.513	5.570	295.163	0.000	295.163
• Congressional General Reductions		-1.150			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		6.720			
• Congressional Directed Transfers		0.000			
• Reprogrammings	11.316	0.000			
• SBIR/STTR Transfer	-3.303	0.000			
• Realignment / Internal Functional Transfer	-5.500	0.000	56.153	0.000	56.153
• Inflation Reduction	0.000	0.000	-1.249	0.000	-1.249
• Other Program Adjustment	0.000	0.000	240.259	0.000	240.259

**Congressional Add Details (\$ in Millions, and Includes General Reductions)**

**Project: RA: *Systems Engineering and Innovation***

Congressional Add: *Recovery, Recycle and Reuse (R3) of DOE Metals for DoD Applications*

Congressional Add Subtotals for Project: RA

**Project: RF: *Detection Technology***

Congressional Add: *Next Generation Intelligent Portable Radionuclide Detection and Identification Systems*

Congressional Add: *AELED IED Electronic Signature Detection*

Congressional Add: *Continuation of Adv Materials Research for Nuc Detection, CP and Imaging*

Congressional Add Subtotals for Project: RF

Congressional Add Totals for all Projects

	<u>FY 2009</u>	<u>FY 2010</u>
	0.000	1.920
	0.000	1.920
	1.600	0.000
	3.200	4.800
	0.800	0.000
	5.600	4.800
	5.600	6.720

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Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Defense Threat Reduction Agency DATE: February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 3: <i>Advanced Technology Development (ATD)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0603160BR: <i>Counterproliferation Initiatives - Proliferation, Prevention and Defeat</i>
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**Change Summary Explanation**

The FY 2009 increase from the previous budget submission reflects the net effect of two reprogramming actions; the FY09-04 PA reprogramming action to accelerate ongoing DTRA efforts for advanced nuclear and radiological detection systems, and the FY 09-26 PA reprogramming in support of higher priority Department needs.

The DoD did not estimate FY 2011 cost when the FY 2010 President's Budget was prepared. The FY 2011 Agency's RDT&E budget reflects increased investment in several areas which respond directly to DoD and Presidential CWMD strategic priorities. The budget adjustments close critical investment and sustainment gaps across the DTRA CWMD spectrum. Specific focus areas are: 1) Counter WMD-Terrorism (CWMD-T), 2) Joint Intelligence Preparation of the Operational Environment (JIPOE), 3) Nuclear Forensics, 4) Arms Control Monitoring, 5) Helium-3 replacement technology, and 6) Counter-WMD Analysis Cell (C-WAC). The CWMD-T develops technologies to enable the warfighter to locate, identify, characterize, and access WMDs and their production and storage facilities. It also focuses efforts to disrupt, delay, degrade, destroy or deny Chemical, Biological, Radiological, and Nuclear WMDs, all while minimizing risk to U.S. forces. The JIPOE integrates, federates, and analyzes intelligence information to forecast plausible terrorist threats for planning and conducting operations to combat WMD terrorism. Nuclear Forensics increases support post-detonation data collection and analysis to support national decision making. Arms Control Monitoring and Verification Technologies will revitalize arms control technologies to support treaty verification regimes by developing systems to improve capabilities to be more responsive to the new security environment without compromising sensitive U.S. information. Helium-3 Replacement Technology develops technologies and components for systems to reduce reliance on Helium-3 technology. C-WAC will conduct the analysis required to accelerate spiral development and deployment of new modeling capabilities across Nuclear, Biological Warfare (BW) and Chemical Warfare (CW) threat areas, enhancing fusion of R&D and intelligence support for the Combatant Commands. Sustaining these RDT&E budget increases are key to meeting national and DoD CWMD priorities.

These increases are partially offset by the internal functional transfer of advisory and assistance services from DTRA's Research, Development, Test & Evaluation, Defense-Wide account to the Operation and Maintenance, Defense-Wide account. The transfer to Operation and Maintenance reflects the internal functional realignment of advisory and assistance services and other business-related costs that were formerly captured under DTRA's Research, Development, Test & Evaluation, Defense-Wide account to the Operation and Maintenance, Defense-Wide account. As part of DTRA's continued effort to integrate and refine its functions and activities, this transfer more appropriately aligns this funding to the proper appropriation. At the Agency level, this functional transfer between appropriations will have a zero sum impact to these budget line items. An additional decrease of \$1.249 million is associated with changes in the inflation rates and therefore is a price change, not a program change.

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Defense Threat Reduction Agency								<b>DATE:</b> February 2010			
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 3: <i>Advanced Technology Development (ATD)</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0603160BR: <i>Counterproliferation Initiatives - Proliferation, Prevention and Defeat</i>				<b>PROJECT</b> RA: <i>Systems Engineering and Innovation</i>			
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
RA: <i>Systems Engineering and Innovation</i>	17.447	7.314	7.270	0.000	7.270	7.342	7.346	5.937	5.859	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

The Systems Engineering and Innovation project provides the research and development operations analysis support to the Agency in understanding, analysis, integration and execution of Defense Threat Reduction Agency (DTRA) operational missions. This includes analysis of National, Department of Defense and other Federal agencies' strategic guidance and plans in the combating Weapons of Mass Destruction (WMD), Combating Terrorism and Homeland Defense arenas through analytical political-military and technical studies, workshops and conferences. It also provides DTRA on-site support to North Atlantic Treaty Organization (NATO) and Supreme Headquarters Allied Powers, Europe (SHAPE) with a current primary focus on support to U.S. European Command (USEUCOM), NATO, and SHAPE in combating WMD and maintaining the NATO nuclear deterrent. A significant element of this project includes support to Command Elements and the warfighting Combatant Commands (COCOMs) on strategies for reducing/countering the WMD threat in the COCOMs Areas of Responsibility. This project also provides for the solution to the Secretary of Defense mandate for DTRA to account, maintain, report, and track the National Nuclear Weapons Stockpile & Nuclear Weapon-Related Materiel during peacetime, crisis, and wartime. In support of national requirements necessary to maintain a viable nuclear deterrent, the Defense Integration and Management of Nuclear Data Services provides a platform to ensure continued sustainability and viability of the nuclear weapon stockpile.

**B. Accomplishments/Planned Program (\$ in Millions)**

	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
RA: Systems Engineering and Innovation  <i>FY 2009 Accomplishments:</i> - Organized/convened workshops for the Special Operations Command Commander (Nov 2008 on Security Force Assistance using Pakistan as a case study) and the Air Force Chief of Staff (Jun 2009 on the Air Force's Nuclear Mission and the Future of Deterrence Planning). - Institutionalized development of Combating WMD lessons learned in regional COCOMs theaters and with appropriate international staffs. - Continued to support development and update of DTRA annexes to USEUCOM Theater Security Cooperation Plans to insure DTRA assets are used to further Combating WMD mission in that theater.	17.447	5.394	7.270	0.000	7.270

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Defense Threat Reduction Agency				<b>DATE:</b> February 2010				
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 3: <i>Advanced Technology Development (ATD)</i>		<b>R-1 ITEM NOMENCLATURE</b> PE 0603160BR: <i>Counterproliferation Initiatives - Proliferation, Prevention and Defeat</i>		<b>PROJECT</b> RA: <i>Systems Engineering and Innovation</i>				
<b>B. Accomplishments/Planned Program (\$ in Millions)</b>								
				<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
<p><i>FY 2011 Base Plans:</i></p> <ul style="list-style-type: none"> <li>- Continue to conduct strategic analyses and assessments on emerging WMD threats.</li> <li>- Continue to organize/conduct senior COCOM, Interagency, and International workshops, symposiums, and table top exercises to address key national/international strategies for reducing/combating the WMD threat.</li> <li>- Continue to refine and enhance WMD lessons learned process with international staff and across the other COCOM, incorporating lessons learned from partner activities.</li> <li>- Continue to develop and update Defense Threat Reduction Agency (DTRA) Campaign Support Plan as directed in the Global Employment of Forces (GEF) to further Combating WMD mission across all theaters while balancing DTRA assets and managing risks as prioritized within the GEF.</li> <li>- Utilize institutionalized linkage with NATO/SHAPE and USEUCOM in international research and development collaboration to further develop similar international research and development collaboration within the Pacific Region in accordance with the GEF.</li> </ul>								
Accomplishments/Planned Programs Subtotals				17.447	5.394	7.270	0.000	7.270
				<b>FY 2009</b>	<b>FY 2010</b>			
Congressional Add: Recovery, Recycle and Reuse (R3) of DOE Metals for DoD Applications				0.000	1.920			
<p><i>FY 2010 Plans:</i></p> <ul style="list-style-type: none"> <li>- Funding will be used toward continued development of an efficient low cost method of obtaining lightweight specialty metals for use by the DoD.</li> <li>- DTRA believes this add was misdirected again in FY10. DTRA is working with Army and OSD to have this add reprogrammed to the Army.</li> </ul>								
Congressional Adds Subtotals				0.000	1.920			

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Defense Threat Reduction Agency		<b>DATE:</b> February 2010
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 3: <i>Advanced Technology Development (ATD)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0603160BR: <i>Counterproliferation Initiatives - Proliferation, Prevention and Defeat</i>	<b>PROJECT</b> RA: <i>Systems Engineering and Innovation</i>

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

<b>Line Item</b>	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>	<b>FY 2012</b>	<b>FY 2013</b>	<b>FY 2014</b>	<b>FY 2015</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
• 20/0602718BR: <i>WMD Defeat Technologies</i>	55.281	55.857	50.914		50.914	53.231	52.905	51.754	53.164	Continuing	Continuing

**D. Acquisition Strategy**

N/A

**E. Performance Metrics**

- Development of a DoD annex to the National Response plan for a pandemic flu and subsequent national-level exercises to test plan.
- Development of Defense Threat Reduction Agency (DTRA) Security Cooperation Plans for all regional Combatant Commands (COCOMs).
- Development of a DTRA gap analysis of Combating Weapons of Mass Destruction (CWMD) mission vice Homeland Defense and Combating Terrorism mission areas to provide way ahead for DTRA operational and research and development planning.
- Robust lessons learned process that incorporates new, workable operational and technical solutions into DoD and with allies.
- Incorporation of at least three new technologies by FY 2013 as a result of International research and development collaboration.
- Number of strategic analyses and assessments conducted on emerging WMD threats.
- Number of senior Combatant Commands (COCOMs), Interagency and/or International Workshops/Conferences organized/conducted to address national/international strategies for reducing the WMD threat.
- Manage the strategic weapons stockpile and Nuclear Weapon-Related Materiel; maintain 100% accountability.
- Support the Office of Secretary of Defense, Joint Staff, Combatant Commands, Services, Nuclear Weapon Custodial Units, and Department of Energy.

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Defense Threat Reduction Agency								<b>DATE:</b> February 2010			
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 3: <i>Advanced Technology Development (ATD)</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0603160BR: <i>Counterproliferation Initiatives - Proliferation, Prevention and Defeat</i>				<b>PROJECT</b> RE: <i>Counter-Terrorism Technologies</i>			
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
RE: <i>Counter-Terrorism Technologies</i>	40.270	61.268	102.395	0.000	102.395	110.987	112.267	113.675	113.380	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

The Counter-Terrorism Technologies project is an over-arching project that has three distinct functional areas in support of Joint U.S. Military Forces, specifically U.S. Special Operations Command (USSOCOM). The research and development support to USSOCOM is one of the highest priority mission areas in the Overseas Contingency Operations and a top priority for Defense Threat Reduction Agency (DTRA). The following efforts are included in this project:

The Device Defeat effort develops innovative technologies, energetic materials, and software programs to identify, defeat, contain and mitigate Weapons of Mass Destruction (WMD) capable Improvised Explosive Devices. Device Defeat began with minimal funding in FY 2008 and receives full funding in FY 2010. DTRA has been delegated the responsibilities and authority to act as Task Lead on behalf of DoD to provide leadership, integration, development, and testing as the primary U.S. Government coordinator for the National Implementation Plan WMD-Terrorism Task 5.4.4.

Develop and transition the full spectrum of new technologies for Joint U.S. Military Forces to counter WMD, enabling warfighters, specifically Special Operations Forces, to improve their ability to detect, disable, interdict, neutralize, and destroy chemical, biological, nuclear production, storage, and weaponization facilities.

Provide oversight for Counterproliferation (CP) research and development resources sent directly to USSOCOM that are used to develop Special Operations Forces (SOF)-unique technologies in support of USSOCOM's CP mission. New CP technologies are developed under USSOCOM management that provides SOF with the operational capability to counter WMD threats.

The requested increase builds upon the FY 2010 request in support of the Combating WMD-Terrorism (CWMD-T) Support Program and Arctic Mist efforts. Arctic Mist builds upon the collaborative effort with the warfighter that delivered a proof of concept to USSOCOM in June 2007 and provides a multi-mission oriented critical capability that may be applied throughout the entire spectrum of warfare while significantly eliminating collateral damage. It will develop technologies to enable the warfighter to locate, identify, characterize and access WMDs, their production and storage facilities and associated enablers anywhere within the terrorist pathway to disrupt, delay, degrade, destroy or deny Chemical, Biological, Radiological and Nuclear WMDs while minimizing risk to US forces in support of Counterproliferation and Counterterrorism Offensive operations. Arctic Mist specifically addresses USSOCOM Directive 70-1 Appendix C, Special Mission Area Programs and 71-4 Force Development Special Operations Forces Capabilities Integration and Development Systems. The Counter Weapons of Mass Destruction – Terrorism (CWMD T) Support Program integrates and federates all-source intelligence products and information with operational analysis to support the Joint Intelligence Preparation of the

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 Defense Threat Reduction Agency **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 3: <i>Advanced Technology Development (ATD)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0603160BR: <i>Counterproliferation Initiatives - Proliferation, Prevention and Defeat</i>	<b>PROJECT</b> RE: <i>Counter-Terrorism Technologies</i>
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Operational Environment (JIPOE) process to forecast plausible terrorist WMD threats for planning and conducting operations to combat WMD terrorism. The CWMD-T Support Program specifically addresses a USSOCOM Statement of Requirements for Combating WMD – Terrorism.

**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
RE: Counter-Terrorism Technologies  <i>FY 2009 Accomplishments:</i> - Continued to support research and development of technologies to enhance the capabilities of U.S. Forces in the OCO in countering Weapons of Mass Destruction (WMD) and improve their ability to detect, disable, interdict, neutralize, and destroy chemical, biological, and nuclear production, storage, and weaponization facilities. - Delivered SOF-unique technologies under the SOF Venture program. Projects completed: Gellants Phase II, Global Positioning Systems-Denied Navigation and Mapping, Phase III (final) of Integrated IMCS, NanoCatalysts, Stir Device, and Generation I Thermal Agent Defeat. - Continued development of various SOF-unique technologies under the SOF Venture program. - Continued terrorist pathway counterproliferation Advanced Technology Development (ATD). - Conducted Military Unit Assessment/Independent Validation and Verification of proven technologies. Provided management oversight and technical assistance for SOF-unique technologies, and developed enhanced SOF capabilities in coordination with USSOCOM. - Developed plans for WMD/Improvised Explosive Device anti-terrorism technologies that will increase Explosive Ordnance Disposal capabilities to identify, defeat and contain a radiological dispersal device (FY 2010 increase in funding will enable research and development to begin resulting in an initial delivery of the short-term solutions). - Initiated Pilot Phase to establish the Combating Weapons of Mass Destruction – Terrorism Support Cell. - Initiated efforts to explore Counter-Smuggling Network development, and utilized University Strategic Partnership to develop a Black Sea Regional Academic Network in support of the Global Initiative to Combat Nuclear Terrorism.	40.270	61.268	102.395	0.000	102.395

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Defense Threat Reduction Agency	<b>DATE:</b> February 2010
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<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 3: <i>Advanced Technology Development (ATD)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0603160BR: <i>Counterproliferation Initiatives</i> <i>- Proliferation, Prevention and Defeat</i>	<b>PROJECT</b> RE: <i>Counter-Terrorism Technologies</i>
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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p><i>FY 2010 Plans:</i></p> <ul style="list-style-type: none"> <li>- Continue development and then transition new technologies for Joint U.S. Military Forces to counter WMD, enabling warfighters, specifically Special Operations Forces (SOF), to improve their ability to detect, disable, interdict, neutralize, and destroy chemical, biological, and nuclear production, storage, and weaponization facilities.</li> <li>- Characterize networks.</li> <li>- Characterize material properties of Ultra-High Performance Concrete.</li> <li>- Initiate funding for three 48-month technology solutions.</li> <li>- Knowledge Management Objectives: Threat Assessment, acquire emergent fireset design and build; characterization &amp; testing; classified Research and Development programs to counter emergent threat(s).</li> <li>- Integrate and federate national intelligence with operations research systems analysis capabilities to support planning and operations.</li> <li>- Continue Counter-Smuggling Network development, and utilize University Strategic Partnership to develop a Black Sea Regional Academic Network in support of the Global Initiative to Combat Nuclear Terrorism.</li> </ul> <p><i>FY 2011 Base Plans:</i></p> <ul style="list-style-type: none"> <li>- Continue development and then transition new technologies for Joint U.S. Military Forces to counter Weapons of Mass Destruction (WMD), enabling warfighters, specifically SOF, to improve their ability to detect, disable, interdict, neutralize, and destroy chemical, biological, and nuclear production, storage, and weaponization facilities. These efforts use innovative technologies utilizing energetic, mechanical and alternative energies to improve the efficiencies and effectiveness of Joint U.S. Military Ground Force's offensive operations against CBRNE WMD production facilities.</li> <li>- Develop test articles for development of Ultra High-Performance Concrete tactics, techniques, and procedures.</li> <li>- Develop tools to enable the warfighter to combat against WMDs, their production and storage facilities and associated enablers anywhere within the terrorist pathway.</li> </ul>					

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<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 3: <i>Advanced Technology Development (ATD)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0603160BR: <i>Counterproliferation Initiatives</i> - <i>Proliferation, Prevention and Defeat</i>	<b>PROJECT</b> RE: <i>Counter-Terrorism Technologies</i>
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<b>B. Accomplishments/Planned Program (\$ in Millions)</b>	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<ul style="list-style-type: none"> <li>- Structural Defeat will provide tools for the destruction of key entry points while collapsing the structure or rendering it unusable (Target Defeat).</li> <li>- Continue Counter-Smuggling Network development, and utilize University Strategic Partnership to develop a Black Sea Regional Academic Network in support of the Global Initiative to Combat Nuclear Terrorism.</li> </ul>					
<b>Accomplishments/Planned Programs Subtotals</b>	40.270	61.268	102.395	0.000	102.395

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

N/A

**D. Acquisition Strategy**

N/A

**E. Performance Metrics**

Number of technologies developed and delivered, and/or proof of concept, or successful Military Utility Assessments conducted that increase the potential mission success and reduces the number of current gaps in Special Operations Forces (SOF) capabilities to counter weapons of mass destruction when conducting Overseas Contingency Operations.

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Defense Threat Reduction Agency								<b>DATE:</b> February 2010			
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 3: <i>Advanced Technology Development (ATD)</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0603160BR: <i>Counterproliferation Initiatives - Proliferation, Prevention and Defeat</i>				<b>PROJECT</b> RF: <i>Detection Technology</i>			
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
RF: <i>Detection Technology</i>	60.622	70.627	90.688	0.000	90.688	89.700	89.898	90.993	91.374	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

The Detection Technology project develops technologies, systems and procedures to detect, identify, track, tag, locate, monitor and interdict strategic and improvised nuclear and radiological weapons, components, or materials in support of Department of Defense requirements for combating terrorism, counterproliferation and nonproliferation, homeland defense, and international initiatives and agreements. This project researches, develops, demonstrates, and transitions advanced technologies to improve: operational capability to detect and identify nuclear and radiological weapons; post-detonation National Technical Nuclear Forensics capabilities; and to support the attribution process. Efforts under this project also support international peacekeeping and nonproliferation objectives, on-site and aerial inspections and monitoring, on-site sampling and sample transport, and on- and off-site analysis to meet forensic, verification, monitoring and confidence-building requirements.

The Detection Technology project under Weapons of Mass Destruction Proliferation Prevention and Defeat emphasizes the advanced technology development and engineering portion of the overall effort.

Efforts within the program element are rebalanced beginning in FY 2010 to support the nuclear forensics Joint Capability Technology Demonstration to employ mature technologies and to improve procedures to address gaps identified by the National Technical Nuclear Forensic (NTNF) Capabilities Based Assessment to advance capabilities across the entire post detonation NTNF system.

The FY 2011 budget increase predominately reflects funding increases for Nuclear Forensics. This accelerates development and implementation of accurate, rapid, and reliable global nuclear forensic capabilities to collect, analyze, and evaluate post-detonation prompt data and ground debris from a nuclear or radiological event to support attribution and National decision-making. It also funds Helium-3 replacement to develop technologies and components that serve as one-for-one replacements for systems that rely on He-3 technology. Additionally, it supports Arms Control Monitoring & Verification Technology to develop systems and technologies to improve monitoring and verification capabilities that are responsive to the new security environment without compromising sensitive US information in the international arena for the arms control treaty regime.

**B. Accomplishments/Planned Program (\$ in Millions)**

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 Defense Threat Reduction Agency **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 3: <i>Advanced Technology Development (ATD)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0603160BR: <i>Counterproliferation Initiatives</i> - <i>Proliferation, Prevention and Defeat</i>	<b>PROJECT</b> RF: <i>Detection Technology</i>
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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<ul style="list-style-type: none"> <li>- Continued transitioning multiple near term technologies to generate prototypes and design packages to assist ground forces. Transitioned 8 of 10 EOD specific tools to supported forces for the defeat of Weapons of Mass Destruction.</li> <li>- Exercised developmental collection capabilities with table top exercises, command post exercises, and field training exercises.</li> <li>- Continued Enhancement/maintenance of the Sentry/Sniper databases. Integrated chemical and biological weapon information and a decision matrix into a comprehensive WMD database. Incorporated Home Made Explosives (HME) data base into Sniper data base.</li> <li>- Continued development Techniques, Tactics, and Procedures of a nuclear forensics ground sample collection team.</li> <li>- Conducted modeling, simulation and experiments to evaluate the feasibility of using muons and protons to stimulate fissions in nuclear materials from standoff ranges.</li> <li>- Conducted/supported multiple Inter-Agency end-to-end exercise/demonstration of global National Technical Nuclear Forensics for attribution capabilities.</li> <li>- Continued refinement of the Concept of Operations (CONOPS) and Standard Operating Procedures (SOP) for ground sample collection.</li> <li>-Continued development of unattended sensor technologies for rapid detection and identification of radiological material.</li> <li>- Development of contour mapping technologies for radiation field analysis.</li> <li>- Continued to enhance/maintain the Sentry/Sniper databases. Continued integrating chemical and biological weapon information and a decision matrix into comprehensive weapons of mass destruction database.</li> <li>-Transitioned eight of 10 Explosive Ordinance Disposal (EOD) specific tools to supported forces for the defeat of WMD.</li> </ul>					

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Defense Threat Reduction Agency	<b>DATE:</b> February 2010
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<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 3: <i>Advanced Technology Development (ATD)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0603160BR: <i>Counterproliferation Initiatives</i> <i>- Proliferation, Prevention and Defeat</i>	<b>PROJECT</b> RF: <i>Detection Technology</i>
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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p><i>FY 2010 Plans:</i></p> <ul style="list-style-type: none"> <li>- Complete design for a baseline Department of Defense large standoff proton active interrogation system to provide a reference standard for evaluating progress and capabilities in standoff detection and warning of hidden and shielded nuclear material.</li> <li>- Continue the extensive effort begun in the stand off Bremsstrahlung active interrogation system JCTD to develop a system capable of detecting hidden and shielded nuclear material.</li> <li>- Perform field demonstrations of new detector technologies for handheld detectors, distributed sensors, and vehicle mountable detector systems, to improve the ability of fielded forces to detect, locate, and identify nuclear materials in the battle space. Continue to improve performance of new detector materials, imaging and spectroscopy systems, and signals analysis methods through rigorous field testing.</li> <li>- Continue to develop and field (prototype) upgraded technical capabilities for prompt and debris sample collection, sample analysis, and integration of design modeling and forensic data to support development of technical conclusions.</li> <li>- Provide enhanced technical support and analysis to the Nuclear Weapons Council and Nuclear Weapons Council Standing and Safety Committee and other high-level committees and senior decision makers to transform the nuclear stockpile and infrastructure.</li> <li>- Investigate the use of muon and proton beams for standoff stimulation of fission in nuclear materials. Conduct experiments to validate the feasibility of the approach.</li> <li>- Continue refinement of the Continuity of Operations and Standard Operating Procedures for ground sample collection.</li> <li>- Continue to enhance/maintain the Sentry/Sniper databases. Continue integrating chemical and biological weapon information and a decision matrix into a comprehensive WMD database.</li> <li>- Continue the development and transition of prototypes and technical data packages to supported forces.</li> <li>- Begin operational characterization of select shape charges in support of WMD defeat technologies.</li> <li>- Begin operational testing of classified defeat capability against specific WMD targets.</li> </ul>					

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Defense Threat Reduction Agency				<b>DATE:</b> February 2010				
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 3: <i>Advanced Technology Development (ATD)</i>		<b>R-1 ITEM NOMENCLATURE</b> PE 0603160BR: <i>Counterproliferation Initiatives - Proliferation, Prevention and Defeat</i>		<b>PROJECT</b> RF: <i>Detection Technology</i>				
<b>B. Accomplishments/Planned Program (\$ in Millions)</b>								
				<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
<ul style="list-style-type: none"> <li>- Complete operational testing of classified defeat capability against specific WMD targets.</li> <li>- Continue update/enhancement and maintenance of SNIPER family of data bases.</li> <li>- Complete development of next generation of man portable battery powered X-ray systems for diagnostics of WMD.</li> <li>- Complete development of next generation Timed Delay Firing Device.</li> <li>- Investigate capability gaps and opportunities for insertion of technology for treaty monitoring and verification.</li> <li>- Develop experiment to determine the seismic effects of device coupling.</li> <li>- Begin to develop a manufacturing capability for boron and lithium based replacements to helium based neutron detectors.</li> </ul>								
Accomplishments/Planned Programs Subtotals				55.022	65.827	90.688	0.000	90.688
				<b>FY 2009</b>	<b>FY 2010</b>			
Congressional Add: Next Generation Intelligent Portable Radionuclide Detection and Identification Systems <i>FY 2009 Accomplishments:</i> - Efforts are focused on technology development for high resolution, uncooled detectors. eV Microelectronics delivered low power electronics for a handheld detector and improved CZT processing techniques with the last congressional. This year, they will focus on an improved low cost/ high yield method for growing CZT. eV is currently the largest supplier of CZT in the United States.				1.600	0.000			
Congressional Add: AELED IED Electronic Signature Detection <i>FY 2009 Accomplishments:</i> - Continued to develop both an active and passive Improvised Explosive Device (IED) detection signature system.				3.200	4.800			

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Defense Threat Reduction Agency		<b>DATE:</b> February 2010
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<b>B. Accomplishments/Planned Program (\$ in Millions)</b>		
	<b>FY 2009</b>	<b>FY 2010</b>
<ul style="list-style-type: none"> <li>- Frequency agile source prototype design components have been identified and characterized along with filtering approaches to reduce source emissions has been accomplished.</li> <li>- Defined prototype antenna design and identified commercial-off-the-shelf (COTS) availability along with defined prototype software architecture.</li> <li>- Preliminary testing and evaluation (T&amp;E) was completed on the ground and airborne system in July'09 and the formal T&amp;E of the airborne system is being coordinated.</li> <li>- The airborne effort has focused on evaluating system performance and identifying methods to reduce the effects of external and internal electromagnetic interference sources.</li> <li>- The airborne system sensor performance successfully met threshold performance requirements; objective performance requirements are being addressed.</li> </ul> <p><i>FY 2010 Plans:</i></p> <ul style="list-style-type: none"> <li>- Continue active source technology development and integration with passive capability.</li> <li>- Continue frequency agile source development and integration.</li> <li>- Build next-generation active source and integrate with receiver.</li> <li>- Research and develop phenomenology for better assessment of target responses to illumination.</li> <li>- Develop phenomenology for WMD/IED applications for signature detection and evaluation of underground facilities and for WMD/IED triggers.</li> <li>- Develop advanced receiver and algorithm enhancement for detection of evolving signatures to improve DSP (digital signal processing) capability specific to this application and the identification/design of emerging hardware for electronics detection.</li> </ul>		
<p>Congressional Add: Continuation of Adv Materials Research for Nuc Detection, CP and Imaging</p> <p><i>FY 2009 Accomplishments:</i></p> <ul style="list-style-type: none"> <li>- Efforts are focused on technology development for high resolution, uncooled detectors. The anticipated accomplishment for the Constellation Technology Corporation (CTC) \$800k will be an improved, low cost/high yield method for growing mercuric iodide crystals. CTC is currently the world's sole supplier of mercuric iodide.</li> </ul>	0.800	0.000

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 Defense Threat Reduction Agency **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 3: <i>Advanced Technology Development (ATD)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0603160BR: <i>Counterproliferation Initiatives - Proliferation, Prevention and Defeat</i>	<b>PROJECT</b> RF: <i>Detection Technology</i>
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**B. Accomplishments/Planned Program (\$ in Millions)**

	<b>FY 2009</b>	<b>FY 2010</b>
Congressional Adds Subtotals	5.600	4.800

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

<b>Line Item</b>	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>	<b>FY 2012</b>	<b>FY 2013</b>	<b>FY 2014</b>	<b>FY 2015</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
• 26/0602718BR: <i>WMD Defeat Technologies</i>	38.766	47.008	52.649		52.649	48.406	45.660	46.345	47.046	Continuing	Continuing

**D. Acquisition Strategy**

N/A

**E. Performance Metrics**

Conduct/support end-to-end National Technical Nuclear Forensics capabilities exercise and supporting demonstration(s).

Successfully develop data integration capability with future interagency comprehensive, all domain weapons of mass destruction detection architecture.

Continue to develop upgraded technologies for sample collection, sample analysis, and data analysis; develop plan for faster diagnostics based on technology demonstrations; formulate program direction for advanced forensic sampling concepts.

Detection standoff distance: handheld identification of 1 kilogram of shielded Highly Enriched Uranium at five meters.

Successful maritime demonstration of neutron sensitive panel detector.

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Defense Threat Reduction Agency								<b>DATE:</b> February 2010			
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 3: <i>Advanced Technology Development (ATD)</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0603160BR: <i>Counterproliferation Initiatives - Proliferation, Prevention and Defeat</i>				<b>PROJECT</b> RG: <i>Advanced Energetics &amp; Counter WMD Weapons</i>			
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
RG: <i>Advanced Energetics &amp; Counter WMD Weapons</i>	26.412	21.396	17.386	0.000	17.386	18.486	25.508	25.962	26.413	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

The Advanced Energetics & Counter WMD Weapons project provides advanced technology development and demonstration for defeating Weapons of Mass Destruction (WMD) targets (including facilities with biological and chemical agents) while minimizing collateral damage and release of those agents when using air, land and sea assets brought to the theater by the warfighters. These objectives will be accomplished by a combination of developing and/or maturing technologies, weapon systems, weapon concepts and methods. Supported products are: (1) advanced counter-WMD weapons, fuzing technology, and robotics; (2) counter force agent defeat weapons and methods; and (3) disruptive payloads and delivery systems.

**B. Accomplishments/Planned Program (\$ in Millions)**

	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
RG: Advanced Energetics & Counter WMD Weapons	26.412	21.396	17.386	0.000	17.386
<p><i>FY 2009 Accomplishments:</i></p> <ul style="list-style-type: none"> <li>- Continued development of advanced countering Weapons of Mass Destruction (WMD) weapons and counter-force agent defeat weapons.</li> <li>- Integrated/tested Insensitive Munitions Agent Defeat Bomb, Live Unit (BLU)-109 payload supporting U.S. Air Force tactics, techniques and procedures for the Shredder program.</li> <li>- Completed Joint Direct Attack Munitions Guidance Kit Integration and Demonstration with BLU-121.</li> <li>- Produced BLU-121 technical data package for transition to program of record.</li> <li>- Conducted sub-scale testing of counter-WMD kinetic and non-kinetic based payloads.</li> <li>- Continued development of non-kinetic payloads and novel materials.</li> <li>- Supported the Acquisition Transition Program Support and Weapon Effects Targeting Analysis for BLU-121.</li> <li>- Supported Thermobaric Advanced Concept Technology Demonstrations All Up Round Penetration Sled Test.</li> </ul>					

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<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 3: <i>Advanced Technology Development (ATD)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0603160BR: <i>Counterproliferation Initiatives - Proliferation, Prevention and Defeat</i>	<b>PROJECT</b> RG: <i>Advanced Energetics &amp; Counter WMD Weapons</i>
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**C. Other Program Funding Summary (\$ in Millions)**

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u> <u>Base</u>	<u>FY 2011</u> <u>OCO</u>	<u>FY 2011</u> <u>Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• 26/0602718BR: <i>WMD Defeat Technologies</i>	21.265	32.381	29.139		29.139	27.522	26.483	26.883	27.282	Continuing	Continuing

**D. Acquisition Strategy**

N/A

**E. Performance Metrics**

Percent increase of countering Weapons of Mass Destruction weapon performance compared to fielded weapons (e.g. Bomb, Live Unit (BLU)-109 and BLU-113).

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 Defense Threat Reduction Agency **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b>				<b>R-1 ITEM NOMENCLATURE</b>				<b>PROJECT</b>			
0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 3: <i>Advanced Technology Development (ATD)</i>				PE 0603160BR: <i>Counterproliferation Initiatives - Proliferation, Prevention and Defeat</i>				RI: <i>Nuclear Survivability</i>			
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
RI: <i>Nuclear Survivability</i>	9.749	13.935	14.052	0.000	14.052	13.962	13.878	14.062	14.252	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

The Nuclear Survivability project develops and demonstrates Radiation Hardened Microelectronics (RHM) for nuclear hardening and survivability of Department of Defense's (DoD) systems on the Radiation Hardened Oversight Council Technology Roadmap and provides for the execution of force-on-force evaluations and nuclear weapons surety efforts to enhance the protection of nuclear resources.

The RHM program responds to DoD space and missile system requirements for RHM and photonics technology to support mission needs. This program develops and demonstrates radiation-hardened, high performance prototype microelectronics to support the availability of RHM and photonics for DoD missions from both private sector and government organizations.

Mighty Guardian Force-on-Force tests aid in satisfying requirements for the U.S. Air Force and U.S. Navy by providing denial of access to nuclear weapons in all environments; operational, storage and in transit. The results of the evaluations identify security vulnerabilities to weapons systems that are then addressed through targeted application of research and development projects requested by the U.S. Air Force and U.S. Navy resource owners. These projects are designed to demonstrate, test, and evaluate security enhancement systems prior to service procurement.

Nuclear Weapons Surety, as tasked by the DoD Nuclear Weapon System Safety Program, provides Combatant Commands (COCOMs), Services, and Joint Chiefs of Staff with technical analyses, studies, research, and experimental data necessary to identify and quantify risks of plutonium dispersal and Loss of Assured Safety due to accidents, fires or natural causes during peacetime operations of the nation's nuclear weapon systems. Additionally, this will provide studies necessary to quantify the probability of success against targeted terrorist attacks on DoD facilities, while leveraging these risk assessment advances. It also provides new and innovative technologies for the protection of nuclear resources in support of COCOMs and Services.

**B. Accomplishments/Planned Program (\$ in Millions)**

	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
RI: Nuclear Survivability	9.749	13.935	14.052	0.000	14.052

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 Defense Threat Reduction Agency **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 3: <i>Advanced Technology Development (ATD)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0603160BR: <i>Counterproliferation Initiatives - Proliferation, Prevention and Defeat</i>	<b>PROJECT</b> RI: <i>Nuclear Survivability</i>
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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p><i>FY 2011 Base Plans:</i></p> <ul style="list-style-type: none"> <li>- Develop mitigation techniques for 45nm Radiation Hardened by Design Technology</li> <li>- Develop initial Technology Computer-Aided Design modeling for 45nm</li> <li>- Demonstrate 45nm Radiation Hardened by Design (RHBD) Test Circuit Vehicle.</li> <li>- Conduct Mighty Guardian XIV Force-On-Force test at a location to be determined by Global Strike command to evaluate nuclear security policy as it applies to bomber generation.</li> <li>-Planning Mighty Guardian XV Force-on-Force test to evaluate nuclear security policy for waterfront restricted areas and submarines in transit at Naval Base Kings Bay, GA.</li> <li>- Conduct exploratory research on physical security equipment and technology designed to enhance protection of the nuclear stockpile as determined by the Services.</li> </ul>					
<b>Accomplishments/Planned Programs Subtotals</b>	9.749	13.935	14.052	0.000	14.052

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

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• 25/0602718BR: <i>WMD Defeat Technologies</i>	29.359	18.660	17.902		17.902	17.788	17.695	17.962	18.250	Continuing	Continuing

**D. Acquisition Strategy**

N/A

**E. Performance Metrics**

Achieve Radiation Hardened 150nm, RH 150nm 16 meters Static Random Access Memory and Radiation Hardened by Design 90nm reconfigurable Field Programmable Gate Array.

Achieve RHBD 90nm digital, analog and mixed signal System-On-a-Chip and digital and analog/mixed signal libraries.

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Defense Threat Reduction Agency		<b>DATE:</b> February 2010
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<p>Successful completion of Mighty Guardian exercises is measured by completing all necessary planning and logistics steps, troops arriving when required, training completed, execution of the exercise, redeployment of forces, and publishing a final report within 90 days of completion.</p> <p>Successful completion of exploratory research for physical security equipment and technology is determined by performers completing the project on-time and within budget, all stated tasks in the statement of objectives being met, proper reporting and coordination of decision areas, receipt of final reports closing out the project, and transitioning the project to the requesting Service.</p>		

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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
RM: <i>WMD Battle Management</i>	37.647	31.939	28.260	0.000	28.260	26.907	27.914	28.200	28.482	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

The WMD Battle Management project develops, integrates, demonstrates and transitions emerging/innovative technologies to support the counter Weapons of Mass Destruction (WMD) Mission. This activity specifically focuses on two critical components in countering the WMD threat:

Develop end-to-end planning capabilities including weaponeering tools to aid the Combatant Commander's targeting and weapons officers in choosing the proper weapon, fuze, and employment parameters to optimize the defeat of WMD and related hard targets. Deliver modernized, validated and fast running attack planning tools and integrating software. Leverage attack planning tools to support force protection planners and vulnerability assessment teams.

Develop, integrate, demonstrate and transition emerging/innovative technologies to provide the warfighter with an enhanced near real-time combat and battle damage assessment capability. Capability is achieved through the development of Unmanned Aerial Systems and weapon-based sensors, platforms, taggants, seekers and other innovative technologies to; remotely sense, identify, track and target WMD-related threats; perform battle damage assessment/indication of strikes against these threats; and locate, track, collect, detect, selectively identify, and characterize Chemical Weapon and Biological Weapon aerosol agents released during these WMD counterforce strikes.

The FY 2009 to FY 2010 funding decreases reflects the Agency's decision to rebalance efforts within its research and development portfolio to achieve the Department of Defense's investment goal for basic research of 10-12% of Total Obligation Authority. The reductions are in the areas of advanced modeling systems and survivability technology. The impacts are delayed full 3-D modeling and simulation efforts for electromagnetic pulse response and consequence management predictions to include third order effects.

**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
RM: WMD Battle Management	37.647	31.939	28.260	0.000	28.260

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 Defense Threat Reduction Agency **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 3: <i>Advanced Technology Development (ATD)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0603160BR: <i>Counterproliferation Initiatives</i> <i>- Proliferation, Prevention and Defeat</i>	<b>PROJECT</b> RM: <i>WMD Battle Management</i>
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<b>B. Accomplishments/Planned Program (\$ in Millions)</b>	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<ul style="list-style-type: none"> <li>- Develop, integrate and demonstrate miniaturized CBRNE sensors with radio frequency tags in support of Combating Weapons of Mass Destruction (CWMD) Tag, Track and Locate.</li> <li>- Develop CWMD P-ISR integration framework for the fusion of data from multiple sources that provide activity based intelligence</li> <li>- Complete system assessment and flight test of the Phase 2 Global Strike battle damage assessment system, to include the Chemical, Acoustic, Nuclear and Seismic sensor capabilities, mesh networking with two or more hubs, relay of BDA data via a long haul (satellite) interface and display on a Warfighter Interface.</li> </ul>					
<b>Accomplishments/Planned Programs Subtotals</b>	37.647	31.939	28.260	0.000	28.260

<b>C. Other Program Funding Summary (\$ in Millions)</b>											
<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• 20/0602718BR: <i>WMD Defeat Technologies</i>	25.210	14.440	10.899		10.899	10.303	11.435	11.727	12.107	Continuing	Continuing

**D. Acquisition Strategy**

N/A

**E. Performance Metrics**

Standoff detection range of Weapons of Mass Destruction (WMD) reconnaissance system.

Number of new capabilities delivered to Combatant Commands (COCOMs).

Number of weaponizing solutions delivered to COCOMs.

Increase automation of the analytic process used by Defense Threat Reduction Agency Reachback, DTRA Operations Center and the U.S. Strategic Command Center for Combating WMD.

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Defense Threat Reduction Agency								<b>DATE:</b> February 2010			
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 3: <i>Advanced Technology Development (ATD)</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0603160BR: <i>Counterproliferation Initiatives - Proliferation, Prevention and Defeat</i>				<b>PROJECT</b> RT: <i>Target Assessment Technologies</i>			
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
RT: <i>Target Assessment Technologies</i>	29.324	32.294	35.112	0.000	35.112	35.593	35.419	34.269	34.820	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

For some hard and deeply buried targets, physical destruction is neither possible, nor practical, with current conventional weapons and employment techniques. It may be possible, however, to achieve target defeat objectives by denying or disrupting the mission or function of the target facility. Functional defeat, however, requires more information, more detailed analysis of the target. The functional defeat process includes finding and identifying a facility, characterizing its function and physical layout, determining its vulnerabilities to available weapons, planning and executing an attack, assessing damage, and if necessary, suppressing reconstitution efforts and re-attacking the facility. Target Assessment Technologies provides the Combatant Commands and the Intelligence Community with technologies and processes to find and characterize hard and deeply buried targets and then assess the results of attacks against those targets. Overall objectives are to develop new methodologies, processes and technologies for detecting, locating, identifying, physically and functionally characterizing, modeling, and assessing new and existing hard and deeply buried targets to support full dimensional defeat operations. Extending this activity and applying these processes to Weapons of Mass Destruction (WMD) target characterization and threat analysis presents the next technical challenge. The Target Assessment Technologies project now consists of three subordinate and related activities: (1) Targeting and Intelligence Community Technology Development; (2) Find, Characterize, Assess Technology Development; and (3) the newly added WMD Analysis Cell Technology Support.

The FY 2009 to FY 2010 increase in funding within this project is due to the rebalancing of efforts from Project RM – WMD Battle Management to enhance the Combating WMD Analysis Cell (C-WAC) effort, which is patterned after the Hard Target Research and Analysis Center model to develop and integrate new software, engineering, and modeling methodologies, technology, and vulnerability support.

The FY 2010 to FY 2011 increase is in support of the DoD and Presidential CWMD strategic priorities and will fill critical investment and sustainment gaps across the DTRA CWMD spectrum. This increase is in support of the C-WAC cell and will accelerate spiral development and deployment of new modeling capabilities across Nuclear, Biological Warfare (BW) and Chemical Warfare (CW) threat areas, enhancing fusion of R&D and intelligence support for the Combatant Commands.

**B. Accomplishments/Planned Program (\$ in Millions)**

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Defense Threat Reduction Agency		<b>DATE:</b> February 2010
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 3: <i>Advanced Technology Development (ATD)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0603160BR: <i>Counterproliferation Initiatives - Proliferation, Prevention and Defeat</i>	<b>PROJECT</b> RT: <i>Target Assessment Technologies</i>
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A		
<b>D. Acquisition Strategy</b> N/A		
<b>E. Performance Metrics</b> Incorporation of Defense Threat Reduction Agency (DTRA) Underground Targeting and Analysis System (UTAS) 3-D models into Defense Intelligence Agency (DIA) standard targeting products by the end of FY 2010.  Attainment of final National Geospatial Intelligence Agency certification of UTAS geospatial information functionalities by the end of FY 2010.  Demonstration of an end-to-end hand placed Integrated Sensor System prototype by the end of FY 2010.  Demonstration against a realistic test target of the capability of a deployed sensor system to decrease uncertainty and improve fidelity of characterization and near-real-time damage assessment.  Demonstrate an initial Combating Weapons of Mass Destruction (CWMD) Analysis Cell capability to perform analysis of nuclear threats in response to COCOMs and Intelligence Community needs.  By FY 2010, demonstrate an initial CWMD Analysis Cell capability to perform analysis of biological weapons threats in response to COCOMs and Intelligence Community needs.  Demonstrate CWMD Analysis Cell capability to perform technical analysis of nuclear, biological or chemical weapons threats in response to Combatant Command and Intelligence Community needs.		

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**Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Defense Threat Reduction Agency** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 5: <i>Development &amp; Demonstration (SDD)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0605000BR: <i>WMD Defeat Capabilities</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	15.499	9.489	7.307	0.000	7.307	6.660	5.432	5.508	5.587	Continuing	Continuing
RL: <i>Nuclear &amp; Radiological Effects</i>	15.499	8.689	7.307	0.000	7.307	6.660	5.432	5.508	5.587	Continuing	Continuing
RR: <i>Test Infrastructure</i>	0.000	0.800	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

The Weapons of Mass Destruction (WMD) Defeat Capabilities program extends nuclear and radiological modeling and simulation development to system development and demonstration by developing nuclear and radiological assessment modeling tools and WMD integrated architecture to support military operational planning, weapon effects predictions, and strategic system design decisions; consolidate validated Defense Threat Reduction Agency (DTRA) modeling tools into net-centric environment for integrated functionality capable of predicting system responses to nuclear and radiological weapons producing electromagnetic, thermal, blast, shock and radiation environments in addition to chemical, biological, and conventional weapons. Key systems/environments include space assets, missiles, structures, networks, urban areas, and humans.

Efforts within this program element are rebalanced to enhance corporate capabilities in Program Element (PE) 0602718BR and PE 0603160BR to support Project RF – Detection Technology. The impacts delay full 3-D modeling and simulation efforts for electromagnetic pulse (EMP) response and consequence management predictions, to include second and third order effects.

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**Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Defense Threat Reduction Agency** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b>	<b>R-1 ITEM NOMENCLATURE</b>
0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i>	PE 0605000BR: <i>WMD Defeat Capabilities</i>
BA 5: <i>Development &amp; Demonstration (SDD)</i>	

**B. Program Change Summary (\$ in Millions)**

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	15.896	8.735	0.000	0.000	0.000
Current President's Budget	15.499	9.489	7.307	0.000	7.307
Total Adjustments	-0.397	0.754	7.307	0.000	7.307
• Congressional General Reductions		-0.046			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.800			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	-0.397	0.000			
• Realignment / Internal Functional Transfer	0.000	0.000	-0.478	0.000	-0.478
• Inflation Reduction	0.000	0.000	-0.026	0.000	-0.026
• Other Program Adjustment	0.000	0.000	7.811	0.000	7.811

**Congressional Add Details (\$ in Millions, and Includes General Reductions)**

**Project:** RR: *Test Infrastructure*

Congressional Add: *Electric Grid Reliability/Assurance*

	<u>FY 2009</u>	<u>FY 2010</u>
	0.000	0.800
Congressional Add Subtotals for Project: RR	0.000	0.800
Congressional Add Totals for all Projects	0.000	0.800

**Change Summary Explanation**

The decrease in funding between FY 2009 and FY 2010 reflects the rebalancing of projects to refocus research and development efforts to meet the 21st century Combating Weapons of Mass Destruction (WMD) needs in the Defense Threat Reduction Agency (DTRA) Basic Research Initiative and WMD Defeat Technologies programs. Efforts within this program element (PE) are rebalanced to enhance corporate capabilities in PE 0602718BR and PE 0603160BR to support Project RF – Detection Technology. The impacts delay full 3-D modeling and simulation efforts for electromagnetic pulse (EMP) response and consequence management predictions, to include second and third order effects.

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 Defense Threat Reduction Agency **DATE:** February 2010

**APPROPRIATION/BUDGET ACTIVITY**  
0400: *Research, Development, Test & Evaluation, Defense-Wide*  
BA 5: *Development & Demonstration (SDD)*

**R-1 ITEM NOMENCLATURE**  
PE 0605000BR: *WMD Defeat Capabilities*

The DoD did not estimate FY 2011 costs when the FY 2010 President's Budget was prepared. There is a FY 2011 decrease that reflects the internal functional transfer of advisory and assistance services from DTRA's Research, Development, Test & Evaluation, Defense-Wide account to the Operation and Maintenance, Defense-Wide account. This transfer reflects the internal functional realignment of advisory and assistance services and other business-related costs that were formerly captured under DTRA's Research, Development, Test & Evaluation, Defense-Wide account to the Operation and Maintenance, Defense-Wide account. As part of DTRA's continued effort to integrate and refine its functions and activities, this transfer more appropriately aligns this funding to the proper appropriation. At the Agency level, this functional transfer between appropriations will have a zero sum impact to these budget line items. An additional decrease of \$.026 million is associated with changes in the inflation rates and therefore is a price change, not a program change.

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 Defense Threat Reduction Agency **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 5: <i>Development &amp; Demonstration (SDD)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0605000BR: <i>WMD Defeat Capabilities</i>	<b>PROJECT</b> RL: <i>Nuclear &amp; Radiological Effects</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
RL: <i>Nuclear &amp; Radiological Effects</i>	15.499	8.689	7.307	0.000	7.307	6.660	5.432	5.508	5.587	Continuing	Continuing
Quantity of RDT&E Articles											

**A. Mission Description and Budget Item Justification**

Advanced Modeling Systems includes three functional areas 1) Integrated Weapons of Mass Destruction Toolset (IWMDT), 2) Nuclear Capability Services (NuCS), and 3) Consequence of Execution (CoE)-Nuclear Integration. NuCS develops the capabilities for the U.S. and its allies for state-of-the-art, secure, accredited, nuclear & radiological Modeling & Simulation (M&S) capabilities. The IWMDT develops the architecture, defines and implements the standards to consolidate validated Defense Threat Reduction Agency tools, and through this architecture, enables rapid access for planning, emergency response and assessment capabilities. These capabilities are used by a wide range of planners, managers, and operational and technical personnel facing the full spectrum of chemical, biological, radiological, nuclear, and high-yield explosives threats. CoE-Nuclear Integration provides the modeling capability to U.S. Strategic Command as well as enhancing the consequence assessment integration and testing for transition of Chemical, Biological, Radiological, Nuclear, and Explosive Events Science & Technology to the Joint Effects Model, Chemical-Biological Defense Program for hazard prediction. This sub-project extends research and development to system development and demonstration.

Funds are realigned from this project due to rebalancing of efforts to project RF – Detection Technology. The impacts are in the areas of advanced modeling systems and delay of full 3-D modeling and simulation efforts for electromagnetic pulse response and consequence management predictions, to include second and third order affects.

**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
RL: Nuclear & Radiological Effects <i>FY 2009 Accomplishments:</i> - Complete Nuclear Weapon Effects Users Group accreditation of modeling and simulation in the Nuclear Capability Services (NuCS). - Provide fully distributed, transportable and mobile Chemical, Biological, Radiological and Nuclear (CBRN) capability solution meeting the CBRN requirements of forward deployed warfighters, first	15.499	8.689	7.307	0.000	7.307

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 Defense Threat Reduction Agency **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 5: <i>Development &amp; Demonstration (SDD)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0605000BR: <i>WMD Defeat Capabilities</i>	<b>PROJECT</b> RL: <i>Nuclear &amp; Radiological Effects</i>
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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p>responders, analysts, and future planning users. Through this capability, users customize the CBRN portal to meet their decision support, analysis, and collaborative mission planning through a dynamically fused view.</p> <ul style="list-style-type: none"> <li>- Deliver NuCS Spiral 2 capabilities through the Integrated Weapons of Mass Destruction Toolset framework meeting 80% of customer-required nuclear weapon effects Modeling &amp; Simulation (M&amp;S), enabling technology transfer to Program of Record and external systems as required.</li> <li>- Initiate NuCS Spiral 3 development addressing the remaining 20% of customer-required nuclear weapon effect M&amp;S capabilities.</li> <li>- Deliver nuclear weapon improved water/urban burst prototype.</li> </ul> <p><i>FY 2010 Plans:</i></p> <ul style="list-style-type: none"> <li>- Establish an operational baseline Continuity of Operations capability for geographically separated real-time backup of all CBRN and Explosive Events capabilities.</li> <li>- Initial implementation of Net Centric Enterprise Services messaging and collaboration for use across exercise and operational deployments.</li> <li>- Migrate nuclear effects framework and Consequence of Execution – Nuclear Integration efforts to program of records for community use and broader integration.</li> <li>- Data replication synchronization implemented for disparate deployment methods.</li> <li>- Complete updated data verification from Nevada Test Site digs conducted in FY 2008.</li> </ul> <p><i>FY 2011 Base Plans:</i></p> <ul style="list-style-type: none"> <li>- Enhance the Continuity of Operations (COOP) functionality to allow “hot” updates and full Rapid Assessment and Identification support of alternate sites and capabilities.</li> <li>- Enhanced implementation of Net Centric Enterprise Services messaging and collaboration for use across exercise and operational deployments.</li> <li>- All three programs complete legacy tools migration, enter into a pure integration paradigm focused on “plug and play” methodology for emergent technologies into the extant Chemical, Biological,</li> </ul>					

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 Defense Threat Reduction Agency **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 5: <i>Development &amp; Demonstration (SDD)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0605000BR: <i>WMD Defeat Capabilities</i>	<b>PROJECT</b> RL: <i>Nuclear &amp; Radiological Effects</i>
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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Radiological, Nuclear and Explosive Integrated Weapons of Mass Destruction Toolset (IWMDT) framework. - Integrate Nevada Test Site dig data into Consequence of Execution – Nuclear Integration science efforts resulting in enhanced capabilities across IWMDT and the nuclear community tools.					
<b>Accomplishments/Planned Programs Subtotals</b>	15.499	8.689	7.307	0.000	7.307

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

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• 20/0602718BR: <i>WMD Defeat Technologies</i>	15.041	19.704	16.776		16.776	17.323	17.067	17.336	17.612	Continuing	Continuing

**D. Acquisition Strategy**

The programs for Integrated Weapons of Mass Destruction Toolset, Nuclear Capability Services, and Consequence of Execution are executed through competed, Cost Plus Award-Fee and Cost Plus Fixed-Fee contracts. These contracts are normally 3-year efforts for software development, test, and integration. Follow-on contracts will be competed for award to continue any out-year activities.

**E. Performance Metrics**

Demonstrate and provide over 80% of the customer-required Nuclear Weapons Effects (NWE) modeling and simulation capabilities over networks, e.g. Department of Defense Global Information Grid.

Transform 100% of the validated mission-required legacy Defense Threat Reduction Agency NWE codes to a net-centric implementation in a process-controlled Verification, Validation, and Accreditation standards-based method.

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis: PB 2011 Defense Threat Reduction Agency</b>										<b>DATE:</b> February 2010			
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 5: <i>Development &amp; Demonstration (SDD)</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0605000BR: <i>WMD Defeat Capabilities</i>				<b>PROJECT</b> RL: <i>Nuclear &amp; Radiological Effects</i>					

**Product Development (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
System Development - IWMDT	C/CPAF	SAIC San Deigo, CA	10.800	3.226	Nov 2009	2.564	Nov 2010	0.000		2.564	28.000	44.590	42.000
System Development - NuCS	C/CPFF	Applied Research Associates Albuquerque, NM	2.100	1.560	Nov 2009	1.270	Nov 2010	0.000		1.270	2.390	7.320	5.658
System Development - COE	C/CPFF	Titan Kingstowne, VA	4.149	0.942	Nov 2009	0.444	Nov 2010	0.000		0.444	2.390	7.925	4.490
System Development - Component Contracts	C/Various	Various Various	3.772	0.957	Dec 2009	0.344	Dec 2010	0.000		0.344	4.780	9.853	8.452
<b>Subtotal</b>			20.821	6.685		4.622		0.000		4.622	37.560	69.688	60.600

**Remarks**

The "Various" reported reflects multiple contracts, mainly CPFF.

**Support (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Configuration Management	C/Various	SAIC, ARA, Titan Various	0.122	0.000		0.024	Nov 2010	0.000		0.024	0.180	0.326	0.302
Software Integration	C/Various	SAIC, ARA, Titan Various	2.600	0.000		0.500	Nov 2010	0.000		0.500	6.079	9.179	8.679
Technical Data	C/Various	SAIC, ARA, Titan	0.042	0.000		0.008	Nov 2010	0.000		0.008	0.070	0.120	0.112

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis: PB 2011 Defense Threat Reduction Agency</b>										<b>DATE:</b> February 2010			
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 5: <i>Development &amp; Demonstration (SDD)</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0605000BR: <i>WMD Defeat Capabilities</i>				<b>PROJECT</b> RL: <i>Nuclear &amp; Radiological Effects</i>					

**Support (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
		Various											
Engineering Services	C/Various	SAIC, ARA, Titan Various	1.264	0.000		0.200	Nov 2010	0.000		0.200	1.540	3.004	2.804
Accreditation & Certification	C/Various	SAIC, ARA, Titan Various	0.122	0.000		0.024	Nov 2010	0.000		0.024	0.180	0.326	0.302
<b>Subtotal</b>			4.150	0.000		0.756		0.000		0.756	8.049	12.955	12.199

Remarks

**Test and Evaluation (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Developmental Test & Evaluation	C/Various	SAIC, ARA, Titan Various	1.050	0.513	Nov 2009	0.505	Nov 2010	0.000		0.505	2.012	4.080	3.050
Operational Test & Evaluation	C/Various	SAIC, ARA, Titan Various	1.050	0.512	Nov 2009	0.505	Nov 2010	0.000		0.505	2.012	4.079	3.050
<b>Subtotal</b>			2.100	1.025		1.010		0.000		1.010	4.024	8.159	6.100

Remarks

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis: PB 2011 Defense Threat Reduction Agency</b>										<b>DATE:</b> February 2010			
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 5: <i>Development &amp; Demonstration (SDD)</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0605000BR: <i>WMD Defeat Capabilities</i>				<b>PROJECT</b> RL: <i>Nuclear &amp; Radiological Effects</i>					

**Management Services (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Program Management	C/Various	SAIC, ARA, Titan Various	1.050	0.467	Nov 2009	0.479	Nov 2010	0.000		0.479	2.012	4.008	3.050
Travel	C/Various	SAIC, ARA, Titan Various	0.528	0.256	Nov 2009	0.220	Nov 2010	0.000		0.220	1.006	2.010	1.525
Overhead	C/Various	SAIC, ARA, Titan Various	0.528	0.256	Nov 2009	0.220	Nov 2010	0.000		0.220	1.006	2.010	1.525
<b>Subtotal</b>			2.106	0.979		0.919		0.000		0.919	4.024	8.028	6.100

**Remarks**

Project Cost Totals	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
	29.177	8.689		7.307		0.000		7.307	53.657	98.830	84.999

**Remarks**

"All PY Costs" costs and activities for Integrated Weapons of Mass Destruction Toolset (IWMDT), Nuclear Capability Server (NuCS), and Consequence of Execution (COE) were assigned under Project BD of PE 0602716BR. IWMDT was funded in 2004 by a competed, CPAF contract for \$12,425,028 over a 3-year period. At end of FY 2006, its follow-on contract was awarded with an initial \$300,000 increment. IWMDT program efforts have continued into FY 2010 with \$28,961,730.49 now applied. Likewise, the NuCS program was funded under a competed, CPFF contract over a 3-year period with funding of \$5,913,235 applied through FY 2008; a follow-on contract has now been awarded with initial funding to date of \$2,355,880.00 to continue program efforts. COE was funded under a competed, CPFF contract with increments to date of \$6,566,087 total. Beginning in FY 2008, these activities began funding under PE 0605000BR. Beginning in FY10 the COENI follow-on contract anticipates funding \$1M.

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**Exhibit R-4A, RDT&E Schedule Details:** PB 2011 Defense Threat Reduction Agency **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 5: <i>Development &amp; Demonstration (SDD)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0605000BR: <i>WMD Defeat Capabilities</i>	<b>PROJECT</b> RL: <i>Nuclear &amp; Radiological Effects</i>
---	--	---

Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
Integrated Weapons of Mass Destruction Toolset (IWMDT) - System Development , Test, and Integration - Phase I	1	2009	4	2009
IWMDT - System Development, Test, and Integration - Phase 2	1	2010	4	2012
IWMDT - System Development, Test, and Integration - Phase 3	1	2013	4	2015
Consequence of Execution (COE) Development and Integration	1	2009	4	2009
COE Integration - Phase 2	1	2010	4	2012
COE Integration - Phase 3	1	2013	4	2015
Nuclear Capabilities Services (NuCS) - Spiral Development, Test, and Integration - Phase 1	1	2009	4	2009
NuCS - Spiral 2 Development	1	2010	4	2012
NuCS - Spiral 3 Development	1	2013	4	2015

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Defense Threat Reduction Agency									<b>DATE:</b> February 2010			
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 5: <i>Development &amp; Demonstration (SDD)</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0605000BR: <i>WMD Defeat Capabilities</i>				<b>PROJECT</b> RR: <i>Test Infrastructure</i>				
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	
RR: <i>Test Infrastructure</i>	0.000	0.800	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing	
Quantity of RDT&E Articles												
<b>A. Mission Description and Budget Item Justification</b>												
<p>Test Infrastructure performs research and testing for the effects of Electromagnetic Pulse (EMP) attacks on the electric power grid and associated control systems, critical communications systems, and other defense critical infrastructures. Current modeling capabilities would be enhanced to include EMP effects and to allow analysis of multiple infrastructures supporting key Department of Defense facilities. This enhanced capability is needed by U.S. Strategic Command and other Department of Defense (DoD) components to address critical mission assurance concerns in the event of EMP attacks.</p>												
<b>B. Accomplishments/Planned Program (\$ in Millions)</b>												
						<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>		
RR - Test Infrastructure						0.000	0.000	0.000	0.000	0.000		
<p>Test Infrastructure performs research and testing for the effects of Electromagnetic Pulse (EMP) attacks on the electric power grid and associated control systems, critical communications systems, and other defense critical infrastructures. Current modeling capabilities would be enhanced to include EMP effects and to allow analysis of multiple infrastructures supporting key Department of Defense facilities. This enhanced capability is needed by U.S. Strategic Command and other Department of Defense (DoD) components to address critical mission assurance concerns in the event of EMP attacks.</p> <p><i>FY 2009 Accomplishments:</i> [*** PLEASE ENTER ACCOMPLISHMENT/PLANNED PROGRAM TEXT FOR PRIOR YEAR. ***]</p>												
Accomplishments/Planned Programs Subtotals						0.000	0.000	0.000	0.000	0.000		

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 Defense Threat Reduction Agency **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 5: <i>Development &amp; Demonstration (SDD)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0605000BR: <i>WMD Defeat Capabilities</i>	<b>PROJECT</b> RR: <i>Test Infrastructure</i>
---	--	--

**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010
Congressional Add: Electric Grid Reliability/Assurance  <i>FY 2009 Accomplishments:</i> [*** PLEASE ENTER CONGRESSIONAL ADD TEXT FOR PRIOR YEAR. ***]  <i>FY 2010 Plans:</i> - Determine and define the effects on the three elements of the power grid - Incorporate EMP effects and coupling models into tools to allow for analysis of power grid and communications impacts on the DoD mission assurance for key facilities and such as command and control nodes. - Develop and evaluate technologies to mitigate effects of EMP attacks	0.000	0.800
Congressional Adds Subtotals	0.000	0.800

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

Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• 20/0602718BR: <i>WMD Defeat Technologies</i>	17.411	19.651	21.528		21.528	21.437	21.354	21.705	22.101	Continuing	Continuing

**D. Acquisition Strategy**

Interagency Cost Reimbursement Order (IACRO) to the National Nuclear Security Administration (NNSA).

**E. Performance Metrics**

Adapt EMP coupling models for DoD application and identify new Electromagnetic Pulse (EMP) mitigation technology for command and control facilities (fixed or mobile).

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**Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Defense Threat Reduction Agency** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b>			<b>R-1 ITEM NOMENCLATURE</b>								
0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i>			PE 0605502BR: <i>Small Business Innovation Research</i>								
BA 6: <i>RDT&amp;E Management Support</i>											
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
Total Program Element	8.076	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
RA: <i>Systems Engineering and Innovation</i>	8.076	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

**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**

The SBIR program provides the means for stimulating technological innovation in the private sector, strengthens the role of small business in meeting 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 DoD supported research and development results. These efforts are responsive to Public Law 106-554.

**B. Program Change Summary (\$ in Millions)**

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	0.000	0.000	0.000	0.000	0.000
Current President's Budget	8.076	0.000	0.000	0.000	0.000
Total Adjustments	8.076	0.000	0.000	0.000	0.000
• Congressional General Reductions		0.000			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	8.076	0.000			

**Change Summary Explanation**

Funding for the FY 2009 SBIR Program has been consolidated in this program element for execution.

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R-1 Line Item #150

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Defense Threat Reduction Agency									<b>DATE:</b> February 2010			
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 6: <i>RDT&amp;E Management Support</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0605502BR: <i>Small Business Innovation Research</i>				<b>PROJECT</b> RA: <i>Systems Engineering and Innovation</i>				
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	
RA: <i>Systems Engineering and Innovation</i>	8.076	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing	
Quantity of RDT&E Articles												
<b>Note</b> * 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.												
<b>A. Mission Description and Budget Item Justification</b> This project provides the means for stimulating technological innovation in the private sector, strengthens the role of small business in meeting 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 DoD supported research and development results. These efforts are responsive to Public Law 106-554.												
<b>B. Accomplishments/Planned Program (\$ in Millions)</b>												
						<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>		
RA: Systems Engineering and Innovation <i>FY 2009 Accomplishments:</i> - Completed execution of 8 FY 2007 Phase II contracts. - Continued execution of 7 FY 2008 Phase II contracts. - Awarded 12 Phase I contracts to perform feasibility studies on FY 2009 topics. - Awarded 8 FY 2009 Phase II contracts on successful FY 2008 Phase I efforts. - Transitioned FY 2006 and prior Phase II efforts to Phase III, Commercialization, as results and funding permit.						8.076	0.000	0.000	0.000	0.000		

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Defense Threat Reduction Agency				<b>DATE:</b> February 2010		
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 6: <i>RDT&amp;E Management Support</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0605502BR: <i>Small Business Innovation Research</i>	<b>PROJECT</b> RA: <i>Systems Engineering and Innovation</i>				
<b>B. Accomplishments/Planned Program (\$ in Millions)</b>						
		<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
<i>FY 2010 Plans:</i> N/A						
Accomplishments/Planned Programs Subtotals		8.076	0.000	0.000	0.000	0.000
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A						
<b>D. Acquisition Strategy</b> N/A						
<b>E. Performance Metrics</b> Number of Phase I awards supporting innovative technology development.  Number of Phase II and III awards leading to technology transition.						

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**Department of Defense  
Fiscal Year (FY) 2011 President's Budget**

February 2010



**The Joint Staff**

*Justification Book Volume 5B*

***Research, Development, Test & Evaluation, Defense-Wide***

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Defense-Wide  
 FY 2011 President's Budget  
 Exhibit R-1 FY 2011 Base and Overseas Contingency Operations (OCO) Request  
 Summary  
 (Dollars in Thousands)

20 Jan 2010

	FY 2009 (Base & OCO)	FY 2010 Base & OCO Enacted	FY 2010 Supplemental Request	FY 2010 Total	FY 2011 Base	FY 2011 OCO	FY 2011 Total Request
Summary Recap of Budget Activities							
RDT&E Management Support	55,282	98,159		98,159	117,658		117,658
Operational Systems Development	16,385	13,786		13,786	7,356		7,356
Total Research, Development, Test & Eval, DW	71,667	111,945		111,945	125,014		125,014
Summary Recap of FYDP Programs							
General Purpose Forces	9,341	3,824		3,824	25,369		25,369
Intelligence and Communications	3,652	4,081		4,081	2,261		2,261
Research and Development	55,282	96,505		96,505	94,577		94,577
Administration and Associated Activities	3,392	7,535		7,535	2,807		2,807
Total Research, Development, Test & Eval, DW	71,667	111,945		111,945	125,014		125,014

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Defense-Wide  
 FY 2011 President's Budget  
 Exhibit R-1 FY 2011 Base and Overseas Contingency Operations (OCO) Request  
 Summary  
 (Dollars in Thousands)

20 Jan 2010

	FY 2009 (Base & OCO)	FY 2010 Base & OCO Enacted	FY 2010 Supplemental Request	FY 2010 Total	FY 2011 Base	FY 2011 OCO	FY 2011 Total Request
Summary Recap of Defensewide							
The Joint Staff	71,667	111,945		111,945	125,014		125,014
Total Research, Development, Test & Evaluation	71,667	111,945		111,945	125,014		125,014

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Defense-Wide  
 FY 2011 President's Budget  
 Exhibit R-1 FY 2011 Base and Overseas Contingency Operations (OCO) Request  
 (Dollars in Thousands)

Date: 20 Jan 2010

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

Line No	Program Element No	Item	Act	FY 2009 (Base & OCO)	FY 2010 Base & OCO Enacted	FY 2010 Supplemental Request	FY 2010 Total	FY 2011 Base	FY 2011 OCO	FY 2011 Total Request	U
141	0605126J	Joint Integrated Air and Missile Defense Organization (JIAMDO)	06	55,282	96,505		96,505	94,577		94,577	U
165	0204571J	Joint Staff Analytical Support	06		1,654		1,654	23,081		23,081	U
RDT&E Management Support											
184	0204571J	Joint Staff Analytical Support	07	7,618	98,159		98,159	117,658		117,658	U
185	0208043J	Classified Programs	07	1,723	2,170		2,170	2,288		2,288	U
205	0303149J	C4I for the Warrior	07	3,652	4,081		4,081	2,261		2,261	U
247	0902298J	Management Headquarters (JCS)	07	3,392	7,535		7,535	2,807		2,807	U
Operational Systems Development											
				16,385	13,786		13,786	7,356		7,356	
Total Research, Development, Test & Eval, DW				71,667	111,945		111,945	125,014		125,014	

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The Joint Staff  
 FY 2011 President's Budget  
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 (Dollars in Thousands)

Date: 20 Jan 2010

Line No	Program Element Number	Item	Act	FY 2009 (Base & OCO)	FY 2010 Base & OCO Enacted	FY 2010 Supplemental Request	FY 2010 Total	FY 2011 Base	FY 2011 OCO	FY 2011 Total Request	U
141	0605126J	Joint Integrated Air and Missile Defense Organization (JIAMDO)	06	55,282	96,505		96,505	94,577		94,577	U
165	0204571J	Joint Staff Analytical Support	06		1,654		1,654	23,081		23,081	U
		RDT&E Management Support		55,282	98,159		98,159	117,658		117,658	U
184	0204571J	Joint Staff Analytical Support	07	7,618							U
185	0208043J	Classified Programs	07	1,723	2,170		2,170	2,288		2,288	U
205	0303149J	C4I for the Warrior	07	3,652	4,081		4,081	2,261		2,261	U
247	0902298J	Management Headquarters (JCS)	07	3,392	7,535		7,535	2,807		2,807	U
		Operational Systems Development		16,385	13,786		13,786	7,356		7,356	U
		Total The Joint Staff		71,667	111,945		111,945	125,014		125,014	U



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

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

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<b>Line Item</b>	<b>Budget Activity</b>	<b>Program Element Number</b>	<b>Program Element Title</b>	<b>Page</b>
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Joint Staff Analytical Support (JSAS)	0204571J	165	06..... Volume 5B - 229	
Management Headquarters	0902298J	247	07..... Volume 5B - 253	
Planning and Decision Aid System (PDAS)	0208043J	185	07..... Volume 5B - 237	

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**Exhibit R-2, RDT&E Budget Item Justification: PB 2011 The Joint Staff** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 6: <i>RDT&amp;E Management Support</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0605126J: <i>Joint Integrated Air &amp; Missile Defense Organization (JIAMDO)</i>
--	--

COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	45.106	96.505	94.577	0.000	94.577	97.804	84.041	76.993	77.011	Continuing	Continuing
P001: <i>Core</i>	19.016	5.994	26.183	0.000	26.183	26.975	28.234	28.281	27.884	Continuing	Continuing
P002: <i>Homeland</i>	0.000	0.000	19.000	0.000	19.000	25.000	8.000	0.000	0.000	73.000	73.000
P003: <i>Intra-Agency Homeland Air Security</i>	0.000	61.300	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
P004: <i>Black Dart</i>	0.000	0.000	4.500	0.000	4.500	5.000	5.500	6.000	6.500	Continuing	Continuing
P005: <i>Joint Distributed Engineering Plant</i>	5.628	11.897	8.735	0.000	8.735	8.927	9.124	9.287	9.474	Continuing	Continuing
P006: <i>Nimble Fire</i>	6.215	0.528	18.477	0.000	18.477	13.685	14.115	14.327	14.323	Continuing	Continuing
P007: <i>Cruise Missile Combat Identification (CID)</i>	14.247	16.786	17.682	0.000	17.682	18.217	19.068	19.098	18.830	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

The Joint Integrated Air and Missile Defense Organization (JIAMDO), formerly Joint Theater Air and Missile Defense Organization, is the organization within the Department of Defense (DOD) chartered to plan, coordinate, and oversee Joint Air and Missile Defense (AMD) requirements, joint operational concepts, and operational architectures. As part of the CJCS staff, JIAMDO supports the Chairman in meeting his Title 10 responsibilities as they relate to air and missile defense issues. JIAMDO serves as the operational community's proponent for characteristics, requirements, and capabilities in air and missile defense, and is the joint air and missile defense resource 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 air and missile defense architectures and concepts.

JIAMDO has established a close partnership with Combatant Commanders (COCOM) and maintains liaison offices at all major COCOM locations to facilitate coordination of integration issues and requirements. In particular, JIAMDO maintains close coordination with US Strategic Command (USSTRATCOM) in support of ballistic missile defense of the U.S. It provides the Chairman, JCS and the Joint Requirements Oversight Council (JROC) the ability to meet statutory responsibilities to review the cost, schedule and performance criteria of Missile Defense Agency (MDA) 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 conduct of Military

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**Exhibit R-2, RDT&E Budget Item Justification: PB 2011 The Joint Staff** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b>	<b>R-1 ITEM NOMENCLATURE</b>
0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i>	PE 0605126J: <i>Joint Integrated Air &amp; Missile Defense Organization (JIAMDO)</i>
BA 6: <i>RDT&amp;E Management Support</i>	

Utility Assessments and analysis of the Ballistic Missile Defense System (BMDS). JIAMDO supports the USSTRATCOM mission by ensuring operational and technical requirements are integrated into the theater missile warning architecture. JIAMDO represents the Joint Staff in work on the AMD Capabilities Based Assessment Joint Service Team. JIAMDO also provides direct support to US Northern Command (USNORTHCOM) for homeland air surveillance issues and to US Joint Forces Command (USJFCOM) for capabilities development and validation in support of its Unified Command Plan (UCP) assigned missions.

**B. Program Change Summary (\$ in Millions)**

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	55.282	96.505	0.000	0.000	0.000
Current President's Budget	45.106	96.505	94.577	0.000	94.577
Total Adjustments	-10.176	0.000	94.577	0.000	94.577
• Congressional General Reductions		0.000			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Functional Realignment	-10.176	0.000	94.577	0.000	94.577

**Change Summary Explanation**

FY 2009 Program change was due to a functional realignment of funds within the JIAMDO program to adequately resource the Special Access Programs (SAP) to meet statutory requirements more efficiently.

The DoD did not estimate FY2011 cost when the FY2010 President's Budget was prepared.

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 The Joint Staff **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 6: <i>RDT&amp;E Management Support</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0605126J: <i>Joint Integrated Air &amp; Missile Defense Organization (JIAMDO)</i>	<b>PROJECT</b> P001: <i>Core</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
P001: <i>Core</i>	19.016	5.994	26.183	0.000	26.183	26.975	28.234	28.281	27.884	Continuing	Continuing
Quantity of RDT&E Articles											

**A. Mission Description and Budget Item Justification**

The Joint Integrated Air and Missile Defense Organization (JIAMDO), formerly Joint Theater Air and Missile Defense Organization, is the organization within the Department of Defense (DOD) chartered to plan, coordinate, and oversee Joint Air and Missile Defense (AMD) requirements, joint operational concepts, and operational architectures. As part of the CJCS staff, JIAMDO supports the Chairman in meeting his Title 10 responsibilities as they relate to air and missile defense issues. JIAMDO serves as the operational community's proponent for characteristics, requirements, and capabilities in air and missile defense, and is the joint air and missile defense resource 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 air and missile defense architectures and concepts.

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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Core	19.016	5.994	26.183	0.000	26.183

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 The Joint Staff	<b>DATE:</b> February 2010
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<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 6: <i>RDT&amp;E Management Support</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0605126J: <i>Joint Integrated Air &amp; Missile Defense Organization (JIAMDO)</i>	<b>PROJECT</b> P001: <i>Core</i>
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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p>Provides overall staff support for JIAMDO operations in the area of ballistic missile defense, air and cruise missile defense and homeland defense. This includes performing analyses, demonstrations, and programmatic assessments of technology, operations, requirements, and weapons systems. In coordination with Services and COCOMs, JIAMDO Core also leads the definition, assessment, development and approval of Joint AMD Operational Concepts, Operational Architectures, and capability requirements to guide the Department's joint/interagency/combined fully integrated and net-centric capable air defense (including defense against cruise missiles, unmanned aerial vehicles, and ballistic missiles). JIAMDO Core also:</p> <ul style="list-style-type: none"> <li>• Develops and integrates joint exercises, simulations, war-games, force resource allocations, and interoperability initiatives;</li> <li>• Manages relevant Congressional interaction and COCOM interface through a cadre of liaisons collocated with major headquarters;</li> <li>• Directly supports and sponsors homeland air surveillance related demonstration and analysis activities;</li> <li>• Runs the AMD Working Group focusing COCOM, Joint Staff and Service collaboration efforts in the generation of joint concepts and development of the integrated AMD architecture and roadmap</li> <li>• Develops U.S. positions for, and serves as the U.S. representative to, the NATO Air Defense Committee.</li> </ul> <p>JIAMDO Core also enables strategic planning development, infrastructure, security, travel, administrative and other support activities. Funding pays for: Contractor Systems Engineering and Technical Assistance (SETA) support for Air &amp; Cruise Missile Defense (ACMD), Ballistic Missile Defense (BMD), Homeland Air Security (HAS) strategic planning, senior level briefings, and JIAMDO white papers; leased office space, including all upkeep services; all travel costs for government and contractor support personnel, including support for Combatant Commander liaison personnel travel; multiple levels of security including lease support for a Joint Worldwide Intelligence Communications System (JWICS) communications line and Special Compartmented Information (SCI) terminals (due</p>					

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 The Joint Staff				<b>DATE:</b> February 2010				
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 6: <i>RDT&amp;E Management Support</i>		<b>R-1 ITEM NOMENCLATURE</b> PE 0605126J: <i>Joint Integrated Air &amp; Missile Defense Organization (JIAMDO)</i>		<b>PROJECT</b> P001: <i>Core</i>				
<b>B. Accomplishments/Planned Program (\$ in Millions)</b>								
				<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
<p>to the classified nature and the diverse content of work in the JIAMDO portfolio); 24-hour physical security force and alarm monitoring and maintenance; daily on-site security personnel to meet DOD, National Industrial Security Program Operating Manual (NISPOM), and other security regulations; for all administrative and support functions; all associated Information Technology (IT) support, copier purchase and maintenance, as well as basic office supplies and furniture; all telephones, telephone lines, classified telephones, and classified/unclassified data connections.</p> <p><i>FY 2009 Accomplishments:</i> Supported Joint Land Attack Cruise Missile Defense Elevated Netted Sensor (JLENS) requirements study; BMDS Countermeasures Implication Analysis Phase I; Integrated Air and Missile Defense (IAMD) Force Structure Analysis; IAMD Architecture Spiral 3; IAMD Capability Gap Analysis; USFK Radar Analysis; US representative at NATO Air Defense Council and Panel on Air Defense and IAMD forums and the Combatant Commander Liaison Program</p> <p><i>FY 2010 Plans:</i> Access IAMD Family of Systems (FoS) Capability Assessment – Advanced Threats; BMDS Countermeasures Implication Analysis Phase II; IAMD Architecture Spiral 4; IAMD Roadmap Version 4; Interceptor Sufficiency Analysis (against air breathing targets); IAMD Capability Description Document; Single Integrated Air Picture (SIAP) Capability Description Document; US representative at NATO Air Defense Council and Panel on Air Defense and IAMD forums and the Combatant Commander Liaison Program</p> <p><i>FY 2011 Base Plans:</i> Demonstrate Airborne Warning and Control System- Cooperative Engagement Capability (AWACS-CEC) Integration Demo; IAMD Family of Systems Capability Assessment – Advanced Threats (Modeling &amp; Simulation); IAMD Capability Gap Analysis; US representative at NATO Air Defense Council and Panel on Air Defense and IAMD forums and the Combatant Commander Liaison Program</p>								

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 The Joint Staff				<b>DATE:</b> February 2010				
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 6: <i>RDT&amp;E Management Support</i>		<b>R-1 ITEM NOMENCLATURE</b> PE 0605126J: <i>Joint Integrated Air &amp; Missile Defense Organization (JIAMDO)</i>		<b>PROJECT</b> P001: <i>Core</i>				
<b>B. Accomplishments/Planned Program (\$ in Millions)</b>								
				<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
Accomplishments/Planned Programs Subtotals				19.016	5.994	26.183	0.000	26.183
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A								
<b>D. Acquisition Strategy</b> Not required for Budget Activities 1, 2, 3 and 6.								
<b>E. Performance Metrics</b> - Ensure successful integrated air and missile defense operational and system architectures and system-of-systems engineering are complete and accepted for implementation by the JROC, OSD, and Services								

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 The Joint Staff **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 6: <i>RDT&amp;E Management Support</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0605126J: <i>Joint Integrated Air &amp; Missile Defense Organization (JIAMDO)</i>	<b>PROJECT</b> P002: <i>Homeland</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
<i>P002: Homeland</i>	0.000	0.000	19.000	0.000	19.000	25.000	8.000	0.000	0.000	73.000	73.000
Quantity of RDT&E Articles											

**A. Mission Description and Budget Item Justification**

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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Homeland	0.000	0.000	19.000	0.000	19.000

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 The Joint Staff				<b>DATE:</b> February 2010				
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 6: <i>RDT&amp;E Management Support</i>		<b>R-1 ITEM NOMENCLATURE</b> PE 0605126J: <i>Joint Integrated Air &amp; Missile Defense Organization (JIAMDO)</i>		<b>PROJECT</b> P002: <i>Homeland</i>				
<b>B. Accomplishments/Planned Program (\$ in Millions)</b>								
				<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
Details of this project are classified.  <i>FY 2009 Accomplishments:</i> Details of this project are classified.  <i>FY 2010 Plans:</i> Details of this project are classified.  <i>FY 2011 Base Plans:</i> Details of this project are classified.								
Accomplishments/Planned Programs Subtotals				0.000	0.000	19.000	0.000	19.000
<b>C. Other Program Funding Summary (\$ in Millions)</b>								
N/A								
<b>D. Acquisition Strategy</b>								
Not required for Budget Activities 1, 2, 3 and 6.								
<b>E. Performance Metrics</b>								
Details of this project are classified.								

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 The Joint Staff **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 6: <i>RDT&amp;E Management Support</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0605126J: <i>Joint Integrated Air &amp; Missile Defense Organization (JIAMDO)</i>				<b>PROJECT</b> P003: <i>Intra-Agency Homeland Air Security</i>			
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
P003: <i>Intra-Agency Homeland Air Security</i>	0.000	61.300	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**

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**B. Accomplishments/Planned Program (\$ in Millions)**

	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
Intra-Agency Homeland Air Security	0.000	61.300	0.000	0.000	0.000

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 The Joint Staff				<b>DATE:</b> February 2010				
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 6: <i>RDT&amp;E Management Support</i>		<b>R-1 ITEM NOMENCLATURE</b> PE 0605126J: <i>Joint Integrated Air &amp; Missile Defense Organization (JIAMDO)</i>		<b>PROJECT</b> P003: <i>Intra-Agency Homeland Air Security</i>				
<b>B. Accomplishments/Planned Program (\$ in Millions)</b>								
				<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
Details of the program are classified.  <i>FY 2009 Accomplishments:</i> Details of the program are classified.  <i>FY 2010 Plans:</i> Details of the program are classified.  <i>FY 2011 Base Plans:</i> Details of the program are classified.								
Accomplishments/Planned Programs Subtotals				0.000	61.300	0.000	0.000	0.000
<b>C. Other Program Funding Summary (\$ in Millions)</b>								
N/A								
<b>D. Acquisition Strategy</b>								
Not required for Budget Activities 1, 2, 3 and 6.								
<b>E. Performance Metrics</b>								
Details of the program are classified.								

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 The Joint Staff **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 6: <i>RDT&amp;E Management Support</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0605126J: <i>Joint Integrated Air &amp; Missile Defense Organization (JIAMDO)</i>	<b>PROJECT</b> P004: <i>Black Dart</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
<i>P004: Black Dart</i>	0.000	0.000	4.500	0.000	4.500	5.000	5.500	6.000	6.500	Continuing	Continuing
Quantity of RDT&E Articles											

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The Joint Integrated Air and Missile Defense Organization (JIAMDO), formerly Joint Theater Air and Missile Defense Organization, is the organization within the Department of Defense (DOD) chartered to plan, coordinate, and oversee Joint Air and Missile Defense (AMD) requirements, joint operational concepts, and operational architectures. As part of the CJCS staff, JIAMDO supports the Chairman in meeting his Title 10 responsibilities as they relate to air and missile defense issues. JIAMDO serves as the operational community's proponent for characteristics, requirements, and capabilities in air and missile defense, and is the joint air and missile defense resource 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 air and missile defense architectures and concepts.

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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
JIAMDO Black Dart	0.000	0.000	4.500	0.000	4.500

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 The Joint Staff				<b>DATE:</b> February 2010		
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 6: <i>RDT&amp;E Management Support</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0605126J: <i>Joint Integrated Air &amp; Missile Defense Organization (JIAMDO)</i>	<b>PROJECT</b> P004: <i>Black Dart</i>				
<b>B. Accomplishments/Planned Program (\$ in Millions)</b>						
		<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
<p>Provides funding to support administration and execution of Black Dart demonstrations. Black Dart is a joint agency demonstration which focuses on rapid development and implementation of UAV technology from readily-available commercial products.</p> <p><i>FY 2009 Accomplishments:</i> Programmed transition from USNORTHCOM to JIAMDO</p> <p><i>FY 2010 Plans:</i> Continue to detect, ID, and interdict UAV's demonstration event and supporting analysis (includes targets)</p> <p><i>FY 2011 Base Plans:</i> Detect, ID, and interdict UAV's demonstration event and supporting analysis (includes targets)</p>						
<b>Accomplishments/Planned Programs Subtotals</b>		0.000	0.000	4.500	0.000	4.500
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A						
<b>D. Acquisition Strategy</b> Not required for Budget Activities 1, 2, 3 and 6.						
<b>E. Performance Metrics</b>						
<ul style="list-style-type: none"> <li>- Complete events within schedule and budget. Events provide useful data to improve C-UAS capability</li> <li>- Document gaps, develop &amp; substantiate hardware, software and employment concepts</li> <li>- Field C-UAS capability</li> </ul>						

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 The Joint Staff								<b>DATE:</b> February 2010			
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 6: <i>RDT&amp;E Management Support</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0605126J: <i>Joint Integrated Air &amp; Missile Defense Organization (JIAMDO)</i>				<b>PROJECT</b> P005: <i>Joint Distributed Engineering Plant</i>			
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
P005: <i>Joint Distributed Engineering Plant</i>	5.628	11.897	8.735	0.000	8.735	8.927	9.124	9.287	9.474	Continuing	Continuing
Quantity of RDT&E Articles											

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**B. Accomplishments/Planned Program (\$ in Millions)**

	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
Joint Distributed Engineering Plant (JDEP)	5.628	11.897	8.735	0.000	8.735

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 The Joint Staff				<b>DATE:</b> February 2010				
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 6: <i>RDT&amp;E Management Support</i>		<b>R-1 ITEM NOMENCLATURE</b> PE 0605126J: <i>Joint Integrated Air &amp; Missile Defense Organization (JIAMDO)</i>		<b>PROJECT</b> P005: <i>Joint Distributed Engineering Plant</i>				
<b>B. Accomplishments/Planned Program (\$ in Millions)</b>								
				<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
<p>Evaluates and improves interoperability by establishing and using a distributed, nationwide, hardware and software in-the-loop simulation capability that allows proposed combat capabilities and field combat weapon systems to operate in operationally representative, synthetic joint air and missile defense environments.</p> <p><i>FY 2009 Accomplishments:</i> Supported Aegis Data Integration into Missile Warning; auto data release; defense of Israel interoperability (Juniper Cobra 2010 risk reduction) and Link 16 Track Data Correlation/Decorrelation.</p> <p><i>FY 2010 Plans:</i> Develop TPS59 Missile Warning Integration ; F/A 18 Advanced Integrated Fire Control; Joint Sensor Integration (regional/maritime).</p> <p><i>FY 2011 Base Plans:</i> FY11 events will be determined based on Service/COCOM priorities.</p>								
Accomplishments/Planned Programs Subtotals				5.628	11.897	8.735	0.000	8.735
<b>C. Other Program Funding Summary (\$ in Millions)</b>								
N/A								
<b>D. Acquisition Strategy</b>								
Not required for Budget Activities 1, 2, 3 and 6.								
<b>E. Performance Metrics</b>								
- Each JDEP event develop measures of effectiveness (MOE) & measures of performance (MOP) based on a eighteen month test planning and event process.								

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 The Joint Staff **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 6: <i>RDT&amp;E Management Support</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0605126J: <i>Joint Integrated Air &amp; Missile Defense Organization (JIAMDO)</i>	<b>PROJECT</b> P006: <i>Nimble Fire</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
P006: <i>Nimble Fire</i>	6.215	0.528	18.477	0.000	18.477	13.685	14.115	14.327	14.323	Continuing	Continuing
Quantity of RDT&E Articles											

**A. Mission Description and Budget Item Justification**

The Joint Integrated Air and Missile Defense Organization (JIAMDO), formerly Joint Theater Air and Missile Defense Organization, is the organization within the Department of Defense (DOD) chartered to plan, coordinate, and oversee Joint Air and Missile Defense (AMD) requirements, joint operational concepts, and operational architectures. As part of the CJCS staff, JIAMDO supports the Chairman in meeting his Title 10 responsibilities as they relate to air and missile defense issues. JIAMDO serves as the operational community's proponent for characteristics, requirements, and capabilities in air and missile defense, and is the joint air and missile defense resource 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 air and missile defense architectures and concepts.

JIAMDO has established a close partnership with Combatant Commanders (COCOM) and maintains liaison offices at all major COCOM locations to facilitate coordination of integration issues and requirements. In particular, JIAMDO maintains close coordination with US Strategic Command (USSTRATCOM) in support of ballistic missile defense of the U.S. It provides the Chairman, JCS and the Joint Requirements Oversight Council (JROC) the ability to meet statutory responsibilities to review the cost, schedule and performance criteria of Missile Defense Agency (MDA) 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 conduct of Military Utility Assessments and analysis of the Ballistic Missile Defense System (BMDS). JIAMDO supports the USSTRATCOM mission by ensuring operational and technical requirements are integrated into the theater missile warning architecture. JIAMDO represents the Joint Staff in work on the AMD Capabilities Based Assessment Joint Service Team. JIAMDO also provides direct support to US Northern Command (USNORTHCOM) for homeland air surveillance issues and to US Joint Forces Command (USJFCOM) for capabilities development and validation in support of its Unified Command Plan (UCP) assigned missions.

**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
JIAMDO Nimble Fire	6.215	0.528	18.477	0.000	18.477

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 The Joint Staff **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b>				<b>R-1 ITEM NOMENCLATURE</b>				<b>PROJECT</b>			
0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 6: <i>RDT&amp;E Management Support</i>				PE 0605126J: <i>Joint Integrated Air &amp; Missile Defense Organization (JIAMDO)</i>				P007: <i>Cruise Missile Combat Identification (CID)</i>			
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
P007: <i>Cruise Missile Combat Identification (CID)</i>	14.247	16.786	17.682	0.000	17.682	18.217	19.068	19.098	18.830	Continuing	Continuing
Quantity of RDT&E Articles											

**A. Mission Description and Budget Item Justification**

The Joint Integrated Air and Missile Defense Organization (JIAMDO), formerly Joint Theater Air and Missile Defense Organization, is the organization within the Department of Defense (DOD) chartered to plan, coordinate, and oversee Joint Air and Missile Defense (AMD) requirements, joint operational concepts, and operational architectures. As part of the CJCS staff, JIAMDO supports the Chairman in meeting his Title 10 responsibilities as they relate to air and missile defense issues. JIAMDO serves as the operational community's proponent for characteristics, requirements, and capabilities in air and missile defense, and is the joint air and missile defense resource 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 air and missile defense architectures and concepts.

JIAMDO has established a close partnership with Combatant Commanders (COCOM) and maintains liaison offices at all major COCOM locations to facilitate coordination of integration issues and requirements. In particular, JIAMDO maintains close coordination with US Strategic Command (USSTRATCOM) in support of ballistic missile defense of the U.S. It provides the Chairman, JCS and the Joint Requirements Oversight Council (JROC) the ability to meet statutory responsibilities to review the cost, schedule and performance criteria of Missile Defense Agency (MDA) 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 conduct of Military Utility Assessments and analysis of the Ballistic Missile Defense System (BMDS). JIAMDO supports the USSTRATCOM mission by ensuring operational and technical requirements are integrated into the theater missile warning architecture. JIAMDO represents the Joint Staff in work on the AMD Capabilities Based Assessment Joint Service Team. JIAMDO also provides direct support to US Northern Command (USNORTHCOM) for homeland air surveillance issues and to US Joint Forces Command (USJFCOM) for capabilities development and validation in support of its Unified Command Plan (UCP) assigned missions.

**B. Accomplishments/Planned Program (\$ in Millions)**

	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
Cruise Missile Combat Identification (CID)	14.247	16.786	17.682	0.000	17.682

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 The Joint Staff				<b>DATE:</b> February 2010				
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 6: <i>RDT&amp;E Management Support</i>		<b>R-1 ITEM NOMENCLATURE</b> PE 0605126J: <i>Joint Integrated Air &amp; Missile Defense Organization (JIAMDO)</i>		<b>PROJECT</b> P007: <i>Cruise Missile Combat Identification (CID)</i>				
<b>B. Accomplishments/Planned Program (\$ in Millions)</b>								
				<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
Develops joint cruise missile CID technology and positions it for fielding on front-line weapon systems. Monitors, assesses and enhances joint AMD Combat ID programs.  <i>FY 2009 Accomplishments:</i> Details of this program are classified.  <i>FY 2010 Plans:</i> Details of this program are classified.  <i>FY 2011 Base Plans:</i> Details of this program are classified.								
Accomplishments/Planned Programs Subtotals				14.247	16.786	17.682	0.000	17.682
<b>C. Other Program Funding Summary (\$ in Millions)</b>								
N/A								
<b>D. Acquisition Strategy</b>								
Not required for Budget Activities 1, 2, 3 and 6.								
<b>E. Performance Metrics</b>								
Details of this program are classified.								

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**Exhibit R-2, RDT&E Budget Item Justification: PB 2011 The Joint Staff** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 6: <i>RDT&amp;E Management Support</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0204571J: <i>Joint Staff Analytical Support (JSAS)</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	7.618	1.654	23.081	0.000	23.081	0.598	0.616	0.634	0.653	Continuing	Continuing
P001: <i>Concept Development Red Teaming</i>	0.000	1.654	0.581	0.000	0.581	0.598	0.616	0.634	0.653	Continuing	Continuing
P002: <i>Joint Staff Analytical Support (JSAS)</i>	7.618	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	7.695
P003: <i>Global Force Management Data Initiative (GFM DI)</i>	0.000	0.000	22.500	0.000	22.500	0.000	0.000	0.000	0.000	Continuing	Continuing

**Note**  
In FY 2010, a portion of Joint Staff Analytical Support (JSAS) funding realigned to Management Headquarters in support of Joint Staff-specific information technology, management, and collaboration initiatives under the Office of the Chief Information Officer (OCIO), Joint Staff Information Network (JSIN) project. The remaining funds were realigned to BA 6.

**A. Mission Description and Budget Item Justification**  
The Joint Staff Analytical Support (JSAS) family of programs provides defense analytical support capabilities for the CJCS and COCOMs. JSAS encompasses the developmental tools and infrastructure required to conduct analyses and formulate the results to best assist the Chairman in fulfilling his statutory responsibilities. Key deliverables provided by JSAS include 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 initiatives.

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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2011 The Joint Staff	<b>DATE:</b> February 2010
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<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 6: <i>RDT&amp;E Management Support</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0204571J: <i>Joint Staff Analytical Support (JSAS)</i>
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**B. Program Change Summary (\$ in Millions)**

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	7.695	1.654	0.000	0.000	0.000
Current President's Budget	7.618	1.654	23.081	0.000	23.081
Total Adjustments	-0.077	0.000	23.081	0.000	23.081
• Congressional General Reductions		0.000			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Program Realignment	-0.077	0.000	0.581	0.000	0.581
• Global Force Management Data Initiative (GFM DI) Funding	0.000	0.000	22.500	0.000	22.500

**Change Summary Explanation**

FY2009 - FY2010 change: In FY 2010, a portion of Joint Staff Analytical Support (JSAS) funding realigned to Management Headquarters in support of Joint Staff-specific information technology, management, and collaboration initiatives under the Office of the Chief Information Officer (OCIO), Joint Staff Information Network (JSIN) project. The remaining funds were realigned to BA 6.

FY2011 increase: Funding was provided for the FY2011 Global Force Management Data Initiative Next Steps program.

The DoD did not estimate FY2011 cost when the FY2010 President's Budget was prepared.

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 The Joint Staff								<b>DATE:</b> February 2010			
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 6: <i>RDT&amp;E Management Support</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0204571J: <i>Joint Staff Analytical Support (JSAS)</i>				<b>PROJECT</b> P001: <i>Concept Development Red Teaming</i>			
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
P001: <i>Concept Development Red Teaming</i>	0.000	1.654	0.581	0.000	0.581	0.598	0.616	0.634	0.653	Continuing	Continuing
Quantity of RDT&E Articles											
<b>A. Mission Description and Budget Item Justification</b>											
<p>The Joint Staff Analytical Support (JSAS) family of programs provides defense analytical support capabilities for the CJCS and COCOMs. JSAS encompasses the developmental tools and infrastructure required to conduct analyses and formulate the results to best assist the Chairman in fulfilling his statutory responsibilities. Key deliverables provided by JSAS include 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 initiatives.</p>											
<b>B. Accomplishments/Planned Program (\$ in Millions)</b>											
							<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
Concept Development Red Teaming  Funds discovery experimentation activities supporting Joint Operations Concept (JOpsC) Development Process, implementation, and system integration. Provides expert assessment of future conceptual approaches, alternate means to achieve future solutions and capabilities through Red Teaming. Supports development and competition of ideas that provide the fundamental underpinnings for force development and design critical to assessing risk to in DOD future capabilities.  <i>FY 2009 Accomplishments:</i> None. Program funding began in FY2010.  <i>FY 2010 Plans:</i> Subject matter experts provided assessments for eight Red Teaming concepts: <ul style="list-style-type: none"> <li>• Foreign Internal Defense</li> </ul>							0.000	1.654	0.581	0.000	0.581

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 The Joint Staff				<b>DATE:</b> February 2010				
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 6: <i>RDT&amp;E Management Support</i>		<b>R-1 ITEM NOMENCLATURE</b> PE 0204571J: <i>Joint Staff Analytical Support (JSAS)</i>		<b>PROJECT</b> P001: <i>Concept Development Red Teaming</i>				
<b>B. Accomplishments/Planned Program (\$ in Millions)</b>								
				<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
<ul style="list-style-type: none"> <li>• Joint Supply Joint Integrating Concept</li> <li>• Joint Logistics White Paper</li> <li>• Irregular Warfare Joint Operating Concept</li> <li>• Maritime Domain Awareness Joint Integrating Concept</li> <li>• Homeland Defense and Civil Support Joint Operating Concept</li> <li>• Deterrence Joint Operating Concept</li> <li>• Cyber Joint Operating Concept</li> </ul> <p><i>FY 2011 Base Plans:</i> Increase Red Team activities by four additional future concepts.</p>								
Accomplishments/Planned Programs Subtotals				0.000	1.654	0.581	0.000	0.581
<b>C. Other Program Funding Summary (\$ in Millions)</b>								
N/A								
<b>D. Acquisition Strategy</b>								
N/A								
<b>E. Performance Metrics</b>								
Increase support of the current Red Teaming concepts from eight to twelve in FY2011.								

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 The Joint Staff									<b>DATE:</b> February 2010		
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 6: <i>RDT&amp;E Management Support</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0204571J: <i>Joint Staff Analytical Support (JSAS)</i>				<b>PROJECT</b> P002: <i>Joint Staff Analytical Support (JSAS)</i>			
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
P002: <i>Joint Staff Analytical Support (JSAS)</i>	7.618	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	7.695
Quantity of RDT&E Articles											
<b>Note</b> In FY 2010, JSAS funding realigned to Management Headquarters in support of the Joint Staff-specific information technology, management, and collaboration initiatives under the Office of the Chief Information Officer (OCIO), Joint Staff Information Network (JSIN) project.											
<b>A. Mission Description and Budget Item Justification</b> Joint Staff Analytical Support (JSAS) funded the Joint Training System, Joint Logistics, Joint Collaborative Analysis (JCA) Support (formerly Joint Modeling & Simulation), Adaptive Planning and Analytic Agenda, and Functional Capabilities Boards (FCBs) .											
<b>B. Accomplishments/Planned Program (\$ in Millions)</b>											
						<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>	
Joint Staff Analytical Support  Joint Staff Analytical Support (JSAS) funds Joint Training System, Joint Logistics, Joint Collaborative Analysis (JCA) Support (formerly Joint Modeling & Simulation), Adaptive Planning and Analytic Agenda, and Functional Capabilities Boards (FCBs).  <i>FY 2009 Accomplishments:</i> The FCBs assessed all aspects of Joint Warfighting related programs and initiatives. In FY 2009, the FCBs conducted detailed portfolio management, including program analysis, capability gap analysis, future capability prioritization, and knowledge discovery.						7.618	0.000	0.000	0.000	0.000	

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 The Joint Staff				<b>DATE:</b> February 2010				
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 6: <i>RDT&amp;E Management Support</i>		<b>R-1 ITEM NOMENCLATURE</b> PE 0204571J: <i>Joint Staff Analytical Support (JSAS)</i>		<b>PROJECT</b> P002: <i>Joint Staff Analytical Support (JSAS)</i>				
<b>B. Accomplishments/Planned Program (\$ in Millions)</b>								
				<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
<p><i>FY 2010 Plans:</i> None. Funding realigns to Management Headquarters in support of Joint Staff-specific information technology, management, and collaboration initiatives under the Office of the Chief Information Officer (OCIO) Joint Staff Information Network (JSIN) project.</p> <p><i>FY 2011 Base Plans:</i> None. Funding realigned to Management Headquarters in support of Joint Staff-specific information technology, management, and collaboration initiatives under the Office of the Chief Information Officer (OCIO) Joint Staff Information Network (JSIN) project.</p>								
Accomplishments/Planned Programs Subtotals				7.618	0.000	0.000	0.000	0.000
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A								
<b>D. Acquisition Strategy</b> N/A								
<b>E. Performance Metrics</b> N/A								

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 The Joint Staff									<b>DATE:</b> February 2010			
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 6: <i>RDT&amp;E Management Support</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0204571J: <i>Joint Staff Analytical Support (JSAS)</i>				<b>PROJECT</b> P003: <i>Global Force Management Data Initiative (GFM DI)</i>				
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	
P003: <i>Global Force Management Data Initiative (GFM DI)</i>	0.000	0.000	22.500	0.000	22.500	0.000	0.000	0.000	0.000	Continuing	Continuing	
Quantity of RDT&E Articles												
<b>A. Mission Description and Budget Item Justification</b>												
<p>The Joint Staff Analytical Support (JSAS) family of programs provides defense analytical support capabilities for the CJCS and COCOMs. JSAS encompasses the developmental tools and infrastructure required to conduct analyses and formulate the results to best assist the Chairman in fulfilling his statutory responsibilities. Key deliverables provided by JSAS include 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 initiatives.</p>												
<b>B. Accomplishments/Planned Program (\$ in Millions)</b>												
						<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>		
Global Force Management Data Initiative (GFM DI)						0.000	0.000	22.500	0.000	22.500		
<p>The GFM DI is the Department enterprise solution that enables comprehensive visibility, accessibility, and sharing of the entire DoD force information, which provides the Department with the capacity to integrate data across domains and systems. Provides the Department with improved decision-making ability by enabling solutions at the strategic, operational, and tactical level.</p> <p><i>FY 2011 Base Plans:</i> xxx</p>												
Accomplishments/Planned Programs Subtotals						0.000	0.000	22.500	0.000	22.500		

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 The Joint Staff		<b>DATE:</b> February 2010
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 6: <i>RDT&amp;E Management Support</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0204571J: <i>Joint Staff Analytical Support (JSAS)</i>	<b>PROJECT</b> P003: <i>Global Force Management Data Initiative (GFM DI)</i>

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

N/A

**D. Acquisition Strategy**

N/A

**E. Performance Metrics**

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R-1 Line Item #165

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**Exhibit R-2, RDT&E Budget Item Justification: PB 2011 The Joint Staff** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b>			<b>R-1 ITEM NOMENCLATURE</b>								
0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i>			PE 0208043J: <i>Planning and Decision Aid System (PDAS)</i>								
BA 7: <i>Operational Systems Development</i>											
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
Total Program Element	1.723	2.170	2.288	0.000	2.288	2.402	2.522	2.248	2.361	Continuing	Continuing
P001: <i>Planning and Decision Aid System OPS</i>	1.723	2.170	2.288	0.000	2.288	2.402	2.522	2.248	2.361	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

Planning and Decision Aid System (PDAS) is a classified automated information system protected program under Secretary of Defense (SecDef). PDAS supports the planning and execution of Integrated Joint Special Technical Operations (IJSTO).

**B. Program Change Summary (\$ in Millions)**

	<u><b>FY 2009</b></u>	<u><b>FY 2010</b></u>	<u><b>FY 2011 Base</b></u>	<u><b>FY 2011 OCO</b></u>	<u><b>FY 2011 Total</b></u>
Previous President's Budget	1.749	2.170	0.000	0.000	0.000
Current President's Budget	1.723	2.170	2.288	0.000	2.288
Total Adjustments	-0.026	0.000	2.288	0.000	2.288
• Congressional General Reductions		0.000			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Economic Adjustments	-0.026	0.000	2.288	0.000	2.288

**Change Summary Explanation**

The DoD did not estimate FY2011 cost when the FY2010 President's Budget was prepared.

**C. Accomplishments/Planned Program (\$ in Millions)**

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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2011 The Joint Staff	<b>DATE:</b> February 2010
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<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0208043J: <i>Planning and Decision Aid System (PDAS)</i>
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<b>C. Accomplishments/Planned Program (\$ in Millions)</b>	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
Planning and Decision Aid System (PDAS)  Planning and Decision Aid System (PDAS) is a classified automated information system protected program under Secretary of Defense (SecDef). PDAS supports the planning and execution of Integrated Joint Special Technical Operations (IJSTO).  <i>FY 2009 Accomplishments:</i> Details of this program are classified.  <i>FY 2010 Plans:</i> Details of this program are classified.  <i>FY 2011 Base Plans:</i> Details of this program are classified.	1.723	2.170	2.288	0.000	2.288
<b>Accomplishments/Planned Programs Subtotals</b>	1.723	2.170	2.288	0.000	2.288

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

**E. Acquisition Strategy**  
Details of this program are classified.

**F. Performance Metrics**  
Details of this program are classified.

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**Exhibit R-2, RDT&E Budget Item Justification: PB 2011 The Joint Staff** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0303149J: <i>Command, Control, Communications, Computers, and Intelligence for the Warrior (C4IFTW)</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	3.652	4.081	2.261	0.000	2.261	2.315	2.369	2.419	2.470	Continuing	Continuing
P001: <i>Communication Requirements Development Support</i>	0.331	0.866	0.886	0.000	0.886	0.887	0.896	0.905	0.959	Continuing	Continuing
P002: <i>Coalition Warrior Interoperability Demo</i>	1.352	1.672	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
P003: <i>Communications Operations Analysis and Integration</i>	1.969	1.543	1.375	0.000	1.375	1.428	1.473	1.514	1.511	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

The Command, Control, Communications, Computers, and Intelligence for the Warrior (C4IFTW) vision evolved into the Department's Global Information Grid (GIG) as a means to achieve Information Superiority. The GIG is the globally interconnected, end-to-end set of information capabilities, associated processes, and personnel for collecting, processing, storing, disseminating and managing information on-demand to warfighters, policy makers, and support personnel. The GIG includes all owned and leased communications and computing systems and services, software (including applications), data, security services, and other associated services necessary to achieve Information Superiority. It also includes National Security Systems as defined in section 5142 of the Clinger-Cohen Act of 1996. The GIG supports all DOD, National Security, and related Intelligence Community missions and functions (strategic, operational, tactical and business), in war and in peace. The GIG also provides capabilities from all operating locations (bases, posts, camps, stations, facilities, mobile platforms, and deployed sites). Finally, the GIG provides interfaces to coalition, allied, and non-DOD users and systems.

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<b>Exhibit R-2, RDT&amp;E Budget Item Justification: PB 2011 The Joint Staff</b>	<b>DATE:</b> February 2010
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<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0303149J: <i>Command, Control, Communications, Computers, and Intelligence for the Warrior (C4IFTW)</i>
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**B. Program Change Summary (\$ in Millions)**

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	3.901	4.081	0.000	0.000	0.000
Current President's Budget	3.652	4.081	2.261	0.000	2.261
Total Adjustments	-0.249	0.000	2.261	0.000	2.261
• Congressional General Reductions		0.000			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Program Transfer	-0.249	0.000	2.261	0.000	2.261

**Change Summary Explanation**

In FY2011, Coalition Warrior Interoperability Demonstration (CWID) program transfers from the Joint Staff to Director of Defense Research and Engineering and Navy for USJFCOM consistent with program management responsibility.

The DoD did not estimate FY2011 cost when the FY2010 President's Budget was prepared.

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 The Joint Staff								<b>DATE:</b> February 2010			
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>			<b>R-1 ITEM NOMENCLATURE</b> PE 0303149J: <i>Command, Control, Communications, Computers, and Intelligence for the Warrior (C4IFTW)</i>					<b>PROJECT</b> P001: <i>Communication Requirements Development Support</i>			
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
P001: <i>Communication Requirements Development Support</i>	0.331	0.866	0.886	0.000	0.886	0.887	0.896	0.905	0.959	Continuing	Continuing
Quantity of RDT&E Articles											

**A. Mission Description and Budget Item Justification**

The Command, Control, Communications, Computers, and Intelligence for the Warrior (C4IFTW) vision evolved into the Department's Global Information Grid (GIG) as a means to achieve Information Superiority. The GIG is the globally interconnected, end-to-end set of information capabilities, associated processes, and personnel for collecting, processing, storing, disseminating and managing information on-demand to warfighters, policy makers, and support personnel. The GIG includes all owned and leased communications and computing systems and services, software (including applications), data, security services, and other associated services necessary to achieve Information Superiority. It also includes National Security Systems as defined in section 5142 of the Clinger-Cohen Act of 1996. The GIG supports all DOD, National Security, and related Intelligence Community missions and functions (strategic, operational, tactical and business), in war and in peace. The GIG also provides capabilities from all operating locations (bases, posts, camps, stations, facilities, mobile platforms, and deployed sites). Finally, the GIG provides interfaces to coalition, allied, and non-DOD users and systems.

**B. Accomplishments/Planned Program (\$ in Millions)**

	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
Communication Requirements Development Support  Supports Joint Command, Control, Communications, and Computers (C4) analytical tool development; Global Information Grid (GIG) transformational activities; GIG network operations and related network management and configuration management efforts, cyberspace operations, and joint C4 network and program development. Institutionalizes knowledge management capabilities across the Joint Staff. Ensures synchronization of systems to network capabilities, validates the Net-Ready Key Performance Parameters, and certifies interoperability and supportability.	0.331	0.866	0.886	0.000	0.886

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 The Joint Staff	<b>DATE:</b> February 2010
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<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0303149J: <i>Command, Control, Communications, Computers, and Intelligence for the Warrior (C4IFTW)</i>	<b>PROJECT</b> P001: <i>Communication Requirements Development Support</i>
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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p><i>FY 2009 Accomplishments:</i>                      Developed the Joint Information Environment – Marianas Operational Architecture to identify and align information technology investments with mission requirements and approved joint capability areas. Researched and compiled a consolidated, comprehensive list of joint tasks to serve as a basis for planning, readiness reporting, joint training and joint military activities in cyberspace. Developed the GIG 2.0 Operational Reference Architecture identifying the operational outcomes and technical characteristics for a secure, single information environment across the DoD enterprise. Drafted the GIG 2.0 Capstone Capability Delivery Increment Plan, documenting the required activities and technical requirements to achieve the GIG 2.0 vision. Coordinated stakeholder meetings in support of CJCS IPv6 Certification Criteria and participated in the Joint User Interoperability Communications Exercise and DoD Interoperability Communications Exercise 2010 to research interoperability challenges. Provided Web 2.0 technology training to Joint Staff members across all directorate, the National Military Command Center, and Pakistan/Afghanistan Coordination Cell. Provided technical analysis and recommendations on US Strategic Command Operational Plans for NetOps and Computer Network Defense. Provided technical analysis and recommendations on US Cyber Command Implementation Plan. Participated in US Strategic Command and US Joint Forces Command hosted Cyber Defense Limited Objective Experiments for cyberspace operations research. Provided technical analysis and conducted Joint Staff Web 2.0 use study to support the development of DoD-wide social networking services policy. Reviewed over 100 technical program documentation exhibits to conduct Interoperability and Supportability/Net-Ready Key Performance Parameter Readiness assessments in accordance with CJCS Instruction 6212.01.</p> <p><i>FY 2010 Plans:</i>                      Develop Global Information Grid (GIG) and cyberspace strategy, planning guidance, policy, doctrine, implementation plans, and related courses of action, concepts of operations, standard operating procedures, and tactics, techniques and procedures. Conduct research and develop in collecting, coordinating, implementing, and executing requirements provided by the joint warfighting community</p>					

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 The Joint Staff	<b>DATE:</b> February 2010
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<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0303149J: <i>Command, Control, Communications, Computers, and Intelligence for the Warrior (C4IFTW)</i>	<b>PROJECT</b> P001: <i>Communication Requirements Development Support</i>
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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p>research and development to collect, coordinate, implement, and execute requirements provided by the joint warfighting community to include ensure warfighting applicability for secure and efficient GIG operations and defense. Facilitate the development, management, operation and defense of the GIG and GIG 2.0 efforts, including but not limited to Joint Basing and DoD Data Standards and Strategy. Conduct analysis and recommendations in executing operations in cyberspace by participating in the design, development, implementation and execution of cyberspace experiments, exercises, tactical decision games, and war games to ensure the inclusion and appropriateness of information assurance, network operations and computer network operations objectives, goals, and activities. Conduct technical computer network operations, NetOps, and information assurance and planning to integrate into force management processes and operational plans and orders. Conduct studies and provide white papers, problem statements, and support the development of new GIG and cyberspace operating concepts. Conduct GIG Interoperability and Supportability assessments of capabilities submitted for processing through JCIDS in accordance with applicable DOD and CJCS directives and instructions, including the CJCS Instruction 6212.01 series. Participate in the development, implementation, and execution of GIG network management, configuration management, network defense, information assurance, and network visualization solutions. Develop, prioritize, prototype, and implement technical solutions to enable rapid and efficient decision-making. Provide technical analysis for implementing and deploying Voice over IP (VoIP), Voice over Security IP (VoSIP), and everything over IP (EoIP) capabilities to OSD, Joint Staff and CC/S/A as well as other DoD mission partners. Conduct technical coordination with Offices of the Secretary of Defense, all Combatant Commands, Services, Agencies (CC/S/A), the Defense Information Systems Agency, the National Intelligence community, and specified information sharing and mission partners.</p>					
Accomplishments/Planned Programs Subtotals	0.331	0.866	0.886	0.000	0.886

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 The Joint Staff **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b>	<b>R-1 ITEM NOMENCLATURE</b>	<b>PROJECT</b>
0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	PE 0303149J: <i>Command, Control, Communications, Computers, and Intelligence for the Warrior (C4IFTW)</i>	P001: <i>Communication Requirements Development Support</i>

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

N/A

**D. Acquisition Strategy**

N/A

**E. Performance Metrics**

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 The Joint Staff **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0303149J: <i>Command, Control, Communications, Computers, and Intelligence for the Warrior (C4IFTW)</i>	<b>PROJECT</b> P002: <i>Coalition Warrior Interoperability Demo</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
P002: <i>Coalition Warrior Interoperability Demo</i>	1.352	1.672	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles			0		0	0	0	0	0		

**A. Mission Description and Budget Item Justification**

The Command, Control, Communications, Computers, and Intelligence for the Warrior (C4IFTW) vision evolved into the Department's Global Information Grid (GIG) as a means to achieve Information Superiority. The GIG is the globally interconnected, end-to-end set of information capabilities, associated processes, and personnel for collecting, processing, storing, disseminating and managing information on-demand to warfighters, policy makers, and support personnel. The GIG includes all owned and leased communications and computing systems and services, software (including applications), data, security services, and other associated services necessary to achieve Information Superiority. It also includes National Security Systems as defined in section 5142 of the Clinger-Cohen Act of 1996. The GIG supports all DOD, National Security, and related Intelligence Community missions and functions (strategic, operational, tactical and business), in war and in peace. The GIG also provides capabilities from all operating locations (bases, posts, camps, stations, facilities, mobile platforms, and deployed sites). Finally, the GIG provides interfaces to coalition, allied, and non-DOD users and systems.

**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Coalition Warrior Interoperability Demonstration  The Command, Control, Communications, Computers, and Intelligence for the Warrior (C4IFTW) program evolved into the Department's Global Information Grid (GIG) as a means to achieve information superiority. Coalition Warrior Interoperability Demonstration (CWID) provides focus and visibility into resolving joint, coalition, and national civil authority C4 interoperability issues and provides organizing principles, techniques, and procedures for achieving information superiority as envisioned by Joint Vision 2020. The GIG stresses interoperability and CWID leverages the rapid pace of C4 technology advancements. CWID is the Chairman's annual event that enables the US	1.352	1.672	0.000	0.000	0.000

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 The Joint Staff	<b>DATE:</b> February 2010
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<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0303149J: <i>Command, Control, Communications, Computers, and Intelligence for the Warrior (C4IFTW)</i>	<b>PROJECT</b> P002: <i>Coalition Warrior Interoperability Demo</i>
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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p>combatant commands, national civil authorities, and international community to investigate command control, communications, computers, intelligence, surveillance and reconnaissance (C4ISR) solutions that focus on relevant and timely objectives for enhancing coalition interoperability and exploring new partnerships. CWID is conducted in a simulated operational environment to provide context for warfighter and national civil authorities' validation of those solutions. Interoperability Trials (ITs) are the activities used to address the core coalition and interagency interoperability objectives selected each year. ITs strive to address warfighter requirements and interoperability deficiencies. The selection of trials is dependent upon the annual overarching objectives, the host combatant command's priorities, Coalition/State/Agency desires to partner in a proposed trial, interagency participation, and the desires of invited coalition participants. CWID is an integral component of the JV 2020 conceptual template.</p> <p><i>FY 2009 Accomplishments:</i> Completed a revision update to CWID Instruction CJCSI 6260.01. Conducted day-to-day program operations, six planning conferences/meetings, and demonstration execution. Evaluated 42 technologies and capabilities (many new and emerging) for exchanging information among coalition partners, military services, government agencies, first responders and U.S. combatant commanders. Executed an integrated communication plan across the DoD, Department of Homeland Security and amongst coalition partners resulting in more than 30 Internet stories, several originating from print publications; five broadcast stories; blog discussions, and social networking sites such as Twitter and YouTube.</p> <p><i>FY 2010 Plans:</i> Focus on real world and future problems (i.e. CENTRIX-ISAF). Exploit opportunities for integration and collaboration with CYBERCOM. Evaluate 40 technologies and capabilities (many new and emerging) for exchanging information among coalition partners, military services, government agencies, first responders and U.S. combatant commanders. Investigate capabilities to develop an Information Communication Technologies umbrella for coalition operations to facilitate multinational command</p>					

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 The Joint Staff				<b>DATE:</b> February 2010				
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>		<b>R-1 ITEM NOMENCLATURE</b> PE 0303149J: <i>Command, Control, Communications, Computers, and Intelligence for the Warrior (C4IFTW)</i>		<b>PROJECT</b> P002: <i>Coalition Warrior Interoperability Demo</i>				
<b>B. Accomplishments/Planned Program (\$ in Millions)</b>								
				<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
and control. Develop criteria/standards for assessing technologies to be measured against for use in a "coalition environment". Conduct day-to-day program operations, six planning conferences/meetings, and demonstration execution.  <i>FY 2011 Base Plans:</i> None. This program will transfer to USJFCOM, as directed by the Vice Chairman, in FY2011.								
Accomplishments/Planned Programs Subtotals				1.352	1.672	0.000	0.000	0.000
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A								
<b>D. Acquisition Strategy</b> N/A								
<b>E. Performance Metrics</b> None. This program will transfer to USJFCOM, as directed by the Vice Chairman, in FY11.								

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**Exhibit R-2A, RDT&E Project Justification: PB 2011 The Joint Staff** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0303149J: <i>Command, Control, Communications, Computers, and Intelligence for the Warrior (C4IFTW)</i>	<b>PROJECT</b> P003: <i>Communications Operations Analysis and Integration</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
P003: <i>Communications Operations Analysis and Integration</i>	1.969	1.543	1.375	0.000	1.375	1.428	1.473	1.514	1.511	Continuing	Continuing
Quantity of RDT&E Articles											

**A. Mission Description and Budget Item Justification**

The Command, Control, Communications, Computers, and Intelligence for the Warrior (C4IFTW) vision evolved into the Department's Global Information Grid (GIG) as a means to achieve Information Superiority. The GIG is the globally interconnected, end-to-end set of information capabilities, associated processes, and personnel for collecting, processing, storing, disseminating and managing information on-demand to warfighters, policy makers, and support personnel. The GIG includes all owned and leased communications and computing systems and services, software (including applications), data, security services, and other associated services necessary to achieve Information Superiority. It also includes National Security Systems as defined in section 5142 of the Clinger-Cohen Act of 1996. The GIG supports all DOD, National Security, and related Intelligence Community missions and functions (strategic, operational, tactical and business), in war and in peace. The GIG also provides capabilities from all operating locations (bases, posts, camps, stations, facilities, mobile platforms, and deployed sites). Finally, the GIG provides interfaces to coalition, allied, and non-DOD users and systems.

**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Communications Operations Analysis & Integration  Future operations will rely on seamless and fully integrated Satellite Communications and terrestrial Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR) systems and networks - all capable of supporting network centric operations. The use of creative analytical methodologies, C4ISR assessment tools, modeling and simulation, functional analysis, architecture development and assessment tools, and other analytical techniques, as appropriate, will help the development of insights and solutions to further evolve to a fully connected, integrated, and interoperable force.	1.969	1.543	1.375	0.000	1.375

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 The Joint Staff		<b>DATE:</b> February 2010
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0303149J: <i>Command, Control, Communications, Computers, and Intelligence for the Warrior (C4IFTW)</i>	<b>PROJECT</b> P003: <i>Communications Operations Analysis and Integration</i>

**E. Performance Metrics**

Contractor produces written summaries of key Frequency Panel sub-group meetings and preparatory meetings for annual COCOM spectrum management conferences.

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**Exhibit R-2, RDT&E Budget Item Justification: PB 2011 The Joint Staff** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b>			<b>R-1 ITEM NOMENCLATURE</b>								
0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i>			PE 0902298J: <i>Management Headquarters</i>								
BA 7: <i>Operational Systems Development</i>											
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
Total Program Element	3.392	7.535	2.807	0.000	2.807	2.864	2.960	2.933	2.820	Continuing	Continuing
P001: <i>Joint Staff Information Network (JSIN)</i>	3.392	7.535	2.807	0.000	2.807	2.864	2.960	2.933	2.820	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

Management Headquarters provides the day-to-day financial resources necessary to support TJS operations. Across the Joint Staff, Management Headquarters resources support various efforts including network infrastructure, civilian pay accounts, supplies, travel, training, portfolio management, business process reviews, and transformation initiatives.

**B. Program Change Summary (\$ in Millions)**

	<u><b>FY 2009</b></u>	<u><b>FY 2010</b></u>	<u><b>FY 2011 Base</b></u>	<u><b>FY 2011 OCO</b></u>	<u><b>FY 2011 Total</b></u>
Previous President's Budget	3.392	8.303	0.000	0.000	0.000
Current President's Budget	3.392	7.535	2.807	0.000	2.807
Total Adjustments	0.000	-0.768	2.807	0.000	2.807
• Congressional General Reductions		0.000			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Joint Staff Information Network (JSIN)	0.000	-0.768	2.807	0.000	2.807

**Change Summary Explanation**

FY10 program reduction is due to the internal realignment of RDT&E funding in support of Joint Staff-specific information technology, management, and collaboration initiatives under the Office of the Chief Information Officer (OCIO) Joint Staff Information Network (JSIN) project.

The DoD did not estimate FY2011 cost when the FY2010 President's Budget was prepared.

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 The Joint Staff								<b>DATE:</b> February 2010				
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0902298J: <i>Management Headquarters</i>				<b>PROJECT</b> P001: <i>Joint Staff Information Network (JSIN)</i>				
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	
P001: <i>Joint Staff Information Network (JSIN)</i>	3.392	7.535	2.807	0.000	2.807	2.864	2.960	2.933	2.820	Continuing	Continuing	
Quantity of RDT&E Articles												
<b>A. Mission Description and Budget Item Justification</b>												
Management Headquarters provides the day-to-day financial resources necessary to support TJS operations. Across the Joint Staff, Management Headquarters resources support various efforts including network infrastructure, civilian pay accounts, supplies, travel, training, portfolio management, business process reviews, and transformation initiatives.												
<b>B. Accomplishments/Planned Program (\$ in Millions)</b>												
						<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>		
Joint Staff Information Network (JSIN)						3.392	7.535	2.807	0.000	2.807		
<p>Provides RDT&amp;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, COCOMs 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 (COCOMs), Services, and agencies, as well as within TJS.</p> <p><i>FY 2009 Accomplishments:</i> Developed products, capabilities, and services designed to satisfy valid mission-critical needs, including classified Secret JS network, thin client computers/ communications, enhanced identification/ secured network access, automated task/workflow management system, web-enabled and integrated task management pilot, desktop and electronic Video Tele-Conference (eVTC) suites, Information Technology (IT) for the new National Joint Operations and Intelligence Center and Pakistan</p>												

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 The Joint Staff				<b>DATE:</b> February 2010				
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<b>B. Accomplishments/Planned Program (\$ in Millions)</b>								
				<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
<p>Afghanistan Coordination Cell providing vital support of US Forces and the International Stabilization Force (ISAF). Initiated research to build web portal capabilities. Researched JS IT strategic direction and improvements.</p> <p><i>FY 2010 Plans:</i> Enhance eVTC capabilities. Upgrade IT capabilities for Chairman, JCS. Upgrade communications hardware &amp; software. Implement computer and server intrusion prevention and detection capability. Enhance enterprise monitoring/reporting and computer configuration control capabilities. Improve IT automated service support/delivery management system. Implement GO remote communications capabilities. Increase secure, mobile electronic data/voice capabilities. Upgrade communications at JS contingency location. Initiate Joint Training Information Management System (JTIMS) development. Develop users' communication issue resolution capability. Deploy MS Office and Exchange 2007 enhanced capabilities. Modernize network architecture and expand Test Lab. Initiate web portal enhancements. Research JS IT strategic direction and improvements.</p> <p><i>FY 2011 Base Plans:</i> Develop new, enhanced JS automated task/workflow management system. Modernize network architecture. Upgrade communications hardware &amp; software. Researching JS IT strategic direction and improvements. Complete web portal and content discovery enhancements. Provide secure, mobile electronic data/voice capabilities. Enhance identification/secured network access capabilities. Complete JTIMS implementation.</p>								
Accomplishments/Planned Programs Subtotals				3.392	7.535	2.807	0.000	2.807
<b>C. Other Program Funding Summary (\$ in Millions)</b>								
N/A								
<b>D. Acquisition Strategy</b>								
N/A								

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 The Joint Staff		<b>DATE:</b> February 2010
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**E. Performance Metrics**

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**Department of Defense  
Fiscal Year (FY) 2011 President's Budget**

February 2010



**United States Special Operations Command**

*Justification Book Volume 5B*

***Research, Development, Test & Evaluation, Defense-Wide***

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 (Dollars in Thousands)

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

Date: 21 Jan 2010

Line No	Program Element Number	Item	Act	FY 2009 (Base & OCO)	FY 2010 Base & OCO Enacted	FY 2010 Supplemental Request	FY 2010 Total	FY 2011 Base	FY 2011 OCO	FY 2011 Total Request	Sec
22	1160401BB	Special Operations Technology Development	02	32,167	30,606		30,606	26,545		26,545	U
23	1160407BB	SOF Medical Technology Development	02	2,361	2,390		2,390				U
		Applied Research		34,528	32,996		32,996	26,545		26,545	
67	1160402BB	Special Operations Advanced Technology Development	03	78,836	56,727		56,727	30,806		30,806	U
68	1160422BB	Aviation Engineering Analysis	03		3,529		3,529	4,234		4,234	U
69	1160472BB	SOF Information and Broadcast Systems Advanced Technology	03	8,405	4,967		4,967	4,942		4,942	U
		Advanced Technology Development (ATD)		87,241	65,223		65,223	39,982		39,982	
211	0304210BB	Special Applications for Contingencies	07	23,020	27,467		27,467	16,272		16,272	U
227	0305208BB	Distributed Common Ground/Surface Systems	07	763	7,701		7,701	1,290		1,290	U
232	0305219BB	MQ-1 Predator A UAV	07	13,642	2,058		2,058	98		98	U
250	1105219BB	MQ-9 UAV	07		4,362		4,362	98		98	U
251	1160279BB	Small Business Innovative Research/ Small Bus Tech Transfer Pilot Prog	07	10,206							U
252	1160403BB	Special Operations Aviation Systems Advanced Development	07	72,225	72,308		72,308	68,691		68,691	U
253	1160404BB	Special Operations Tactical Systems Development	07	15,143	6,845		6,845	1,582		1,582	U

Exhibit R-1G: FY 2011 President's Budget (Published), as of January 21, 2010 at 14:26:23

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Defense-Wide  
FY 2011 President's Budget  
Exhibit R-1 FY 2011 Base and Overseas Contingency Operations (OCO) Request  
(Dollars in Thousands)

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

Date: 21 Jan 2010

Line No	Program Element Number	Item	Act	FY 2009 (Base & OCO)	FY 2010 Base & OCO Enacted	FY 2010 Supplemental Request	FY 2010 Total	FY 2011 Base	FY 2011 OCO	FY 2011 Total Request	Se
254	1160405BB	Special Operations Intelligence Systems Development	07	39,866	41,223		41,223	23,879	9,440	33,319	U
255	1160408BB	SOF Operational Enhancements	07	53,672	63,045		63,045	62,592		62,592	U
256	1160421BB	Special Operations CV-22 Development	07	30,970	12,634		12,634	14,406		14,406	U
257	1160423BB	Joint Multi-Mission Submersible	07		33,273		33,273	14,924		14,924	U
258	1160426BB	Operations Advanced Seal Delivery System (ASDS) Development	07	5,643	3,485		3,485				U
259	1160427BB	Mission Training and Preparation Systems (MTPS)	07	5,496	3,178		3,178	2,915		2,915	U
260	1160428BB	Unmanned Vehicles (UV)	07	41,352	996		996				U
261	1160429BB	MC130J SOF Tanker Recapitalization	07	4,474	5,932		5,932	7,624		7,624	U
262	1160474BB	SOF Communications Equipment and Electronics Systems	07		730		730	1,922		1,922	U
263	1160476BB	SOF Tactical Radio Systems	07		2,358		2,358	2,347		2,347	U
264	1160477BB	SOF Weapons Systems	07	3,857	1,077		1,077	479		479	U
265	1160478BB	SOF Soldier Protection and Survival Systems	07	3,040	594		594	593		593	U
266	1160479BB	SOF Visual Augmentation, Lasers and Sensor Systems	07	6,485	8,533		8,533				U
267	1160480BB	SOF Tactical Vehicles	07	1,600	1,965		1,965	1,994		1,994	U

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

Date: 21 Jan 2010

Line No	Program Element Number	Item	Act	FY 2009 (Base & OCO)	FY 2010 Base & OCO Enacted	FY 2010 Supplemental Request	FY 2010 Total	FY 2011 Base	FY 2011 OCO	FY 2011 Total Request	Se c
268	1160482BB	SOF Rotary Wing Aviation	07	3,202	18,784		18,784	14,473		14,473	U
269	1160483BB	SOF Underwater Systems	07	8,572	18,774		18,774	13,986		13,986	U
270	1160484BB	SOF Surface Craft	07	6,232	9,959		9,959	2,933		2,933	U
271	1160488BB	SOF PSYOP	07	8,251	9,846		9,846	4,193		4,193	U
272	1160489BB	SOF Global Video Surveillance Activities	07	13,914	4,923		4,923	5,135		5,135	U
273	1160490BB	SOF Operational Enhancements Intelligence	07	7,005	11,499		11,499	9,167		9,167	U
9999	9999999999	Classified Programs		1,663	1,591		1,591	3,444		3,444	U
		Operational Systems Development		380,293	375,140		375,140	275,037	9,440	284,477	
Total Research, Development, Test & Eval, DW				502,062	473,359		473,359	341,564	9,440	351,004	

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69	03	1160472BB	Information and Broadcast Systems Advanced Technology/S225.....	Volume 5B - 327

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## *ORGANIZATIONS*

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ISOW	1st Special Operations Wing
160th SOAR	160th Special Operations Aviation Regiment
AFSOC	Air Force Special Operations Command
ARSOA	Army Special Operations Aviation
BGAD	Bluegrass Army Depot
CERDEC	Communications-Electronics Research, Development and Engineering Center
CSO	Center for Special Operations
DARPA	Defense Advanced Research Projects Agency
DTRA	Defense Threat Reduction Agency
FDA	Federal Drug Administration
JSOAC	Joint Special Operations Aviation Component
MARSOC	Marine Special Operations Command
NATO	North Atlantic Treaty Organization
NAVAIR	Naval Aviation Systems
NAVSCIATTS	Naval Small Craft Instructor and Technical Training School
NAVSPECWARCOM	Naval Special Warfare Command
NSA	National Security Agency
NSWC	Naval Special Warfare Command
PMA-275	V-22 Joint Program Office
SOFSA	Special Operations Forces Support Facility
TAPO	Technology Applications Program Office
TSOC	Theater Special Operations Command
USAF	United States Air Force
USASOC	United States Army Special Operations Command
USSOCOM	United States Special Operations Command

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## *ACRONYMS*

A2C2S	Army Aviation Command & Control System
AA	Anti-Armor
ACTD	Advanced Concepts Technology Demonstration
ADM-NVG	Advanced Digital Multi-Spectral Night Vision Goggle
ADP	Automated Data Processing
ADRAC	Altitude Decompression Sickness Risk Assessment Computer
ADSS	Adaptive Deployable Sensor Suite
AEP	Alternate Engine Program
AFCS	Auto Flight Control System
AGE	Arterial Gas Embolism
AHRS	Attitude Heading Reference System
ALE	Automatic Link Establishment
ALGL	Autonomous Landing Guidance System
ALGS	Advanced Lightweight Grenade Launcher
ALLTV	All Light Level Television
AM	Amplitude Modulation
AMP	Avionics Modernization Program
AMR	Anti-Materiel Rifle
AOBPS	Aircraft Occupant Ballistic Protection System
ARAP	ASDS Reliability Action Panel
ARH	Armed Reconnaissance Helicopter
AS&C	Advanced Systems Concept
ASD	Assistant Secretary of Defense
ASDS	Advanced Sea, Air, Land Delivery System
ASE	Aircraft Survivability Equipment
ASIC	Application Specific Integrated Circuit
ASM	Anti Structural Munitions
ATACMS	Army Tactical Missile System
ATC	Air Traffic Control
ATD	Advanced Technology Demonstration
ATD/TB	AC-130U Gunship Aircrew Training Devices/Testbed
ATL	Advanced Tactical Laser

## ACRONYMS

ATM	Asynchronous Transfer Mode
ATPIAL	Advanced Tactical Precision Illuminator Aiming Laser
ATPS	Advanced Tactical Parachute System
ATTWR	Advanced Tactical Threat Warning Radio
ATV	All Terrain Vehicle
AWE	Aircraft, Weapons, Electronics
BALCS	Body Armor Load Carriage System
BFT	Blue Force Tracking
BIO	Basic Input Output
BLOS	Beyond Line-of-Site
BLOSESM	Below Line-of-Site Electronic Support Measures
BMATT	Brief Multimission Advanced Tactical Terminal
BOIP	Basis of Issue Plan
BUD/S	Basic Underwater Demolition School
C2	Command and Control
C3I	Command, Control, Communications, and Intelligence
C4	Command, Control, Communications, and Computers
C4I	Command, Control, Communications, Computers, and Intelligence
C4IAS	Command, Control, Communications, Computers, and Intelligence Automation System
CAAP	Common Avionics Architecture for Penetration
CAAS	Common Avionics Architecture Systems
CAMS	Combat Autonomous Mobility System
CAPS	Counter-Proliferation Analysis and Planning System
CASEVAC	Casualty Evacuation
CBN	Chemical, Biological and Nuclear
CCCEKIT	Combat Casualty Care Equipment Kit
CCD	Coherent Change Detection
CCD	Charged Coupled Device (Forward Looking Infrared Radar Only)
CCFLIR	Combatant Craft Forward Looking Infrared
CDB	Common Database
CDR	Critical Design Review
CERP	Capital Equipment Replacement Plan

## *ACRONYMS*

CESE	Civil Engineering Support Equipment
CFE	Contractor Furnished Equipment
CGF	Computer Generated Forces
CINC	Commander in Chief
CLR	Combat Loss Replacement
CMNS	Combat Mission Needs Statement
CMR	Combat Mission Requirement
CMS	Combat Mission Simulator
CNVD	Clip-On Night Vision Device
COIL	Chemical Oxygen Iodine Laser
COMSEC	Communications Security
CONOPS	Concept of Operations
COTM	Communications On-the-Move
COTS	Commercial-Off-The-Shelf
COW	Cost of War
CP	Counter-Proliferation
CPAF	Cost Plus Award Fee
CQBR	Close Quarters Battle Rifle
CS	Confined Space (Light Anti-Armored Weapons)
CS	Combat Swimmer
CSAR	Combat Survivor Evader Locator
CSEL	Combat Search and Rescue
CSOLO	Commando Solo
CW	Center Wing
DAGR	Defense Advanced Global Positioning System Receiver
DAMA	Demand Assured Multiple Access
DARPA	Defense Advanced Research Projects Agency
DAS	Distributed Aperture System
DBP	Demolitions and Bleaching Program
DCGS	Data Common Ground/Surface System
DCS	Decompression Sickness
DDRE	Director, Defense Research & Engineering

## ACRONYMS

DDS	Dry Deck Shelter
DERF	Defense Emergency Response Fund
DF	Direction Finding'
DHEA	Dehydroepiandrosterone
DHIP	Defense Human Intelligence Program
DIAM	Data Interface Acquisition Module
DIRCM	Directional Infrared Countermeasures
DISN	Defense Information Systems Network
DMCS	Deployable Multi-Channel SATCOM
DMS	Diminished Manufacturing Sources (ASDS)
DMS	Defense Message System
DMO	Distributed Mission Operations
DMR	Distributed Mission Rehearsal
DMT	Distributed Mission Training
DMTRS	Distributed Mission Training Rehearsal System
DDP	Detachment Deployment Package
DPPC	Deployable Print Production Center
DT	Development and Test
DT&E	Development, Test and Evaluation
DTT	Desk Top Trainer
DUSD	Deputy Under Secretary of Defense
EA	Evolutionary Acquisition
ECM	Electronic Countermeasures
ECO	Engineering Change Order
ECOS	Enhanced Combat Optical Sights
ECP	Engineering Change Proposal
EDM	Engineering Development Model
EFP	Explosively Forced Penetrator
EGLM	Enhanced Grenade Launcher Module
EIR	Embedded Integrated Broadcast System Receiver
EIRS	Enhanced Infrared Suppression
EMD	Engineering and Manufacturing Development

## *ACRONYMS*

ENTR	Embedded National Tactical Receiver
EOIR	Electro-Optical Infrared
EP	Extension Packages
EPRO	Environmental Protection
ESA	Enhanced Situational Awareness
ETCAS	Enhanced Traffic Alert and Collision Avoidance System
EUE	Extended User Evaluation
ETI	Evolutionary Technology Insertion
EW	Electronic Warfare
EWAISF	Electronic Warfare Avionics Integrated Systems Facility
EWO	Electronic Warfare Officer
FAA	Federal Aviation Administration
FABS	Fly-Away Broadcast System
FCD	Field Computing Devices
FCT	Foreign Comparative Testing
FCU	Fire Control Unit
FDEK	Forward Deployed Equipment Kits
F&DR	Fielding & Deployment Release
FEPSO	Field Experimentation Program for Special Operations
FFE	Fire From Enclosure
FLIR	Forward Looking Infrared Radar
FM	Frequency Modulation
FMBS	Family of Muzzle Brake Suppressors
FNM	Foreign & Nonstandard Materiel
FOL	Family of Loud Speakers
FPM	Flight Performance Model
FSDS	Family of Sniper Detection Systems
FSOV	Family of SOF Vehicles
FSW	Family of Sniper Weapons
FW	Fixed Wing
FSDS	Family of Sniper Detection Systems
GBS	Global Broadcasting System

## ACRONYMS

GDS	Gunfire Detection System
GEO	Geological
GFE	Government Furnishment Equipment
GIG	Global Information Grid
GMS-2	Gunship Multispectral System
GMV	Ground Mobility Vehicles
GMVAS	Ground Mobility Visual Augmentation Systems
GO	Global Observer
GOTS	Government-Off-the-Shelf
GPK	Gunner Protection Kit
GPS	Global Positioning System
GSK	Ground Signal Intelligence Kit
GSN	Global Sensor Network
GV	Ground Vehicle
GVSA	Global Video Surveillance Activity
GWOT	Global War on Terrorism
H-SUV	Hardened-Sport Utility Vehicle
HALE	High Altitude Long Endurance
HE	High Explosive
HEI	High Explosive Incendiary
HF	High Frequency
HFIS	Hostile Fire Indicating System
HFTTL	Hostile Forces Tagging, Tracking, and Locating
HLA	High Level Architecture
HMMWV	High Mobility Multi-purpose Wheeled Vehicle
HMU	Hydrographic Mapping Unit
HPFOTD	High Power Fiber Optic Towed Decoys
HPMMR	High Performance Multi-Mission Radio (PRC-117F)
HPS	Human Patient Simulator
HQ	Headquarters
HRLMD	Hydrographic Reconnaissance Littoral Mapping Device
HSB	High Speed Boat



## *ACRONYMS*

HSR	Heavy Sniper Rifle
HUD	Heads Up Display
IAS/CMS	Integration Avionics System/Cockpit Management System
IBR	Intelligence Broadcast Receiver
IBS	Integrated Bridge System
IBS	Integrated Broadcast Service
IC	Interim Configuration
ICAD	Integrated Control and Display
ICLS	Interim Contractor Logistics Support
ICS	Integrated Combat System
ICS	Interim Contractor Support
ICS	Internal Communication Systems
IDAP	Integrated Defensive Armed Penetrator
IDAS	Interactive Defensive Avionics Subsystem
IDS	Infrared Detection System
IED	Improvised Explosive Devices
IFF	Identify Friend or Foe
IGPS	Iridium Global Positioning System
ILM	Improved Limpet Mine
IM	Insensitive Munitions
IMFP	Integrated Multi-Function Probe
ILS	Integrated Logistics Support
INFOSEC	Information Security
INOD	Improved Night/Day Observation/Fire Control Device
INS	Inertial Navigation System
IOC	Initial Operational Capability
IP	Internet Protocol
IPOC	Initial Proof-of-Concept
IPT	Integrated Product Team
IR	Infrared
IRCM	Infrared Countermeasures
ISOCA	Improved Special Operations Communications Assemblage

## *ACRONYMS*

ISR	Intelligence Surveillance and Reconnaissance
ISR&T	Intelligence Surveillance and Reconnaissance and Target
ISSMS	Improved SOF Manpack System
ITMP	Integrated Technical Management Plan
IWIS	Integrated Warfare Info System
JBS	Joint Base Station
JCAS	Joint Close Air Support
JCIDS	Joint Capabilities Integration and Development System
JCS	Joint Chiefs of Staff
JCTD	Joint Concept Technology Demonstration
JDISS	Joint Deployable Intelligence Support System
JEM	Joint Enhanced Multi-Purpose Inter/Intra Team Radio
JHL	Joint Heavy Lift
JMPS	Joint Mission Planning System
JOS	Joint Operational Stocks
JSOAC	Joint Special Operations Aviation Components
JSOTFS	Joint Special Operations Task Force
JSTAR	Joint Surveillance and Target Attack Radar System
JTA	Joint Table of Allowances
JTC	Joint Terminal Control
JTCITS	Joint Tactical C4I Transceiver System
JTRS	Joint Tactical Radio System
JTWS	Joint Threat Warning System
JWIC	Joint Worldwide Communication System
LASIK	Laser-Assisted IN-Situ Keratomileusis
LAN/WAN	Local Area Network/Wide Area Network
LASAR	Light Assault Attack Reconfigurable Simulator
LAW	Light Anti-Armored Weapons
LBJ	Low Band Jammer
LCMP	Life Cycle Management Plan
LCMR	Lightweight Counter Mortar Radar
LDS	Leaflet Delivery System

## ACRONYMS

LED	Light Emitting Diode
LEP	Lightweight Environmental Protection
LMG	Lightweight Machine Gun
LOS	Line of Sight
LPD	Low Probability of Detection
LPI	Low Probability of Intercept
LPI/D	Low Probability of Intercept/Detection
LPI/LPD	Low Probability of Intercept/Low Probably of Detection
LRBS	Long Range Broadcast System
LRIP	Low Rate Initial Production
LRU	Line Replaceable Unit
LRV	Light Reconnaissance Vehicle
LSV	Logistics Support Vehicle
LTAV	Lightweight Tactical All Terrain Vehicle
LTD	Laser Target Designator
LTDR	Laser Target Designator/Rangefinder
LTI	Lightweight Thermal Imager
LTTG	Locating, Tagging, and Tracking for Global War on Terrorism
LWC	Littoral Warfare Craft
LWCM	Lightweight Counter-Mortar
LWHF	Lightweight Hellfire
M4MOD	M4A1 SOF Carbine Accessory Kit
MAAS	Multimedia Analyst Archive System
MAAWS	Multi-Purpose Anti-Armor/Anti-Personnel Weapons System
MALET	Medium Altitude Long Endurance Tactical
MANPAD	Man Portable Air Defense System
MATT	Multi-mission Advanced Tactical Terminal
MBITR	Multi-Band Inter/Intra Team Radio
MBLT	Machine Based Language Translator
MBMMR	Multi-Band/Multi-Mission Radio
MBSS	Maritime Ballistic Survival System
MCAR	MC-130 Air Refueling

## ACRONYMS

MCADS	Maritime Craft Air Drop System
MCOTS	Modified Commercial Off the Shelf
MCU	Multipoint Conferencing Unit
MDA	Maritime Domain Awareness
MDNS	Mini Day/Night Sight
MELB	Mission Enhancement Little Bird
MET	Meteorological
METOC	Meteorological and Oceanographic
MICH	Modular Integrated Communications Helmet
MK V	Mark V
MMB	Miniature Multiband Beacon
MMPV	Medium Mine Protected Vehicles
MMR	Multi-Mode Radar
MOA	Memorandum of Agreement
MONO-HUD	Monocular Head Up Display
MP	Manpack
MPARE	Mission Planning, Analysis, Rehearsal and Execution
MPC	Media Production Center
MRAP	Mine Resistant Ambush Protected
MPK	Mission Planning Kits
MRD	Mission Rehearsal Device
MTBS	Mobile Television Broadcast System
MTPS	Mission Training and Preparation System
MUA	Military Utility Assessment
NAVSCIATTS	Naval Small Craft Instructor and Technical Training School
NBC	Nuclear, Biological, and Chemical
NBOE	Non-Gasoline Burning Outboard Engine
NDI	Non-Developmental Item
NET	New Equipment Training
NGLS	Next Generation Loudspeaker System
NISH	National Institute of Severly Handicapped
NM	Nautical Miles

## ACRONYMS

NOSC	Network Operations Systems Center
NRE	Non-Recurring Engineering
NSAV	Non-Standard Aviation
NSCV	Non Standard Commercial Vehicle
NSM	Nonstandard Materiel
NSSS	National Systems Support to SOF
NSW	Naval Special Warfare
NVD	Night Vision Devices
NVEO	Night Vision Electro-Optic
OA/CW	Obstacle Avoidance/Cable Warning
OBESA	On-Board Enhanced Situational Awareness
OEF	Operation Enduring Freedom
OGA	Other Government Agencies
OIF	Operation Iraqi Freedom
OMB	Office of Management and Budget
OMMS	Organizational Maintenance Manual Sets
OPEVAL	Operational Evaluation
OPUS	Optimal Placement of Unattended Sensors
ORD	Operational Requirements Document
OT	Operational Test
OT&E	Operational Test and Evaluation
QOT&E	Qualification Test and Evaluation/Qualification Operational Test and Evaluation
P3I	Pre-Planned Product Improvement
PAI	Primary Aircraft Inventory
PAM	Penetration Augmented Munition
PARD	Passive Acoustic Reflection Device
PC	Personal Computer
PC	Patrol Coastal
PDR	Preliminary Design Review
PDS	Psychological Operations Distribution System
PDM	Program Decision Memorandum
PFPS	Portable Flight Planning System

## *ACRONYMS*

PGCB	Precision Guided Canister Bomb
PGSE	Peculiar Ground Support Equipment
PGL	Precision Geo-Location
PIMM	Payload Interface Master Module
PLTD	Precision Laser Targeting Device
PM	Program Manager
PM-MCD	Project Manager for Mines, Countermeasures and Demolitions
PMO	Program Management Office
PMP	Prime Mission Product
PMT	Program Management
POBS	Psychological Operations Broadcasting System
POMD	Psychological Operations Media Display
POPAS	PSYOP Planning and Analysis System
POPS	Psychological Operations Print System
PPHE	Pre-Fragmented Programmable High Explosive
PRK	Photo Refractive Keratectomy
PRTV	Production Representative Test Vehicle
PSR	Precision Sniper Rifle
PSYOP	Psychological Operations
PTLD	Precision Target Locator Designator
PTT	Part Task Trainer
RAA	Required Assets Available
RAMS	Remote Activated Munitions System
REITS	Rapid Exploitation of Innovative Technologies for SOF
RF	Radio Frequency
RFP	Request for Proposal
RGB	Red, Green, Blue
RIB	Rigid Inflatable Boat
RIS	Radio Integration System
RMWS	Remote Miniature Weather System
ROAR	Rover Over the Horizon Augmented Reconnaissance
ROSES	Reduced Optical Signature Emissions System

## ACRONYMS

RPG	Rocket Propelled Grenade
RPUAS	Rucksack Portable Unmanned Aircraft System
RSTA	Reconnaissance Surveillance Target Acquisition
RW	Rotary Wing
RWR	Radar Warning Receivers
SA	Situational Awareness
SAFC	Special Applications for Contingencies
SAGIS	SOF Air-Ground Interface Simulator
SAHRV	Semi-Autonomous Hydrographic Reconnaissance Vehicle
SATCOM	Satellite Communication
SBIR	Small Business Innovative Research
SBR	System Baseline Review
SBUD	Simulator Block Update
SCAR	SOF Combat Assault Rifle
SCI	Sensitive Compartmented Information
SDD	System Design and Development
SDS	Sniper Detection System
SDN	SOF Deployable Node
SDV	Sea, Air, Land (SEAL) Delivery Vehicle
SEAL	Sea, Air, Land
SEALION	Sea, Air, Land, Insertion Observation Neutralization
SIE	SOF Information Enterprise
SIGINT	Signals Intelligence
SIL	Systems Integration Lab
SIPE	Swimming Induced Pulmonary Edema
SIRCM	Suite of Infrared Countermeasures
SIRFC	Suite of Integrated Radar Frequency Countermeasures
SKOS	Sets, Kits and Outfits
SLAM	Selectable Lightweight Attack Munition
SLED	SOF Long Endurance Demonstrator
SLEP	Service Life Extension Program
SMAX	Special Operations Command Multipurpose Antenna, X-Band

## ACRONYMS

SMG	SOF Machine Gun
SMLD	Scatterable Media Long Duration
SMSD	Scatterable Media Short Duration
SMRS	Special Mission Radio System
SO	Special Operations
SOC	Special Operations Craft
SOC	Special Operations Command
SOCR	Special Operations Craft-Riverine
SOCRATES	Special Operations Command, Research, Analysis and Threat Evaluation System
SOEP	Special Operations Eye Protection
SOF	Special Operations Forces
SOFC	Solid Oxide Fuel Cell
SOFDK	SOF Demolition Kit
SOFIV	SOF Intelligence Vehicle
SOFLAM	SOF Laser Marker
SOFLRD	SOF Laser Range Finder and Designator
SOFPARS	SOF Planning and Rehearsal System
SOFTAPS	SOF Tactical Advanced Parachute System
SOFTACS	SOF Tactical Assured Connectivity System
SOIS	Special Operations Intelligence System
SOJICC	Special Operations Joint Interagency Collaboration Center
SOLL	Special Operations Low Level
SOMPE	Special Operations Mission Planning Environment
SOMROV	Special Operations Miniature Robotic Vehicle
SOMS	Special Operations Media Systems
SOPGM	Standoff Precision Guided Munition
SOPMOD	SOF Peculiar Modification
SOPMODM-4	SOF Peculiar Modification-M4 Carbine
SORBIS	Special Operations Resouce Business Information System
SOST	Special Operations Special Technology
SOTD	Special Operations Technology Development
SOTVS	Special Operations Tactical Video System



## ACRONYMS

SOVAS B/M	Special Operations Visual Aumentation System Binocular/Monocular
SOVAS HHI	Special Operations Visual Aumentation System Hand Held Imagers
SPEAR	SOF Personal Equipment Advanced Requirements
SPIKE	Shoulder Fired Smart Round
SPR	Special Purpose Rifle
SRC	Systems Readiness Center
SRC	Special Reconnaissance Capabilities
SRTC	Short Infrared Sensor
SRTV	Secure Real Time Video
SSE	Sensitive Site Exploitation
SSR	Sniper Support Rifle
SSGN	Nuclear Guided Missile Submarine
SSSAR	Solid State Synthetic Aperture Radar
S&T	Science & Technology
START	Special Threat Awareness receiver/Transmitter
STEP	Standard Tactical Entry Point
STD	Swimmer Transport Device
SW	Short-Wave
SWALIS	Special Warfare Automated Logistic Information System
SWIR	Short-Wave Infrared Sensor
SWORDS	Special Weapons Observation and Remote Direct-Action System
SYDET	Sympathetic Detonator
TA	Target Audiences
TACLAN	Tactical Local Area Network
TACTICOMP	Tactical Computer
TAT	To-Accompany Troops
TCCCE	Tactical Combat Casualty Care Equipment
TCCCEKIT	Tactical Combat Casualty Care Equipment Kit
TCV	Transit Case Variant
TDFD	Time Delay Firing Device
TDE	Technology Development Exploitation
TF/TA	Terrain Following/Terrain Avoidance

## *ACRONYMS*

TMPC	Theater Media Production Center
TPE	Theater Provided Equipment
TPED	Tactical Processing, Exploitation, and Dissemination
TEI	Technology Exploitation Initiative
TRR	Test Readiness Review
TRS	Tactical Radio System
TRS	Training and Rehearsal System
TSOC	Theater Special Operations Command
TT	Team Transportable
TTHM	Titanium Tilting Helmet Mount
TTL	Tagging, Tracking & Locating
TV	Television
UARRSI	Universal Aerial Refueling Receptacle Slipaway
UAS	Unmanned Aerial System
UAV	Unmanned Aerial Vehicle
UBA	Underwater Breathing Apparatus
UGS	Unattended Ground Sensor
UGV	Unmanned Ground Vehicle
UHF	Ultra High Frequency
UHMS	Undersea and Hyperbaric Medicine Society
UK	United Kingdom
US	United States
UTB	Unclassified Test Bed
UTC	Unit Type Code
UV	Unmanned Vehicles
UVT	Unmanned Vehicle Targeting
VBL	Visible Bright Lights
VCUAS	Vehicle Craft Unmanned Aircraft System
VESTA	Vibro-Electronic Signature Target Analysis
VHF	Very High Frequency
VSD	Variable Speed Drogue
VSAT	Very Small Aperture Terminal

## *ACRONYMS*

VSWMCM	Very Shallow Water Mine Countermeasures
VTC	Video Teleconferencing
W	Watercraft
WIFI	Wireless Fidelity
WIN-T	Warfighter Information Network-Tactical
WIRED	Wind Tunnel Integrated Real Time In the Cockpit/Real Time Out of the Cockpit Experiments and Demonstrations
WMD	Weapons of Mass Destruction
WSADS	Wind Supported Air Delivery System
WST	Weapon System Trainer

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b>			<b>R-1 ITEM NOMENCLATURE</b>								
0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 2: <i>Applied Research</i>			PE 1160401BB: <i>Special Operations Technology Development/S100</i>								
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
Total Program Element	32.167	30.606	26.545	0.000	26.545	29.350	31.307	31.872	32.449	Continuing	Continuing
S100: <i>Special Operations (SO) Technology Development/Project S100</i>	32.167	30.606	26.545	0.000	26.545	29.350	31.307	31.872	32.449	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, and leverages other organizations' technology projects that may not otherwise be affordable within MFP-11. Small incremental investments with DoD, other government agencies, and commercial organizations allows USSOCOM to influence the schedule and direction of technology developments, emerging technologies and capabilities for Special Operations Forces. This USSOCOM investment strategy is used to link technology opportunities with capability deficiencies, capability objectives, technology thrust areas, and technology objectives.

**B. Program Change Summary (\$ in Millions)**

	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
Previous President's Budget	35.400	27.384	0.000	0.000	0.000
Current President's Budget	32.167	30.606	26.545	0.000	26.545
Total Adjustments	-3.233	3.222	26.545	0.000	26.545
• Congressional General Reductions		-2.853			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		6.075			
• Congressional Directed Transfers		0.000			
• Reprogrammings	-2.378	0.000			
• SBIR/STTR Transfer	-0.855	0.000			
• Other Adjustment	0.000	0.000	26.545	0.000	26.545

**Congressional Add Details (\$ in Millions, and Includes General Reductions)**

**Project:** S100: *Special Operations (SO) Technology Development/Project S100*

<b>FY 2009</b>	<b>FY 2010</b>

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 2: <i>Applied Research</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160401BB: <i>Special Operations Technology Development/S100</i>
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**Congressional Add Details (\$ in Millions, and Includes General Reductions)**

Congressional Add: *Flashlight Soldier-to-Soldier Combat ID System*

Congressional Add: *Foliage Penetrating Reconnaissance and Surveillance*

Congressional Add: *Extended Lifetime Radioisotope Batteries*

Congressional Add: *Unified Management Infrastructure System*

Congressional Add: *USSOCOM STAR-TEC Partnership Program*

Congressional Add Subtotals for Project: S100

Congressional Add Totals for all Projects

	FY 2009	FY 2010
Congressional Add: <i>Flashlight Soldier-to-Soldier Combat ID System</i>	5.584	4.500
Congressional Add: <i>Foliage Penetrating Reconnaissance and Surveillance</i>	3.191	0.000
Congressional Add: <i>Extended Lifetime Radioisotope Batteries</i>	1.595	0.000
Congressional Add: <i>Unified Management Infrastructure System</i>	1.196	0.000
Congressional Add: <i>USSOCOM STAR-TEC Partnership Program</i>	0.000	1.575
Congressional Add Subtotals for Project: S100	11.566	6.075
Congressional Add Totals for all Projects	11.566	6.075

**Change Summary Explanation**

Funding:

FY09: Decrease of -\$3.233 million is due to Small Business Innovative Research transfer (-\$0.855 million), FY09 Omnibus reprogramming FY09-26PA (-\$1.600 million), and DD 1415-3 reprogramming action FY09-18IR (-\$0.778 million).

FY10: Net increase of \$3.222 million is due to a congressional mark (-\$2.750 million), a decrease of -\$0.103 million due to Section 8097 congressional general reduction, and two congressional adds:

- Flashlight Soldier-to-Soldier Combat ID System (\$4.500 million)
- United States Special Operations Command STAR-TEC Partnership Program (\$1.575 million)

FY11: Increase of \$26.545 million is due to the DoD not estimating FY 2011 cost when the FY 2010 President's Budget was prepared.

Schedule: None.

Technical: None.

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 United States Special Operations Command								<b>DATE:</b> February 2010			
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 2: <i>Applied Research</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 1160401BB: <i>Special Operations Technology Development/S100</i>				<b>PROJECT</b> S100: <i>Special Operations (SO) Technology Development/Project S100</i>			
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
<i>S100: Special Operations (SO) Technology Development/Project S100</i>	32.167	30.606	26.545	0.000	26.545	29.350	31.307	31.872	32.449	Continuing	Continuing

**Note**

In FY09, the Capability Areas were listed separately. Beginning in FY10, the Capability Areas were subsumed under the REITS Sub-Project umbrella. The FY09 funds and accomplishments associated with each Capability Area are listed under the REITS Sub-Project in this President's Budget for clarity.

**A. Mission Description and Budget Item Justification**

This project conducts studies and develops laboratory prototypes for applied research and advanced technology development, as well as 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 allows USSOCOM to influence the 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 capability deficiencies, capability objectives, technology thrust areas, and technology objectives. Requirements in these areas may be advertised to industry and government research and development agencies via broad area announcements and calls for white papers. Sub-projects include:

- Rapid Exploitation of Innovative Technologies (REITS). REITS provides USSOCOM the ability to identify, assess and exploit emerging innovative technologies for SOF capability deficiencies and expedite technology transitions from the laboratory to operational use. These technologies provide new transformational capabilities and immediate operational impacts, while providing a compass for the direction of future SOF procurement. REITS supports both top-down and bottom-up approaches for USSOCOM Components, Theater Special Operations Commands and Special Operations Task Forces to articulate innovative technology recommendations. Requirements are submitted to USSOCOM for review and/or approval. The approval process is through the USSOCOM Quick Reaction Board (QRB). The senior approval authority is the USSOCOM Deputy Commander. Members include USSOCOM's Director of Operations, Director of Requirements, Acquisition Executive, Science Advisor, and Interagency Task Force Director. The tenets of the QRB are to promote speed, evolution, collaboration, and engagement in three technology Capability Areas: 1) Command, Control, Communications, and Computers (C4); Intelligence, Surveillance and Reconnaissance (ISR); and Sensors; 2) Mobility; and 3) SOF Warrior Survivability and Medical. An individual Technology Activity can be submitted from every echelon of command through the USSOCOM "HardEdge" portal for initial evaluation and distribution to industry, academia, laboratories or our in-country mobile technology complex to build the solution. The process is detailed in a USSOCOM Directive, "Rapid Technology Support to Special Operations."

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 United States Special Operations Command		<b>DATE:</b> February 2010
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 2: <i>Applied Research</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160401BB: <i>Special Operations Technology Development/S100</i>	<b>PROJECT</b> S100: <i>Special Operations (SO) Technology Development/Project S100</i>
<p><input type="checkbox"/> C4, ISR, and Sensors Capability Area. Develop technologies that provide SOF with improved situational awareness and communications in all environments. Develop technologies to provide significant improvements to SOF's capability to accurately detect and track threats or targets. Exploit and demonstrate technologies that provide enhanced sensors and command and control. Develop technologies to provide new and improved capabilities in information operations and psychological operations. Exploit and develop technologies to provide SOF with standoff capabilities for targeting and locating personnel and equipment. Exploit technologies to provide real-time active decision-making capabilities, increased situational awareness, improved multi-spectral sensors, and advanced processing and display capabilities. Exploit technologies that enhance logistics, reduce cost and enhance performance of SOF weapons and munitions. Exploit technologies to provide multipurpose, adaptable weapons applicable to SOF platform and missions</p> <p><input type="checkbox"/> Mobility Capability Area. Exploit and develop technologies to improve the performance and survivability, and reduce the detectability of SOF mobility assets. Exploit and develop technologies to provide SOF the capability to conduct ground, air, and sea mobility operations in denied areas. This capability area exploits and develops technologies to enhance logistics support, reduce cost, and improve the performance of SOF mobility platforms.</p> <p><input type="checkbox"/> SOF Warrior Survivability and Medical Capability Area. Exploit and develop technologies to increase SOF's survivability and performance. Exploit technologies to improve the human endurance and sensory performance without interfering with normal sensory functions. Exploit and develop technologies to counter the threat of electro-optical devices, devices that detect human presence and enhance individual operator capabilities. Exploit and develop technologies that center on physiological, psychological, and ergonomic factors affecting the ability of SOF to perform missions. USSOCOM requires unique approaches to combat casualty care, medical equipment, and other life support capabilities, including life support for high altitude parachuting, combat swimming, and other SOF-unique missions. This capability area provides guidelines for the development of selection and conditioning criteria, thermal protection, decompression procedures, combat casualty procedures, and life support systems. This capability area also supports the development and evaluation of biomedical enhancements for the unique requirements of all SOF in the conduct of their diverse missions. The following technology activities are included in this capability area:</p> <ul style="list-style-type: none"> <li>o Combat Casualty Management Technology Activity: Reviews the emergency medical equipment currently used in the SOF community and compares it to currently available civilian technology, provides field testing of emergency medical equipment in the adverse environmental conditions encountered by SOF, evaluates current tactical combat casualty care doctrine to ensure consideration of the wide variety of tactical scenarios encountered and applies the latest concepts in casualty care to these circumstances, applies lessons learned from recent combat operations to enhance medical capabilities, and develops CD-ROM and internet compatible automated programs to provide the capability to perform medical interviews in multiple foreign languages and support SOF medical personnel information needs while operating in austere locations.</li> <li>o Decompression for SOF Diving Operations Technology Activity: Decreases the decompression obligation in SOF diving operations through the use of surface-interval oxygen breathing, which provides the basis for extended mission profiles, and investigates pre-oxygenation requirements for high-altitude SOF parachute operations and ground operations at extreme altitudes.</li> <li>o Exercise-related Injuries Technology Activity: Evaluates the effectiveness of applying sports medicine diagnostic, therapeutic and rehabilitative techniques in management of the traumatic and overuse injuries commonly encountered among SOF.</li> </ul>		

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 United States Special Operations Command		<b>DATE:</b> February 2010
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 2: <i>Applied Research</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160401BB: <i>Special Operations Technology Development/S100</i>	<b>PROJECT</b> S100: <i>Special Operations (SO) Technology Development/Project S100</i>
<p>o Inhaled Gas Toxicology Technology Activity: Evaluates the feasibility of using pharmacologic intervention to reduce or eliminate the possibility of central nervous system toxicity.</p> <p>o Medical Sustainment Training Techniques Technology Activity: Examines novel ways of providing and documenting medical sustainment training for SOF corpsmen and physicians, provides capabilities to rapidly develop new protocol and equipment instructions, and develops a system for constantly upgrading the expertise of SOF medical personnel by incorporating new research reports and clinical information into a CD-ROM based computer system that can be used by medical personnel in isolated duty circumstances.</p> <p>o Thermal Protection Technology Activity: Researches various ensemble clothing and devices that may potentially enhance SOF operator performance.</p> <p>o Mission-related Physiology Technology Activity: Develops accurate measures to evaluate SOF mission-related performance, delineates nutritional strategies designed to help personnel apply known nutritional concepts to optimize performance in mission and training scenarios, evaluates potential ergogenic agents as they apply to enhancing mission-related performance, studies the safety and efficacy of various substances to increase performance in sustained operations; studies interfaces of new vision devices with refractive vision enhancements, and studies pharmacologic measures to prevent acute mountain sickness in high altitude SOF air and ground operations.</p> <ul style="list-style-type: none"><li>• Tagging, Tracking, and Locating (TTL) Sub-Project: TTL technologies are a key element in the ability of SOF to find, fix, and finish targets in overseas contingency operations (OCO). This sub-project invests in critical science and technology efforts to improve operational capabilities for TTL high value individuals and objects in support of the OCO.</li><li>• Classified Sub-Project (provided under separate cover).</li><li>• The following technology activities were added by congress in FY 2010:<ul style="list-style-type: none"><li><input type="checkbox"/> Flashlight Soldier-to-Soldier Combat ID System: Continue to develop a flashlight soldier-to-soldier combat identification system.</li><li><input type="checkbox"/> USSOCOM STAR-TEC Partnership Program: Establish an ultra-responsive, local resource tied to academia, science and industry to meet unique SOF requirements.</li></ul></li><li>• The following technology activities were added by congress in FY 2009:<ul style="list-style-type: none"><li><input type="checkbox"/> Flashlight Soldier-to-Soldier Combat ID System. Began development of a flashlight soldier-to-soldier combat identification system.</li><li><input type="checkbox"/> Foliage Penetrating Reconnaissance and Surveillance System. Developed and evaluated a multi-sensor foliage penetrating reconnaissance and surveillance system.</li></ul></li></ul>		

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 2: <i>Applied Research</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160401BB: <i>Special Operations Technology Development/S100</i>	<b>PROJECT</b> S100: <i>Special Operations (SO) Technology Development/Project S100</i>
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- Extended Lifetime Radioisotope Batteries. Developed power solutions to provide long-lasting, high density power for small autonomous devices.
- Unified Management Infrastructure System. Developed a network-based remote communication and control platform for monitoring, managing and controlling many different types of net-centric devices and platforms.

**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Rapid Exploitation of Innovative Technologies for SOF (REITS) - C4, ISR, and Sensors Capability Area  <i>FY 2009 Accomplishments:</i> FY09 Continued the Enhanced Hostile Detection System, Night Vision Windshield/Advanced Distributed Aperture System (ADAS), Battlefield Helicopter Emulator, and the Short Wave Infrared Radar (SWIR) Identify Friend or Foe System, and Sea Eagle Technology Activities.  <i>FY 2010 Plans:</i> FY10 Continue the ADAS Joint Concept Technology Demonstration and development of the Advanced Dual Band Night Vision Goggles. Complete the Enhanced Hostile Detection System. Establish capabilities that can be exploited by SWIR sensors and transition to an acquisition program. Prototype flexible advanced optics and develop new color digital night vision technology. Develop a software solution for super resolution residing on focal plane arrays.  <i>FY 2011 Base Plans:</i> FY11 Develops advanced sensors, multi-spectral optics, high band-width technologies and multi-level security systems.	6.527	8.494	9.799	0.000	9.799
Rapid Exploitation of Innovative Technologies for SOF (REITS) Sub project - Mobility Capability Area  <i>FY 2009 Accomplishments:</i> FY09 Tested the Maverick Unmanned Aerial Vehicle (UAV).	1.675	1.500	2.500	0.000	2.500

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 United States Special Operations Command				<b>DATE:</b> February 2010		
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 2: <i>Applied Research</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160401BB: <i>Special Operations Technology Development/S100</i>	<b>PROJECT</b> S100: <i>Special Operations (SO) Technology Development/Project S100</i>				
<b>B. Accomplishments/Planned Program (\$ in Millions)</b>						
		<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
<p><i>FY 2010 Plans:</i> FY10 Continue to test the Maverick UAV using various payloads. Start developmental work on a Counter UAV Pulsed Energy Projectile.</p> <p><i>FY 2011 Base Plans:</i> FY11 Pursues low observable and counter low observable technologies to develop advanced lightweight armor and materials. Investigate multi-domain mobility platforms.</p>						
<p>Rapid Exploitation of Innovative Technologies for SOF (REITS) Sub project - SOF Warrior Survivability and Medical Capability Area</p> <p><i>FY 2010 Plans:</i> FY10 Conduct concept studies to explore and validate mission-based experiments. Continue application of a blast-wave sensor for the detection of blast overpressure in the screening of mild traumatic brain injury. Develop a prototype altitude readiness management system decision aid, which will monitor the efficacy of pulse waves for mobile triage capability for SOF Medics. Study health hazards of breaching charges in complex environment.</p> <p><i>FY 2011 Base Plans:</i> FY11 Develop far-forward Tactical Combat Casualty Care. Pursue rapid assays/diagnostics, reduce operator load, and provide advanced protection.</p>		0.000	2.000	2.100	0.000	2.100
<p>Classified Sub project</p> <p><i>FY 2009 Accomplishments:</i> FY09 Details provided under separate cover.</p> <p><i>FY 2010 Plans:</i> FY10 Details provided under separate cover.</p>		1.674	2.094	2.037	0.000	2.037

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 United States Special Operations Command				<b>DATE:</b> February 2010		
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<b>B. Accomplishments/Planned Program (\$ in Millions)</b>						
		<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
<i>FY 2011 Base Plans:</i> FY11 Details provided under separate cover.						
Tagging, Tracking, and Locating (TTL) Sub-Project <i>FY 2009 Accomplishments:</i> FY09 Specific objectives, priorities, and technical approaches are classified. Continued projects to exploit nanotechnology, biotechnology, and chemistry for application to TTL systems. Initiated projects identified in the USSOCOM/DoD Roadmap. Supported the Joint Chiefs of Staff TTL Quick Look Capability Assessment.  <i>FY 2010 Plans:</i> FY10 Specific objectives, priorities, and technical approaches are classified. Continue projects to exploit nanotechnology, biotechnology, and chemistry for application to TTL systems. Initiate projects identified in the USSOCOM/DoD Roadmap. Support the Joint Chiefs of Staff TTL Quick Look Capability Assessment.  <i>FY 2011 Base Plans:</i> FY11 Specific objectives, priorities, and technical approaches are classified. Continues projects to exploit nanotechnology, biotechnology, and chemistry for application to TTL systems. Initiates projects identified in the USSOCOM/DoD Roadmap. Supports the Joint Chiefs of Staff TTL Quick Look Capability Assessment.		10.725	10.443	10.109	0.000	10.109
Accomplishments/Planned Programs Subtotals		20.601	24.531	26.545	0.000	26.545
		<b>FY 2009</b>	<b>FY 2010</b>			
Congressional Add: Flashlight Soldier-to-Soldier Combat ID System		5.584	4.500			

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 United States Special Operations Command		<b>DATE:</b> February 2010
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<b>B. Accomplishments/Planned Program (\$ in Millions)</b>		
	<b>FY 2009</b>	<b>FY 2010</b>
<p><i>FY 2009 Accomplishments:</i> FY09 Continued FY08 development to provide technology that reduces friendly fire casualties and increases combat effectiveness.</p> <p><i>FY 2010 Plans:</i> FY10 Continued from FY09 to provide technology that reduces friendly fire casualties and increases combat effectiveness.</p>		
<p>Congressional Add: Foliage Penetrating Reconnaissance and Surveillance</p> <p><i>FY 2009 Accomplishments:</i> FY09 Continued FY08 development. Foliage penetrating synthetic aperture radar offers the capability for penetrating materials that are optically opaque, and thus, not visible by optical or infrared techniques.</p>	3.191	0.000
<p>Congressional Add: Extended Lifetime Radioisotope Batteries</p> <p><i>FY 2009 Accomplishments:</i> FY09 Continued FY08 development to demonstrate small prototype integrated power systems that use radioisotope batteries to continuously trickle-charge larger batteries and capacitors.</p>	1.595	0.000
<p>Congressional Add: Unified Management Infrastructure System</p> <p><i>FY 2009 Accomplishments:</i> FY09 Developed a network-based remote communication and control platform for monitoring, managing and controlling many different types of net-centric devices and platforms.</p>	1.196	0.000
<p>Congressional Add: USSOCOM STAR-TEC Partnership Program</p>	0.000	1.575

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 United States Special Operations Command		<b>DATE:</b> February 2010	
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<b>B. Accomplishments/Planned Program (\$ in Millions)</b>			
		<b>FY 2009</b>	<b>FY 2010</b>
<i>FY 2010 Plans:</i> FY10 Establish an ultra-responsive, local resource that is tied to academia, science and industry to meet unique SOF requirements.			
Congressional Adds Subtotals		11.566	6.075
<b>C. Other Program Funding Summary (\$ in Millions)</b>			
N/A			
<b>D. Acquisition Strategy</b>			
N/A			
<b>E. Performance Metrics</b>			
N/A			

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 2: <i>Applied Research</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160407BB: <i>Special Operations Forces (SOF) Medical Technology Development/S275</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	2.361	2.390	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
S200: <i>Special Operations Forces (SOF) Medical Technology Development/S275</i>	2.361	2.390	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

**Note**

This program element (PE) was subsumed under PE 1160402BB beginning in FY 2010. The congressional add in FY 2010 will be moved to PE 1160402BB via a DD Form 1415-3 reprogramming action.

**A. Mission Description and Budget Item Justification**

This program element provides studies, non-system exploratory advanced technology development, and evaluations. The focus is on medical technologies, centering on physiologic, psychologic, and ergonomic factors affecting the ability of SOF to perform their missions. Special operations requires unique approaches to combat casualty care, medical equipment, and other life support capabilities including life support for high altitude parachuting, combat swimming, and other SOF-unique missions. This program provides guidelines for the development of selection and conditioning criteria, thermal protection, decompression procedures, combat casualty procedures, and life support systems. The program supports the development and evaluation of biomedical enhancements for the unique requirements of all SOF in the conduct of their diverse missions.

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 2: <i>Applied Research</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160407BB: <i>Special Operations Forces (SOF) Medical Technology Development/S275</i>
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**B. Program Change Summary (\$ in Millions)**

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	2.452	0.000	0.000	0.000	0.000
Current President's Budget	2.361	2.390	0.000	0.000	0.000
Total Adjustments	-0.091	2.390	0.000	0.000	0.000
• Congressional General Reductions		-0.010			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		2.400			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	-0.091	0.000			

**Congressional Add Details (\$ in Millions, and Includes General Reductions)**

**Project:** S200: *Special Operations Forces (SOF) Medical Technology Development/S275*

Congressional Add: *Personalized Medicine Initiative*

Congressional Add Subtotals for Project: S200

Congressional Add Totals for all Projects

FY 2009	FY 2010
0.000	2.390
0.000	2.390
0.000	2.390

**Change Summary Explanation**

Funding:

FY09: Decrease of -\$0.091 million is due to Small Business Innovative Research transfer.

FY10: Net increase of \$2.390 million is due to a to Section 8097 congressional general reduction of (-\$.010 million) and a congressional add.  
- Personalized Medicine Initiative (\$2.400 million)

FY11: None.

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 2: <i>Applied Research</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 1160407BB: <i>Special Operations Forces (SOF) Medical Technology Development/S275</i>				<b>PROJECT</b> S200: <i>Special Operations Forces (SOF) Medical Technology Development/S275</i>			
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
<i>S200: Special Operations Forces (SOF) Medical Technology Development/S275</i>	2.361	2.390	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

**Note**

This program element (PE) was subsumed under PE 1160402BB beginning in FY 2010. The congressional add in FY 2010 will be moved to PE 1160402BB via a DD Form 1415-3 reprogramming action.

**A. Mission Description and Budget Item Justification**

This project provides studies, non-system exploratory advanced technology development and evaluations. The focus is on medical technologies, centering on physiologic, psychologic, and ergonomic factors affecting the ability of SOF to perform their missions. Special operations requires unique approaches to combat casualty care, medical equipment, and other life support capabilities including life support for high altitude parachuting, combat swimming, and other SOF unique missions. This project provides guidelines for the development of selection and conditioning criteria, thermal protection, decompression procedures, combat casualty procedures, and life support systems. The project supports the development and evaluation of biomedical enhancements for the unique requirements of all SOF in the conduct of their diverse missions. This effort is defined by the following seven areas of investigation:

- Combat casualty management will: (1) review the emergency medical equipment currently used in the SOF community and compare it to currently available civilian technology, and provide field testing of emergency medical equipment in the adverse environmental conditions encountered by SOF; (2) evaluate current tactical combat casualty care doctrine to ensure consideration of the wide variety of tactical scenarios encountered, and apply the latest concepts in casualty care to these circumstances; (3) apply lessons learned from recent combat operations to enhance medical capabilities; and (4) develop CD-ROM and internet compatible automated programs to provide the capability to perform medical interviews in multiple foreign languages and support SOF medical personnel information needs while operating in austere locations.
- Medical Informatics will study SOF operational medical lessons learned, initiate new studies to update SOF/Joint Medical Doctrine and procedures.
- Performance Enhancements will study flight proficiency and risk taking behavior during extended operations and adverse environments.
- Personalized Medicine Initiative. This project will develop and apply next-generation DNA sequencing technology to sequence the genomes of human subjects with a range of diseases and inherited disorders, in an effort to better understand the genetic basis of disease.

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 United States Special Operations Command			<b>DATE:</b> February 2010			
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 2: <i>Applied Research</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160407BB: <i>Special Operations Forces (SOF) Medical Technology Development/S275</i>	<b>PROJECT</b> S200: <i>Special Operations Forces (SOF) Medical Technology Development/S275</i>				
<b>B. Accomplishments/Planned Program (\$ in Millions)</b>						
		<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
Combat Casualty Care <i>FY 2009 Accomplishments:</i> FY09 Completed ongoing recombinant hemostatic agent's studies for penetrating brain injury and SOCOM lab test. Initiated new studies to develop mission essential elements for enroute care.		0.479	0.000	0.000	0.000	0.000
Medical Informatics <i>FY 2009 Accomplishments:</i> FY09 Completed ongoing studies for SOF medical lessons learned and initiated new studies to update SOF/Joint Medical Doctrine and Procedures.		0.577	0.000	0.000	0.000	0.000
Performance Enhancements <i>FY 2009 Accomplishments:</i> FY09 Completed ongoing studies for comparison of flight proficiency and risk taking behavior in aviators given dextroamphetamine or modafinil during extended operations, the effects of exogenous erythropoietin on acute mountain sickness symptoms in humans and anti-clotting agents. Continued ongoing studies for biomarker and dynamic function tests for optimized health and performance, physical performance trainability limits on SOF standards used for recruitment and initial selection and metabolic markers to develop assays and optimize warfighter fitness. Initiated new studies for ergogenics, ergonomics, and operational performance in adverse environment studies.		1.305	0.000	0.000	0.000	0.000
Accomplishments/Planned Programs Subtotals		2.361	0.000	0.000	0.000	0.000
		<b>FY 2009</b>	<b>FY 2010</b>			
Congressional Add: Personalized Medicine Initiative		0.000	2.390			

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 United States Special Operations Command	<b>DATE:</b> February 2010
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<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 2: <i>Applied Research</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160407BB: <i>Special Operations Forces (SOF) Medical Technology Development/S275</i>	<b>PROJECT</b> S200: <i>Special Operations Forces (SOF) Medical Technology Development/S275</i>
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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010
<p><i>FY 2010 Plans:</i> FY10 This initiative is a Congressional Add. This project will develop and apply next-generation DNA sequencing technology to sequence the genomes of human subjects with a range of diseases and inherited disorders, in an effort to better understand the genetic basis of disease.</p>		
Congressional Adds Subtotals	0.000	2.390

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

N/A

**D. Acquisition Strategy**

N/A

**E. Performance Metrics**

N/A

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 3: <i>Advanced Technology Development (ATD)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160402BB: <i>Special Operations Advanced Technology Development/S200</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	78.836	56.727	30.806	0.000	30.806	32.710	37.148	37.768	38.395	Continuing	Continuing
S200: <i>1160402BB SO Advanced Technology Development S200</i>	78.836	56.727	30.806	0.000	30.806	32.710	37.148	37.768	38.395	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

This element provides for rapid prototyping, Advanced Technology Demonstrations (ATDs) and Joint Capability Technology Demonstrations (JCTDs). 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 element 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.

**B. Program Change Summary (\$ in Millions)**

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	65.684	31.675	0.000	0.000	0.000
Current President's Budget	78.836	56.727	30.806	0.000	30.806
Total Adjustments	13.152	25.052	30.806	0.000	30.806
• Congressional General Reductions		-2.988			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		28.040			
• Congressional Directed Transfers		0.000			
• Reprogrammings	14.222	0.000			
• SBIR/STTR Transfer	-1.070	0.000			
• Other Adjustment	0.000	0.000	30.806	0.000	30.806

**Congressional Add Details (\$ in Millions, and Includes General Reductions)**

**Project:** S200: *1160402BB SO Advanced Technology Development S200*

FY 2009	FY 2010

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<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 3: <i>Advanced Technology Development (ATD)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160402BB: <i>Special Operations Advanced Technology Development/S200</i>
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**Congressional Add Details (\$ in Millions, and Includes General Reductions)**

	FY 2009	FY 2010
Congressional Add: <i>Congressional Add: Field Experimentation Program For SOF</i>	1.596	1.593
Congressional Add: <i>Congressional Add: Improved Information Transfer For Special Forces</i>	2.394	0.000
Congressional Add: <i>Congressional Add: Photovoltaic Power Supply</i>	2.394	0.000
Congressional Add: <i>Congressional Add: Advanced Distributed Aperture System Hostile Fire Indicating System</i>	21.067	1.036
Congressional Add: <i>Congressional Add: Advanced Craft Tech Demonstrations to Quantify and Mitigate Operator Injury</i>	1.995	0.000
Congressional Add: <i>Congressional Add: Autonomous Rendezvous/Formation Flight</i>	1.995	0.000
Congressional Add: <i>Congressional Add: Partnership for Defense Innovation WiFi Test Laboratory</i>	1.995	2.788
Congressional Add: <i>Congressional Add: Micro-Power Special Operations Generator</i>	1.596	0.000
Congressional Add: <i>Congressional Add: Small Assault Vehicle Expeditionary</i>	0.798	0.000
Congressional Add: <i>Congressional Add: Technology Infusion Cell</i>	0.997	0.000
Congressional Add: <i>Congressional Add: Affordable Miniature Foliage Penetrating Radar for Special Operations Craft-Riverine</i>	0.000	2.788
Congressional Add: <i>Congressional Add: Optical Surveillance Equipment</i>	0.000	1.992
Congressional Add: <i>Congressional Add: CBRN Detection Unmanned Aircraft</i>	0.000	1.593
Congressional Add: <i>Congressional Add: Intelligence, Surveillance, and Reconnaissance Global Sensors Architecture</i>	0.000	1.593
Congressional Add: <i>Congressional Add: Program Increase Helicopter Situational Awareness and Survivability</i>	0.000	9.958
Congressional Add: <i>Congressional Add: Antennas and other CNT Devices for Intelligence/Special Military</i>	0.000	2.988
Congressional Add: <i>Congressional Add: Tiger Moth Air-Launched Off Board Sensing Small Unmanned Aerial System</i>	0.000	1.593
Congressional Add Subtotals for Project: S200	36.827	27.922
Congressional Add Totals for all Projects	36.827	27.922

**Change Summary Explanation**

Funding:

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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2011 United States Special Operations Command		<b>DATE:</b> February 2010
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 3: <i>Advanced Technology Development (ATD)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160402BB: <i>Special Operations Advanced Technology Development/S200</i>	
<p>FY09: Net increase of \$5.652 million is due to Small Business Innovative Research transfer (-\$1.070 million), FY09 Omnibus reprogramming action FY09-26PA (-\$3.205 million), reprogramming for Foliage Penetration efforts \$9.999 million, and a classified requirement (-\$0.072 million). Reprogramming for A160T \$7.500 million.</p> <p>FY10: Net increase of \$25.052 million is due to Section 8097 congressional general reduction (-\$.120), a congressional mark (-\$2.750 million) and the following congressional adds:</p> <ul style="list-style-type: none"><li>- Field Experimentation Program for SOF (\$1.600 million)</li><li>- Advanced Distributed Aperture System Hostile Fire Indicating System (\$1.040 million)</li><li>- Partnership for Defense Innovation WiFi Test Laboratory (\$2.800 million)</li><li>- Affordable Miniature Foliage Penetrating Radar for Special Operations Craft-Riverine (\$2.800 million)</li><li>- Optical Surveillance Equipment (\$2.000 million)</li><li>- CBRN Detection Unmanned Aircraft (\$1.600 million)</li><li>- Intelligence, Surveillance, and Reconnaissance Global Sensors Architecture (\$1.600 million)</li><li>- Program Increase Helicopter Situational Awareness and Survivability (\$10.000 million)</li><li>- Antennas and other CNT Devices for Intelligence/Special Military (\$3.000 million)</li><li>- Tiger Moth Air Launched Off Board Sensing Small Unmanned Aerial System (\$1.600 million)</li></ul> <p>FY11: Increase of \$30.806 million is due to the DoD not estimating FY 2011 cost when the FY 2010 President's Budget was prepared.</p> <p>Schedule: None.</p> <p>Technical: None.</p>		

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 United States Special Operations Command								<b>DATE:</b> February 2010			
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 3: <i>Advanced Technology Development (ATD)</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 1160402BB: <i>Special Operations Advanced Technology Development/S200</i>				<b>PROJECT</b> S200: <i>1160402BB SO Advanced Technology Development S200</i>			
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
<i>S200: 1160402BB SO Advanced Technology Development S200</i>	78.836	56.727	30.806	0.000	30.806	32.710	37.148	37.768	38.395	Continuing	Continuing

**Note**

In FY09, the Capability Areas were listed separately. Beginning in FY10, the Capability Areas were subsumed under the REITS Sub-Project umbrella. The FY09 funds and accomplishments associated with each Capability Area are listed under the REITS Sub-Project in this President's Budget for clarity.

**A. Mission Description and Budget Item Justification**

This project conducts rapid prototyping, Advanced Technology Demonstrations (ATDs) and Joint Capability Technology Demonstrations (JCTDs). 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 sub-projects and the insertion of appropriate technologies to acquisition programs. The project 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 include:

Rapid Exploitation of Innovative Technologies (REITS). REITS provides USSOCOM the ability to identify, assess and exploit emerging innovative technologies for SOF capability deficiencies and expedite technology transitions from the laboratory to operational use. These technologies provide new transformational capabilities and immediate operational impacts, while providing a compass for the direction of future SOF procurement. REITS supports both top-down and bottom-up approaches for USSOCOM Components, Theater Special Operations Commands and Special Operations Task Forces to articulate innovative technology recommendations. Requirements are submitted to USSOCOM for review and approval. The approval process is through the USSOCOM Quick Reaction Board (USSOCOM QRB). The USSOCOM QRB is chaired by the USSOCOM Deputy Commander. Members include the Director of Operations, Director of Requirements, the USSOCOM Acquisition Executive, Science Advisors, and the Interagency Task Force Director. The tenets of the QRB are to promote speed, evolution, collaboration, and engagement. An individual Technology Activity can be submitted from every echelon of command through the USSOCOM "HardEdge" portal for initial evaluation and distribution to industry, academia, laboratories or our in-country mobile technology complex to build the solution. The process is detailed in a USSOCOM Directive, "Rapid Technology Support to Special Operations."

C4, ISR and Sensors Capability Area. Exploit emerging technologies to conduct ATDs that provide SOF with a robust C4 and intelligence capability to ensure uninterrupted information exchange, influence situations to support mission accomplishments, and reduce an adversary's ability to use information. Exploit technologies to conduct ATDs that provide SOF with increased sensory performance. Achieve near real-time data fusion for sensor systems.

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 United States Special Operations Command		<b>DATE:</b> February 2010
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 3: <i>Advanced Technology Development (ATD)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160402BB: <i>Special Operations Advanced Technology Development/S200</i>	<b>PROJECT</b> S200: <i>1160402BB SO Advanced Technology Development S200</i>
<p><input type="checkbox"/> Mobility, Power and Energy Capability Area. Exploit emerging technologies to conduct ATDs that provide SOF with survivable mobility capabilities on high threat areas and with enhanced situational awareness. Exploit emerging technologies to allow reconnaissance and conduct direct action in high threat areas using unmanned systems. Exploit power system technologies for signature reduction. Develop advanced energy storage for underwater vehicles.</p> <p><input type="checkbox"/> SOF Warrior Capability Area. Exploit emerging technologies to conduct ATDs that provide SOF with increased survivability and performance. Enhance individual operator capabilities.</p> <p><input type="checkbox"/> Weapons and Munitions Capability Area. Exploit technologies for tunable weapons.</p> <ul style="list-style-type: none"><li>• Tagging, Tracking, and Locating (TTL) Technologies Sub-Project. Exploit emerging technologies to utilize the USSOCOM/DoD TTL Science &amp; Technology Roadmap and the TTL Quick Look Capabilities Assessment. Exploit emerging technologies to locate and track targets or items of interest. Pursue advanced development and prototyping of TTL capabilities that have been proven to be feasible and operationally useful in Special Operations Advanced Technology Development.</li><li>• National to Theater Transition Sub-Project. Conduct additional testing required to transition items from our national forces to theater forces.</li><li>• Classified Sub-Project (provided under separate cover).</li><li>• Iridium-Global Positioning System (I-GPS) Sub-Project. Conduct a proof of concept study of I-GPS to evaluate the capability to provide handsets capable of using signals from iridium and GPS satellites to provide anti-jam, positioning, and timing accuracy capabilities.</li></ul> <p>The following technology activities were added by Congress:</p> <p><input type="checkbox"/> Field Experimentation Program for Special Operations. Prototype and evaluate manned-unmanned platform and sensor networks to articulate new concepts of operation and employment for SOF.</p> <p><input type="checkbox"/> Improved Information Transfer for Special Forces. Apply real-time knowledge management tools using information technologies and cognitive science to meet urgent Special Operations intelligence requirements.</p> <p><input type="checkbox"/> Photovoltaic Power Supply. Develop high efficiency photovoltaic power sources for the deployment of autonomous sensors.</p>		

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 United States Special Operations Command		<b>DATE:</b> February 2010
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<p><input type="checkbox"/> Advanced Distributed Aperture System (ADAS) Hostile Fire Indicating System (HFIS). Develop and initiate acquisition of the ADAS HFIS required for Special Forces Black Hawk helicopters.</p> <p><input type="checkbox"/> Advanced Craft Technology Demonstrations to Quantify and Mitigate Operator Injury. Rapidly field two operational demonstrators to evaluate a shock-mitigating craft with advanced composite material and advanced hull design to reduce operational injuries.</p> <p><input type="checkbox"/> Autonomous Rendezvous/Formation Flight. Develop the capability for aircraft to maintain position while staying very stable in formation fixed to relative position of other aircraft conditions.</p> <p><input type="checkbox"/> Partnership for Defense Innovation WiFi Test Laboratory. Rapidly evaluate and integrate commercial-off-the-shelf (COTS) and government-off-the-shelf (GOTS) secure wireless network technologies that are relevant to the SOF Warrior.</p> <p><input type="checkbox"/> Micro-Power Special Operations Generator. Develop a low-signature, rugged, 2-man-portable, multi-fuel, power generator for SOF missions.</p> <p><input type="checkbox"/> Small Assault Vehicle Expeditionary. Upgrade and optimize the Small Versatile Maritime Mobility Craft platform through hull design and engine replacement.</p> <p><input type="checkbox"/> Technology Infusion Cell. Provide independent, unbiased research and rapid prototype development of emerging technologies to assist SOF to successfully train and fight the war on terror.</p> <p><input type="checkbox"/> Affordable Miniature Foliage Penetrating Radar for Special Operations Craft-Riverine (SOC-R). Develop radar capable of penetrating the foliage in riverine and coastal environments at ranges consistent with mission parameters.</p> <p><input type="checkbox"/> Optical Surveillance Equipment. This system will allow SOF to reproduce large-format/high-resolution calibration patterns used for performance analysis of surveillance systems in black and white, color, and multi-spectral bands.</p> <p><input type="checkbox"/> Chemical, Biological, Radiological, and Nuclear (CBRN) Detection Unmanned Aircraft. Assess the capability and feasibility of operating an Advanced Developed CBRN Detection Payload integrated in a Vertical Take-off/Landing (VTOL) Unmanned Aerial Vehicle (UAV).</p> <p><input type="checkbox"/> Intelligence, Surveillance, and Reconnaissance Global Sensors Architecture. Develop an architecture to achieve near real-time data fusion for deployed sensor systems.</p>		

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 3: <i>Advanced Technology Development (ATD)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160402BB: <i>Special Operations Advanced Technology Development/S200</i>	<b>PROJECT</b> S200: <i>1160402BB SO Advanced Technology Development S200</i>
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- Increase Helicopter Situational Awareness and Survivability. Continue to develop the Advanced Distributed Aperture System (ADAS) program (sensors, 3-D audio, and ADAS processor).
  
- Antennas and other Carbon Nano Tube (CNT) Devices for Intelligence/Special Military. Research, develop and demonstrate antennas and other devices for specialized intelligence and military communications.
  
- Tiger Moth Air-Launched Off Board Sensing Small Unmanned Aerial System (UAS). Demonstrate an inexpensive, compact UAV that can be launched from many types of vehicles (ground, sea and air) to enhance the capabilities and situational awareness of the warfighter.

**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Rapid Exploitation of Innovative Technologies for SOF (REITS) Sub project - C4 /ISR/ Sensors Capability Area  <i>FY 2009 Accomplishments:</i> FY09 Continued the Data Object Protection System, continued Harbor Intruder Joint Concept Technology Demonstration (JCTD), and developed better Fuel Cells for Unmanned Aerial Systems.  <i>FY 2010 Plans:</i> FY10 Continues the Harbor Intruder JCTD. Develops a secure wireless headset. Develops and transitions the Operational 3D JCTD. Initiates the Sea Tracker JCTD and Joint UAS Precision Targeting JCTD.  <i>FY 2011 Base Plans:</i> FY11 Develop advanced processing techniques, persistent surveillance, and advanced multi-function defined radios.	3.731	4.100	6.519	0.000	6.519
Rapid Exploitation of Innovative Technologies for SOF (REITS) Sub project - Mobility/Power and Energy Capability Area	19.399	3.000	3.000	0.000	3.000

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 United States Special Operations Command			<b>DATE:</b> February 2010			
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<b>B. Accomplishments/Planned Program (\$ in Millions)</b>						
		<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
<p><i>FY 2009 Accomplishments:</i> FY09 Conducted planning, payload integration, air vehicle improvements, and training in support of multiple operational demonstrations to evaluate the military utility of the A-160T unmanned aerial vehicle. Integrated two electro-optical infrared sensors to be tested on the A-160T. Continued the Combat Autonomous Mobility System (CAMS) JCTD and the Small Unmanned Aerial System (SUAS) development.</p> <p><i>FY 2010 Plans:</i> FY10 Integrates the CAMS into SOF mobility platforms for ISR; develops a prototype Small Assault Vehicle Expeditionary (SAVE) Light Combatant Craft. Develops a multi-fuel outboard engine. Investigates application of graphite foam for heat transfer applications. Develops fuel cells for all environment capable variant.</p> <p><i>FY 2011 Base Plans:</i> FY11 Pursue low-observable and counter low-observable technologies. Develop advanced lightweight armor and materials. Investigate multi-domain mobility platforms.</p>						
<p>Rapid Exploitation of Innovative Technologies for SOF (REITS) Sub project - SOF Warrior Survivability Technologies Capability Area</p> <p><i>FY 2009 Accomplishments:</i> FY09 Continued frangible ammunition project. Continued diver/crewman thermal protection technology.</p> <p><i>FY 2010 Plans:</i> FY10 Continued shock and vibration mitigation activity and diver/crewman thermal protection technology. Investigates state of technology of transparent armor. Pursue use of superhydrophobics.</p>		0.450	2.500	2.750	0.000	2.750

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 United States Special Operations Command				<b>DATE:</b> February 2010		
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<b>B. Accomplishments/Planned Program (\$ in Millions)</b>						
		<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
<i>FY 2011 Base Plans:</i> FY11 Reduce the load of the operator. Provide advanced protection and visualization; and training systems.						
Rapid Exploitation of Innovative Technologies for SOF (REITS) Sub project - Weapons and Munitions Capability Area <i>FY 2010 Plans:</i> FY10 Optimize small arms signature suppression.  <i>FY 2011 Base Plans:</i> FY11 Pursue precision guided munitions and tunable weapons.		0.000	2.394	2.250	0.000	2.250
Tagging, Tracking, and Locating (TTL) Technologies Sub-Project <i>FY 2009 Accomplishments:</i> FY09 Continued projects from the USSOCOM/DoD TTL project database. Exploited emerging technologies to locate and track targets or items of interest. Projects will include: leveraging and cooperative efforts with DoD, other government agencies and industry.  <i>FY 2010 Plans:</i> FY10 Continue projects from the USSOCOM/DoD TTL project database that exploits and integrate TTL proven relevant technologies. Exploit emerging technologies to locate and track targets or items of interest. Projects will include: leveraging and cooperative efforts with DoD, other government agencies and industry.  <i>FY 2011 Base Plans:</i> FY11 Continues projects from the USSOCOM/DoD TTL project database that exploits and integrate TTL proven relevant technologies. Exploits emerging technologies to locate and track targets or items		12.119	12.355	12.369	0.000	12.369

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 United States Special Operations Command				<b>DATE:</b> February 2010		
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<b>B. Accomplishments/Planned Program (\$ in Millions)</b>						
		<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
of interest. Projects will include: leveraging and cooperative efforts with DoD, other government agencies and industry.						
Classified Sub project <i>FY 2009 Accomplishments:</i> FY09 Details provided under separate cover.  <i>FY 2010 Plans:</i> FY10 Details provided under separate cover.  <i>FY 2011 Base Plans:</i> FY11 Details provided under separate cover.		4.236	2.491	1.974	0.000	1.974
National to Theater Transition Sub-Project <i>FY 2010 Plans:</i> FY10 Conducts additional testing and evaluation required on various equipment items being transitioned to the SOF Theater Forces.  <i>FY 2011 Base Plans:</i> FY11 Conduct additional testing and evaluation required on various equipment items being transitioned to the SOF Theater Forces.		0.000	1.965	1.944	0.000	1.944
Iridium Global Positioning System (I-GPS) Sub-Project <i>FY 2009 Accomplishments:</i> FY09 Conducted a proof-of-concept study of I-GPS to evaluate the capability to provide handsets capable of using signals from iridium and global positioning system satellites to provide anti-jam, positioning, and timing accuracy capabilities.		2.074	0.000	0.000	0.000	0.000

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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Accomplishments/Planned Programs Subtotals	42.009	28.805	30.806	0.000	30.806

	FY 2009	FY 2010
Congressional Add: Congressional Add: Field Experimentation Program For SOF  <i>FY 2009 Accomplishments:</i> FY09 Effort focused on joint, coalition efforts exploiting emerging commercial communications, networks, and data handling solutions.  <i>FY 2010 Plans:</i> FY10 Effort focuses on joint, coalition efforts exploiting emerging commercial communications, networks, and data handling solutions.	1.596	1.593
Congressional Add: Congressional Add: Improved Information Transfer For Special Forces  <i>FY 2009 Accomplishments:</i> FY09 Established a prototype global sensor network, research, development, test, and evaluation environment to migrate and integrate existing and future close-access and persistent intelligence, surveillance, and reconnaissance capabilities into the SOF information environment.	2.394	0.000
Congressional Add: Congressional Add: Photovoltaic Power Supply  <i>FY 2009 Accomplishments:</i> FY09 Developed of highly efficient photovoltaic solar cells to be used on autonomous sensors.	2.394	0.000
	21.067	1.036

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<b>B. Accomplishments/Planned Program (\$ in Millions)</b>		
	<b>FY 2009</b>	<b>FY 2010</b>
Congressional Add: Congressional Add: Advanced Distributed Aperture System Hostile Fire Indicating System  <i>FY 2009 Accomplishments:</i> FY09 Complete development and initiate acquisition of the ADAS HFIS required for Special Forces Black Hawk helicopters.  <i>FY 2010 Plans:</i> FY10 Complete development and initiate acquisition of the ADAS HFIS required for Special Forces Black Hawk helicopters.		
Congressional Add: Congressional Add: Advanced Craft Tech Demonstrations to Quantify and Mitigate Operator Injury  <i>FY 2009 Accomplishments:</i> FY09 Rapidly fielded two operational demonstrators for evaluation of a shock-mitigating craft with advanced composite materiel and advanced hull design to reduce operational injuries.	1.995	0.000
Congressional Add: Congressional Add: Autonomous Rendezvous/Formation Flight  <i>FY 2009 Accomplishments:</i> FY09 Developed the capability for aircraft to maintain position while staying very stable in formation fixed to relative position of other aircraft in instrument meteorological conditions.	1.995	0.000
Congressional Add: Congressional Add: Partnership for Defense Innovation WiFi Test Laboratory  <i>FY 2009 Accomplishments:</i> FY09 Rapidly evaluated and integrated COTS and GOTS secure wireless network technologies that are relevant to the SOF Warrior.	1.995	2.788

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<b>B. Accomplishments/Planned Program (\$ in Millions)</b>			
		<b>FY 2009</b>	<b>FY 2010</b>
<i>FY 2010 Plans:</i> FY10 Rapidly evaluate and integrate COTS and GOTS secure wireless network technologies that are relevant to the SOF Warrior.			
Congressional Add: Congressional Add: Micro-Power Special Operations Generator <i>FY 2009 Accomplishments:</i> FY09 Developed a low signature, rugged, 2-man-portable, multi-fuel, power generator for SOF missions.		1.596	0.000
Congressional Add: Congressional Add: Small Assault Vehicle Expeditionary <i>FY 2009 Accomplishments:</i> FY09 Provided upgrades and optimization to the Small Versatile Maritime Mobility Craft platform through hull design and engine replacement.		0.798	0.000
Congressional Add: Congressional Add: Technology Infusion Cell <i>FY 2009 Accomplishments:</i> FY09 Provided independent, unbiased research and rapid prototype development of emerging technologies to assist SOF to successfully train and fight in overseas contingency operations.		0.997	0.000
Congressional Add: Congressional Add: Affordable Miniature Foliage Penetrating Radar for Special Operations Craft-Riverine <i>FY 2010 Plans:</i> Congressional Add: Affordable Miniature Foliage Penetrating Radar for Special Operations Craft-Riverine		0.000	2.788

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<b>B. Accomplishments/Planned Program (\$ in Millions)</b>			
		<b>FY 2009</b>	<b>FY 2010</b>
Congressional Add: Congressional Add: Optical Surveillance Equipment  <i>FY 2010 Plans:</i> FY10 This system will allow the reproduction of large-format/high-resolution calibration patterns used for performance analysis of surveillance systems in black and white, color, and multi-spectral bands.		0.000	1.992
Congressional Add: Congressional Add: CBRN Detection Unmanned Aircraft  <i>FY 2010 Plans:</i> FY10 Assess the capability and feasibility of operating an Advanced Developed CBRN Detection Payload integrated in a Vertical Take-off/Landing Unmanned Aerial Vehicle.		0.000	1.593
Congressional Add: Congressional Add: Intelligence, Surveillance, and Reconnaissance Global Sensors Architecture  <i>FY 2010 Plans:</i> FY10 This project fulfills an urgent need by Special Operating Forces (SOF) to achieve near real-time data fusion for deployed sensor systems. This project will supplement and enhance the SOF warfighters both in Iraq and Afghanistan.		0.000	1.593
Congressional Add: Congressional Add: Program Increase Helicopter Situational Awareness and Survivability  <i>FY 2010 Plans:</i> FY10 Continue the development of the Advanced Distributed Aperture System (ADAS) program (sensors, 3-D audio, and ADAS processor), which was started under the FY09 Congressional Add called ADAS.		0.000	9.958

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<b>B. Accomplishments/Planned Program (\$ in Millions)</b>			
		<b>FY 2009</b>	<b>FY 2010</b>
Congressional Add: Congressional Add: Antennas and other CNT Devices for Intelligence/Special Military <i>FY 2010 Plans:</i> FY10 Conduct research, development and demonstration of antennas and other devices for specialized intelligence and military communications.		0.000	2.988
Congressional Add: Congressional Add: Tiger Moth Air-Launched Off Board Sensing Small Unmanned Aerial System <i>FY 2010 Plans:</i> FY10 An inexpensive, compact UAV that can be launched from many types of vehicles (ground, sea and air) to enhance the capabilities and situational awareness of the warfighter.		0.000	1.593
Congressional Adds Subtotals		36.827	27.922
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A			
<b>D. Acquisition Strategy</b> N/A			
<b>E. Performance Metrics</b> N/A			

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 3: <i>Advanced Technology Development (ATD)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160422BB: <i>Aviation Engineering Analysis/SF101</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	0.000	3.529	4.234	0.000	4.234	0.837	0.853	0.867	0.881	Continuing	Continuing
SF101: <i>Aviation Engineering Analysis SF101</i>	0.000	3.529	4.234	0.000	4.234	0.837	0.853	0.867	0.881	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

This project provides rapid response capability for the investigation, evaluation, and demonstration of technologies for Special Operations Forces (SOF)-unique aviation 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; and future SOF aircraft requirements.

**B. Program Change Summary (\$ in Millions)**

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	0.000	3.544	0.000	0.000	0.000
Current President's Budget	0.000	3.529	4.234	0.000	4.234
Total Adjustments	0.000	-0.015	4.234	0.000	4.234
• Congressional General Reductions		-0.015			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Adjustment	0.000	0.000	4.234	0.000	4.234

**Change Summary Explanation**

Funding:

FY09: None.

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b>	<b>R-1 ITEM NOMENCLATURE</b>
0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 3: <i>Advanced Technology Development (ATD)</i>	PE 1160422BB: <i>Aviation Engineering Analysis/SF101</i>

FY10: Decrease of -\$0.015 million is due to Section 8097 Congressional general reduction.

FY11: Increase of \$4.234 million is due to the DoD not estimating FY 2011 cost when the FY 2010 President's Budget was prepared.

Schedule: None.

Technical: None.

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 3: <i>Advanced Technology Development (ATD)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160422BB: <i>Aviation Engineering Analysis/SF101</i>	<b>PROJECT</b> SF101: <i>Aviation Engineering Analysis SF101</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
SF101: <i>Aviation Engineering Analysis SF101</i>	0.000	3.529	4.234	0.000	4.234	0.837	0.853	0.867	0.881	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

Provides a rapid response capability to support SOF fixed wing aircraft and unmanned aircraft 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 aircraft 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. Conduct risk reduction studies, analyses, and demonstrations to support emerging, time critical weapons and sensor enhancements.

**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Aviation Engineering Analysis <i>FY 2010 Plans:</i> FY10 Perform engineering studies and analyses for fixed wing aviation SOF-unique equipment and missions.  <i>FY 2011 Base Plans:</i> FY11 Performs engineering studies and analyses for fixed wing aviation SOF-unique equipment and missions.	0.000	3.529	4.234	0.000	4.234
Accomplishments/Planned Programs Subtotals	0.000	3.529	4.234	0.000	4.234

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b>	<b>R-1 ITEM NOMENCLATURE</b>	<b>PROJECT</b>
0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 3: <i>Advanced Technology Development (ATD)</i>	PE 1160422BB: <i>Aviation Engineering Analysis/SF101</i>	SF101: <i>Aviation Engineering Analysis SF101</i>

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

N/A

**D. Acquisition Strategy**

N/A

**E. Performance Metrics**

N/A

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 3: <i>Advanced Technology Development (ATD)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160472BB: <i>Information and Broadcast Systems Advanced Technology/S225</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	8.405	4.967	4.942	0.000	4.942	4.924	4.909	4.992	5.075	Continuing	Continuing
<i>S225: SOF Information and Broadcast Systems Advanced Technology/S225</i>	8.405	4.967	4.942	0.000	4.942	4.924	4.909	4.992	5.075	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

This Program Element (PE) conducts rapid prototyping, advanced technology demonstrations, and advanced concept technology demonstrations of information and broadcast systems technology. This includes planning, analysis, evaluation, and production information systems capabilities and distribution and 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 PE 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 PE also addresses 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.

**B. Program Change Summary (\$ in Millions)**

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	10.960	4.988	0.000	0.000	0.000
Current President's Budget	8.405	4.967	4.942	0.000	4.942
Total Adjustments	-2.555	-0.021	4.942	0.000	4.942
• Congressional General Reductions		-0.021			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	-2.148	0.000			
• SBIR/STTR Transfer	-0.407	0.000			
• Other Adjustment	0.000	0.000	4.942	0.000	4.942

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 3: <i>Advanced Technology Development (ATD)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160472BB: <i>Information and Broadcast Systems Advanced Technology/S225</i>
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**Change Summary Explanation**

Funding:

FY09: Decrease of -\$2.555 million is due to Small Business Innovative Research transfer (-\$0.407 million) and reprogramming for Foliage Penetration efforts (-\$2.148 million).

FY10: Decrease of -\$0.021 million due to Section 8097 Congressional general reductions.

FY11: Increase of \$4.942 million is due to the DoD not estimating FY 2011 cost when the FY 2010 President's Budget was prepared.

Schedule: None.

Technical: None.

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b>				<b>R-1 ITEM NOMENCLATURE</b>				<b>PROJECT</b>			
0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 3: <i>Advanced Technology Development (ATD)</i>				PE 1160472BB: <i>Information and Broadcast Systems Advanced Technology/S225</i>				S225: <i>SOF Information and Broadcast Systems Advanced Technology/S225</i>			
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
<i>S225: SOF Information and Broadcast Systems Advanced Technology/S225</i>	8.405	4.967	4.942	0.000	4.942	4.924	4.909	4.992	5.075	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

This project conducts rapid prototyping of information and broadcast system technology. This 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 toolsets and emerging technologies that support the planning and analytical needs for the Psychological Operations (PSYOP) 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 within this project 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 PSYOP. 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 PSYOP 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 PSYOP 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). Develop software applications that increase the efficiency and shorten the timeline to get PSYOP dissemination packages approved. Develop hardware/software tools that facilitate the collaboration and sharing of information and other critical data.

PSYOP Modernization. This initiative will initiate and continue development of emergent technologies available in the marketplace to transform and modernize PSYOP planning, analysis, development, broadcast, distribution, dissemination, and feedback capabilities. This initiative will also continue development of appropriate emerging technologies initially identified by ATDs and ACTDs to transition to acquisition programs. Technologies include: multi-frequency broadcasts systems; digital broadcast capabilities; remote controlled electronic paper; near real-time command and control of unattended PSYOP systems, especially in denied areas; focused/beam speaker sound technologies; visual projection technologies; advanced commercial broadcast technologies including amplitude modulation (AM) and frequency modulation (FM) radio transmitters and antenna; television (TV) transmitter and antenna systems; internet and telephony dissemination and broadcast systems, technologies capable of disseminating PSYOP products to reach target audiences across a wide variety of media into denied areas; and technologies that automate and improve PSYOP planning and analytical capability through integrated capabilities.

**B. Accomplishments/Planned Program (\$ in Millions)**

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 United States Special Operations Command				<b>DATE:</b> February 2010				
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 3: <i>Advanced Technology Development (ATD)</i>		<b>R-1 ITEM NOMENCLATURE</b> PE 1160472BB: <i>Information and Broadcast Systems Advanced Technology/S225</i>		<b>PROJECT</b> S225: <i>SOF Information and Broadcast Systems Advanced Technology/S225</i>				
<b>B. Accomplishments/Planned Program (\$ in Millions)</b>								
				<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
PSYOP "Global Reach" ACTD  <i>FY 2009 Accomplishments:</i> FY09 Demonstrated and performed an extended user evaluation (EUE) for the broadcast payloads on Predator type Unmanned Aerial Vehicle platforms. Demonstrated and performed EUE for the broadcast payload for High Altitude Unmanned Aerial System (Global Observer or HALE). Both of these EUEs will be in preparation for transition. In addition, demonstrated and performed EUE for the PSYOP Planning and Analysis System, which will lead to the transition of software/hardware.				2.684	0.000	0.000	0.000	0.000
PSYOP Modernization  <i>FY 2009 Accomplishments:</i> FY09 Explored emergent technologies available in the marketplace to transform and modernize PSYOP technology capabilities across several PSYOP shortcomings to include: the next generation loudspeaker system, long range broadcast system, PSYOP media displays, and next generation leaflet delivery system. These efforts will also enhance and modernize PSYOP broadcast systems and PSYOP print systems.  <i>FY 2010 Plans:</i> FY10 Continue exploring emerging technologies available in the marketplace to transform and modernize PSYOP technology capabilities across several PSYOP shortcomings to include: the next generation loudspeaker system, scatterable variants and modular systems that meet multiple concepts of operations scenarios, long range broadcast system, Commando SOLO and terrestrial capabilities that are air droppable, stand alone and networked, and next generation leaflet delivery capabilities. Efforts enhance and modernize PSYOP broadcast systems and PSYOP print systems. Develop toolsets to increase the ability of the PSYOP soldier to select appropriate dissemination assets for influence. Research analytic toolsets that focus on predicting human/cultural behavior and appropriate stimuli for influence.				5.721	4.967	4.942	0.000	4.942

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 United States Special Operations Command				<b>DATE:</b> February 2010				
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 3: <i>Advanced Technology Development (ATD)</i>		<b>R-1 ITEM NOMENCLATURE</b> PE 1160472BB: <i>Information and Broadcast Systems Advanced Technology/S225</i>		<b>PROJECT</b> S225: <i>SOF Information and Broadcast Systems Advanced Technology/S225</i>				
<b>B. Accomplishments/Planned Program (\$ in Millions)</b>								
				<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
<p><i>FY 2011 Base Plans:</i>  FY11 Transitions previously developed technologies to programs of record such as Fly-Away Broadcast System, Media Production Center and Commando SOLO. These capabilities developed under the PSYOP modernization effort will drastically enhance the legacy programs and position the warfighter to fight future wars.</p>								
Accomplishments/Planned Programs Subtotals				8.405	4.967	4.942	0.000	4.942
<b>C. Other Program Funding Summary (\$ in Millions)</b>								
N/A								
<b>D. Acquisition Strategy</b>								
N/A								
<b>E. Performance Metrics</b>								
N/A								

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1105233BB: <i>RQ-7 UAV/S852</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	0.000	0.000	0.000	0.000	0.000	0.486	0.356	0.357	0.343	Continuing	Continuing
S851: <i>RQ-7 UAV/S852</i>	0.000	0.000	0.000	0.000	0.000	0.486	0.356	0.357	0.343	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

This program element identifies, develops, integrates, and tests Special Operations Forces (SOF) - unique multi-mission Unmanned Aircraft Systems, intelligence payloads, and control systems. As the supported combatant command, USSOCOM has been designated as the DoD lead for planning, synchronizing, and as directed, executing Overseas Contingency Operations. USSOCOM requires the capability to find, fix, and finish 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 acquisition.

**B. Program Change Summary (\$ in Millions)**

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	0.000	0.000	0.000	0.000	0.000
Current President's Budget	0.000	0.000	0.000	0.000	0.000
Total Adjustments	0.000	0.000	0.000	0.000	0.000
• Congressional General Reductions		0.000			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			

**Change Summary Explanation**

Funding:

FY09: None.

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1105233BB: RQ-7 UAV/S852
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FY10: None.

FY11: None.

Schedule: None.

Technical: None.

**C. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
*** PLEASE ENTER ACCOMPLISHMENT/PLANNED PROGRAM TITLE ***	0.000	0.000	0.000	0.000	0.000
<i>FY 2009 Accomplishments:</i> [*** PLEASE ENTER ACCOMPLISHMENT/PLANNED PROGRAM TEXT FOR PRIOR YEAR. ***]					
Accomplishments/Planned Programs Subtotals	0.000	0.000	0.000	0.000	0.000

**D. Other Program Funding Summary (\$ in Millions)**

N/A

**E. Acquisition Strategy**

N/A

**F. Performance Metrics**

N/A

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b>			<b>R-1 ITEM NOMENCLATURE</b>								
0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>			PE 0304210BB: <i>Applications for Contingencies (SAFC)/9999</i>								
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
Total Program Element	23.020	27.467	16.272	0.000	16.272	16.574	16.886	17.170	17.459	Continuing	Continuing
9999: <i>Special Applications for Contingencies (SAFC)/9999</i>	23.020	27.467	16.272	0.000	16.272	16.574	16.886	17.170	17.459	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

The SAFC program element develops and deploys special capabilities to perform intelligence surveillance and reconnaissance for deployed Special Operations Forces (SOF) using non-traditional means. 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 remotely controlled system emplacement and data exfiltration from denied areas. 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 an emergent problem set based on requirements validated through a specific Joint Staff/Office of the Secretary of Defense (OSD) chartered approval process.

**B. Program Change Summary (\$ in Millions)**

	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
Previous President's Budget	26.254	16.381	0.000	0.000	0.000
Current President's Budget	23.020	27.467	16.272	0.000	16.272
Total Adjustments	-3.234	11.086	16.272	0.000	16.272
• Congressional General Reductions		-0.114			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		11.200			
• Congressional Directed Transfers		0.000			
• Reprogrammings	-2.634	0.000			
• SBIR/STTR Transfer	-0.600	0.000			
• Other Adjustment	0.000	0.000	16.272	0.000	16.272

**Congressional Add Details (\$ in Millions, and Includes General Reductions)**

**Project:** 9999: *Special Applications for Contingencies (SAFC)/9999*

Congressional Add: *Congressional Add: Comprehensive Maritime Domain Awareness*

<b>FY 2009</b>	<b>FY 2010</b>
4.488	3.187

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0304210BB: <i>Applications for Contingencies (SAFC)/9999</i>
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**Congressional Add Details (\$ in Millions, and Includes General Reductions)**

	FY 2009	FY 2010
Congressional Add: <i>Congressional Add: SAFC Advanced Technology Sensors and Payloads</i>	1.596	4.780
Congressional Add: <i>Congressional Add: SAFC Expeditionary Persistent Power</i>	1.596	0.000
Congressional Add: <i>Congressional Add: SAFC Unmanned Aerial Systems Test Facility</i>	2.394	2.390
Congressional Add: <i>Congressional Add: GMTI Radar for Class II UAVs</i>	0.000	0.797
Congressional Add Subtotals for Project: 9999	10.074	11.154
Congressional Add Totals for all Projects	10.074	11.154

**Change Summary Explanation**

Funding:

FY09: Decrease of -\$3.234 million is due to Small Business Innovative Research transfer (-\$0.600 million) and FY09 Omnibus reprogramming FY09-26PA (-\$2.634 million).

FY10: Increase of \$11.200M for the following Congressional Adds: Advanced Technologies Sensors and Payloads/Unattended SIGINT Node \$4.800 million; Comprehensive Maritime Domain Awareness \$3.200 million; GMTI Radar for Class II UAVs \$0.800 million; UAV/UAS Test Facility \$2.400 million. Decrease of -\$0.114 million is due to Section 8097 Congressional general reductions.

FY11: Increase of \$16.272 million is due to the DoD not estimating FY 2011 cost when the FY 2010 President's Budget was prepared.

Schedule: None.

Technical: None.

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY			R-1 ITEM NOMENCLATURE				PROJECT				
0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>			PE 0304210BB: <i>Applications for Contingencies (SAFC)/9999</i>				9999: <i>Special Applications for Contingencies (SAFC)/9999</i>				
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
9999: <i>Special Applications for Contingencies (SAFC)/9999</i>	23.020	27.467	16.272	0.000	16.272	16.574	16.886	17.170	17.459	Continuing	Continuing
Quantity of RDT&E Articles											

**A. Mission Description and Budget Item Justification**

The Special Applications for Contingencies (SAFC) 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. SAFC applies focused Research and Development for relatively low cost solutions to provide remotely controlled system emplacement and data exfiltration from denied areas. This program also specifically addresses short lead-time contingency planning requirements where focused Research and Development will allow for test and evaluation of leading edge solutions to an emergent problem set based on requirements validated through a specific Joint Staff/OSD chartered approval process.

**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
SAFC - Contingencies	3.027	8.157	16.272	0.000	16.272
<p><i>FY 2009 Accomplishments:</i> FY09 Continued development and combat evaluation of selected sensor delivery platforms and mounted or deliverable ISR capabilities for global contingencies including short notice requirements. Continued to evaluate counter-canopy technologies, persistent stare and quick reaction systems.</p> <p><i>FY 2010 Plans:</i> FY10 Continue 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.</p>					

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 United States Special Operations Command			<b>DATE:</b> February 2010			
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0304210BB: <i>Applications for Contingencies (SAFC)/9999</i>	<b>PROJECT</b> 9999: <i>Special Applications for Contingencies (SAFC)/9999</i>				
<b>B. Accomplishments/Planned Program (\$ in Millions)</b>						
		<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
<i>FY 2011 Base Plans:</i> FY11 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.						
SAFC – Sensors  <i>FY 2009 Accomplishments:</i> FY09 Continued research and assessment of emerging ISR technologies for maritime, land and air domains. Continued research and development of advanced mobile secure networking and detection technologies to create or enhance deployed, remotely emplaced surveillance architectures. Continued development and evaluation of unique unmanned sensor systems.  <i>FY 2010 Plans:</i> FY10 Continues research and assessment of emerging ISR technologies for maritime, land and air domains. Continues research and development of advanced mobile secure networking and detection technologies to create or enhance deployed, remotely emplaced surveillance architectures. Continues development and evaluation of unique unmanned sensor systems.		3.468	8.156	0.000	0.000	0.000
SAFC – Sensor Platform Systems  <i>FY 2009 Accomplishments:</i> FY09 Continued to research, develop and evaluate emerging advances in ISR sensor platform capabilities. Continued to assess and improve persistence and acoustic profile. Continued to enhance and evaluate communication architectures including link performance and interoperability. Continued to develop, deploy and evaluate advanced sensor control technologies.		6.451	0.000	0.000	0.000	0.000
Accomplishments/Planned Programs Subtotals		12.946	16.313	16.272	0.000	16.272

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 United States Special Operations Command		<b>DATE:</b> February 2010
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0304210BB: <i>Applications for Contingencies (SAFC)/9999</i>	<b>PROJECT</b> 9999: <i>Special Applications for Contingencies (SAFC)/9999</i>
<b>B. Accomplishments/Planned Program (\$ in Millions)</b>		
	<b>FY 2009</b>	<b>FY 2010</b>
Congressional Add: Congressional Add: Comprehensive Maritime Domain Awareness  <i>FY 2009 Accomplishments:</i> FY09 Continued establishment of a national center for maritime and port security to develop a maritime domain awareness prototype system.  <i>FY 2010 Plans:</i> FY10 Continues development of a maritime domain awareness prototype system.	4.488	3.187
Congressional Add: Congressional Add: SAFC Advanced Technology Sensors and Payloads  <i>FY 2009 Accomplishments:</i> FY09 Developed a suite of new communications, control, and data exploitation capabilities for use with small and tactical unmanned aerial system.  <i>FY 2010 Plans:</i> FY10 Develops an affordable, miniature wide band, SIGINT/COMINT payload for employment on small and mid-size UAS platforms and in ground sensors.	1.596	4.780
Congressional Add: Congressional Add: SAFC Expeditionary Persistent Power  <i>FY 2009 Accomplishments:</i> FY09 Developed alternative power and propulsion systems for SOF equipment.	1.596	0.000
Congressional Add: Congressional Add: SAFC Unmanned Aerial Systems Test Facility	2.394	2.390

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0304210BB: <i>Applications for Contingencies (SAFC)/9999</i>	<b>PROJECT</b> 9999: <i>Special Applications for Contingencies (SAFC)/9999</i>
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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010
<p><i>FY 2009 Accomplishments:</i> FY09 Developed a test/training range within approved airspace to test, evaluate, and certify sensor payloads and platforms.</p> <p><i>FY 2010 Plans:</i> FY10 Continues to develop a test/training range within approved airspace to test, evaluate, and certify sensor systems.</p>		
<p>Congressional Add: Congressional Add: GMTI Radar for Class II UAVs</p> <p><i>FY 2010 Plans:</i> FY10 Develops ground moving target indicator (GMTI) sensor capabilities for deployment on smaller unmanned aerial vehicle platforms by miniaturizing the GMTI system.</p>	0.000	0.797
Congressional Adds Subtotals	10.074	11.154

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

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u> <u>Base</u>	<u>FY 2011</u> <u>OCO</u>	<u>FY 2011</u> <u>Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• PROC:: SAFC	12.447									Continuing	Continuing
• PROC1:: STUASLO		12.185	12.148		12.148	12.470	12.808	13.025	13.246	Continuing	Continuing

**D. Acquisition Strategy**

N/A

**E. Performance Metrics**

N/A

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 United States Special Operations Command** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0304210BB: <i>Applications for Contingencies (SAFC)/9999</i>	<b>PROJECT</b> 9999: <i>Special Applications for Contingencies (SAFC)/9999</i>
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**Product Development (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Intelligence Surveillance and Reconnaissance Sensor and Networking Development	MIPR	VARIOUS VARIOUS	37.339	8.157	Jul 2010	16.272	Apr 2011	0.000		16.272	Continuing	Continuing	Continuing
Near Real Time Contingencies	MIPR	VARIOUS VARIOUS	18.186	8.156	Aug 2010	0.000		0.000		0.000	0.000	26.342	Continuing
Sensor Platform Capability Development	MIPR	VARIOUS VARIOUS	53.519	0.000		0.000		0.000		0.000	0.000	53.519	Continuing
Comprehensive Port and Maritime Domain Awareness	MIPR	NAVAIR NAVAIR	16.246	3.187	Jun 2010	0.000		0.000		0.000	0.000	19.433	Continuing
Advance Technology Sensors & Payloads	MIPR	NAVAIR NAVAIR	1.596	4.780	Jun 2010	0.000		0.000		0.000	0.000	6.376	Continuing
GMTI Radar for Class II UAS	MIPR	NAVAIR NAVAIR	0.000	0.797	Jun 2010	0.000		0.000		0.000	0.000	0.797	Continuing
Expeditionary Persistent Power	MIPR	NAVAIR NAVAIR	1.596	0.000		0.000		0.000		0.000	0.000	1.596	Continuing
<b>Subtotal</b>			128.482	25.077		16.272		0.000		16.272	0.000	108.063	

**Remarks**

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 United States Special Operations Command** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0304210BB: <i>Applications for Contingencies (SAFC)/9999</i>	<b>PROJECT</b> 9999: <i>Special Applications for Contingencies (SAFC)/9999</i>
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**Test and Evaluation (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
UAS Test Facility Upgrade	MIPR	SPAWAR SPAWAR	2.394	2.390	Jun 2010	0.000		0.000		0.000	0.000	4.784	Continuing
<b>Subtotal</b>			2.394	2.390		0.000		0.000		0.000	0.000	4.784	

**Remarks**

Project Cost Totals	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
<b>Project Cost Totals</b>	130.876	27.467		16.272		0.000		16.272	0.000	112.847	

**Remarks**

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<b>Exhibit R-4, RDT&amp;E Schedule Profile:</b> PB 2011 United States Special Operations Command		<b>DATE:</b> February 2010
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0304210BB: <i>Applications for Contingencies (SAFC)/9999</i>	<b>PROJECT</b> 9999: <i>Special Applications for Contingencies (SAFC)/9999</i>

<b>Exhibit R-4, RDT&amp;E Program Schedule Profile</b>																									<b>Date:</b> FEBRUARY 2010							
Appropriation/Budget Activity					Program Element Number and Name										Project Number and Name																	
RDT&E/7					PE0304210BB/Special Applications for Contingencies										Project 9999/Special Applications for Contingencies																	
Fiscal Year	2009				2010				2011				2012				2013				2014				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				
Intelligence Surveillance and Reconnaissance (ISR) Capabilities Development	▲																															△
ISR Technology Integration & Testing	▲																															△
ISR Prototype Demonstrations	▲																															△
ISR Combat Evaluation	▲																															△
Comprehensive Maritime Domain (Cong Add)	▲																															△
Advanced Technology Sensors and Payloads (Cong Add)	▲																															△
Expeditionary Persistent Power (Cong Add)	▲			▲																												
Unmanned Aerial Systems Test Facility Upgrade (Cong Add)	▲							△																								
GMTI Radar for Class II UAS (Cong Add)							▲					△																				

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2011 United States Special Operations Command		<b>DATE:</b> February 2010
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0304210BB: <i>Applications for Contingencies (SAFC)/9999</i>	<b>PROJECT</b> 9999: <i>Special Applications for Contingencies (SAFC)/9999</i>

Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
Intelligence Surveillance and Reconnaissance (ISR) Capabilities Development	1	2009	4	2015
ISR Technology Integration & Testing	1	2009	4	2015
ISR Prototype Demonstrations	1	2009	4	2015
ISR Combat Evaluation	1	2009	4	2015
Comprehensive Maritime Domain Awareness	1	2009	4	2010
Advanced Technology Sensors and Payloads	1	2009	4	2010
Expeditionary Persistent Power	1	2009	4	2009
Unmanned Aerial Systems Test Facility Upgrade	1	2009	4	2010
GMTI Radar for Class II UAS	1	2010	4	2010

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b>			<b>R-1 ITEM NOMENCLATURE</b>								
0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i>			PE 0305208BB: <i>Distributed Common Ground/Surface Systems/S400A</i>								
BA 7: <i>Operational Systems Development</i>											
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
Total Program Element	0.763	7.701	1.290	0.000	1.290	1.303	1.338	1.361	1.384	Continuing	Continuing
S400A: <i>Distributed Common Ground/Surface Systems/S400A</i>	0.763	7.701	1.290	0.000	1.290	1.303	1.338	1.361	1.384	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

This program element provides for the identification, development, and testing of the Distributed Common Ground/Surface System (DCGS). This architecture interconnects the warfighter and sensors to “find and fix” terrorists and/or individuals. The program integrates tactical processing, exploitation, and dissemination data into the Special Operations Forces (SOF) information enterprise. The program develops and integrates SOF networks providing U. S. Special Operations Command with unique decision capabilities to include: measurement and signature data, sensor exploitation, data compressions and man-portable workstations. The program provides the supporting architecture to link the global sensor network to those who will interpret the data for rapid transmission to collaborative partners via the SOF information enterprise. The program will initially provide SOF with capabilities to conduct exploitation of full motion video from unmanned aerial vehicle assets organic to SOF. The program will integrate and implement the department-level system’s integration backbone standards and architecture on the SOF information enterprise, which will support net-centric data sharing between SOF fixed, tactical capabilities and sensors. This program will employ non-developmental commercial and government off-the-shelf hardware and software and will leverage from existing technology as much as possible.

**B. Program Change Summary (\$ in Millions)**

	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
Previous President's Budget	0.763	1.407	0.000	0.000	0.000
Current President's Budget	0.763	7.701	1.290	0.000	1.290
Total Adjustments	0.000	6.294	1.290	0.000	1.290
• Congressional General Reductions		-0.031			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		6.000			
• Congressional Directed Transfers		0.325			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Adjustment	0.000	0.000	1.290	0.000	1.290

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0305208BB: <i>Distributed Common Ground/Surface Systems/S400A</i>
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**Congressional Add Details (\$ in Millions, and Includes General Reductions)**

**Project:** S400A: *Distributed Common Ground/Surface Systems/S400A*

Congressional Add: *Congressional Add: DCGS Capabilities Modernization*

Congressional Add Subtotals for Project: S400A

Congressional Add Totals for all Projects

	FY 2009	FY 2010
	0.000	5.969
Congressional Add Subtotals for Project: S400A	0.000	5.969
Congressional Add Totals for all Projects	0.000	5.969

**Change Summary Explanation**

Funding:

FY09: None.

FY10: Net increase of \$6.000 million due to Congressional Add for DCGS Capabilities Modernization and a decrease of -\$0.031 million due to Section 8097 Congressional general reductions. Additionally, an increase of \$0.325 million in FY 2010 Overseas Contingency Operations (OCO) funding to continue integration of processing exploitation and dissemination equipment.

FY11: Increase of \$1.290 million is due to the DoD not estimating FY 2011 cost when the FY 2010 President's Budget was prepared.

Schedule: None.

Technical: None.

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>			<b>R-1 ITEM NOMENCLATURE</b> PE 0305208BB: <i>Distributed Common Ground/ Surface Systems/S400A</i>				<b>PROJECT</b> S400A: <i>Distributed Common Ground/Surface Systems/S400A</i>				
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
S400A: <i>Distributed Common Ground/Surface Systems/S400A</i>	0.763	7.701	1.290	0.000	1.290	1.303	1.338	1.361	1.384	Continuing	Continuing
Quantity of RDT&E Articles											

**A. Mission Description and Budget Item Justification**

This project provides for the identification, development, and testing of the Distributed Common Ground/Surface System (DCGS). This architecture interconnects the warfighter and sensors to “find and fix” terrorists and/or individuals. The program integrates tactical processing, exploitation, and dissemination data into the Special Operations Forces (SOF) information enterprise. The program develops and integrates SOF networks providing U. S. Special Operations Command with unique decision capabilities to include: measurement and signature data, sensor exploitation, data compressions and man-portable workstations. The program provides the supporting architecture to link the global sensor network to those who will interpret the data for rapid transmission to collaborative partners via the SOF Information Enterprise. The program will initially provide SOF with capabilities to conduct exploitation of full motion video from unmanned aerial vehicle assets organic to SOF. The program will integrate and implement the department-level system’s integration backbone standards and architecture on the SOF information enterprise, which will support net-centric data sharing between SOF fixed, tactical capabilities, and sensors. This program will employ non-developmental commercial and government off-the-shelf hardware and software and will leverage from existing technology as much as possible.

- Project also include the following Congressional add:
- DCGS Capabilities Modernization addresses requirements for integrating multi-function intelligence processing, exploitation and dissemination (PED) capabilities into the SOF information enterprise and the DCGS architecture. This funding is also provided to develop a DCGS tool for SOF to expand the capability to exploit documents and media for tactical and timely intelligence in forward deployed operations.

**B. Accomplishments/Planned Program (\$ in Millions)**

	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
Distributed Common Ground/Surface System	0.763	1.732	1.290	0.000	1.290

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0305208BB: <i>Distributed Common Ground/ Surface Systems/S400A</i>	<b>PROJECT</b> S400A: <i>Distributed Common Ground/Surface Systems/S400A</i>
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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p><i>FY 2009 Accomplishments:</i> FY09 Continued system development with test and evaluation of common ground/surface system enterprise architecture and unclassified test bed participation in the ISR-centric Empire Challenge 09 exercise. Initiated integration of the Counter-IED Operations Integration Center (COIC) software baseline into the Multi-Agency Collaboration Environment (MACE) provided hardware system configuration.</p> <p><i>FY 2010 Plans:</i> FY10 Continue development of common ground/surface system enterprise architecture and system test and integration of the COIC DCGS Integration Backbone-Joint (DIB-J) and Multi-INT Archive and Analysis System (MAAS) software package solution into the SOCRATES baseline. FY10 Overseas Contingency Operations (OCO) continues integration of processing exploitation and dissemination equipment.</p> <p><i>FY 2011 Base Plans:</i> FY11 Continues to integrate the SOF-unique systems and Multi-INT sensors into service-common capabilities; commences developmental test and evaluation efforts and unclassified test bed. (UTB) software integration for DCGS-SOF v1.0 Phase II increment.</p>					
Accomplishments/Planned Programs Subtotals	0.763	1.732	1.290	0.000	1.290

	FY 2009	FY 2010
Congressional Add: Congressional Add: DCGS Capabilities Modernization	0.000	5.969

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0305208BB: <i>Distributed Common Ground/Surface Systems/S400A</i>	<b>PROJECT</b> S400A: <i>Distributed Common Ground/Surface Systems/S400A</i>
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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010
<i>FY 2010 Plans:</i> FY10 Integrate multi-function intelligence PED capabilities into the SOF information enterprise and the DCGS architecture and expands capabilities to exploit documents and media in forward deployed operations.		
Congressional Adds Subtotals	0.000	5.969

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

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u> <u>Base</u>	<u>FY 2011</u> <u>OCO</u>	<u>FY 2011</u> <u>Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• PROC:: <i>SOF Intelligence</i>	1.808	6.688	5.225		5.225	3.541		9.155	5.586	Continuing	Continuing

**D. Acquisition Strategy**

DCGS will leverage available funds against ongoing efforts by other government agencies to meet SOF-peculiar documented requirements. The technology will allow for seamless integration with DoD, interagency, or coalition Intelligence Surveillance and Reconnaissance tactical processing, exploitation, and dissemination systems.

**E. Performance Metrics**

N/A

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 United States Special Operations Command** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0305208BB: <i>Distributed Common Ground/ Surface Systems/S400A</i>	<b>PROJECT</b> S400A: <i>Distributed Common Ground/Surface Systems/S400A</i>
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**Product Development (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Prime Mission Equipment/Integration	MIPR	MITRE Bedford, MA	0.000	0.150	Jan 2010	0.000		0.000		0.000	Continuing	Continuing	Continuing
Multimedia Analyst Archive System/DCGS-SOF Integration	MIPR	NGA Bethesda, MD	0.000	0.000		0.154	Jan 2011	0.000		0.154	Continuing	Continuing	Continuing
OCO - DCGS Integration	MIPR	JITC, Ft Huachuca, AZ	0.000	0.325	Jun 2010	0.000		0.000		0.000	0	0.325	Continuing
DCGS Capabilities Modernization	TBD/TBD	TBD TBD	0.000	5.969	Feb 2010	0.000		0.000		0.000	Continuing	Continuing	Continuing
<b>Subtotal</b>			0.000	6.444		0.154		0.000		0.154	0.000	0.325	

**Remarks**

**Support (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
DCGS Support for Warfighter Workshop	MIPR	MITRE Bedford, MA	0.000	0.000		0.116	Nov 2010	0.000		0.116	0	0.116	Continuing
DCGS Support	TM	Booz Allen Hamilton Mclean, VA	0.405	0.000		0.000		0.000		0.000	Continuing	Continuing	Continuing
	MIPR	MITRE	0.171	0.000		0.000		0.000		0.000	0.000	0.171	Continuing

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 United States Special Operations Command** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0305208BB: <i>Distributed Common Ground/ Surface Systems/S400A</i>	<b>PROJECT</b> S400A: <i>Distributed Common Ground/Surface Systems/S400A</i>
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**Support (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
DCGS Sensor Web Support		Bedford, MA											
<b>Subtotal</b>			0.576	0.000		0.116		0.000		0.116	0.000	0.287	

**Remarks**

**Test and Evaluation (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
DCGS Test & Evaluation	MIPR	SPAWAR Charleston, SC	0.187	0.190	Mar 2010	0.215	Mar 2011	0.000		0.215	Continuing	Continuing	Continuing
DCGS Independent Verification and Validation	MIPR	MITRE Bedford, MA	0.000	0.871	Jan 2010	0.580	Nov 2010	0.000		0.580	Continuing	Continuing	Continuing
Interoperability Support	MIPR	JITC Ft Huachuca, AZ	0.000	0.196	Jan 2010	0.225	Nov 2010	0.000		0.225	0	0.421	Continuing
<b>Subtotal</b>			0.187	1.257		1.020		0.000		1.020	0.000	0.421	

**Remarks**

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**Exhibit R-4, RDT&E Schedule Profile: PB 2011 United States Special Operations Command** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0305208BB: <i>Distributed Common Ground/Surface Systems/S400A</i>	<b>PROJECT</b> S400A: <i>Distributed Common Ground/Surface Systems/S400A</i>
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<b>Exhibit R-4, RDT&amp;E Program Schedule Profile</b>		Date: FEBRUARY 2010																											
Appropriation/Budget Activity	Program Element and Name	Project Number and Name																											
RDT&E/7	PE0305208BB/Distributed Common Ground/Surface Systems (MIP)	Project S400A/Distributed Common Ground/Surface Systems																											
Fiscal Year	2009				2010				2011				2012				2013				2014				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	
Distributed Common Ground/Surface Systems Integration	▲————▲				▲————△				△————△				△————△				△————△				△————△				△————△				
DCGS Capabilities Modernization							△————△																						
Sensor Web Assessment				▲																									
DCGS Limited Objective Event (DLOE)									△————△																				

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**Exhibit R-4A, RDT&E Schedule Details:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0305208BB: <i>Distributed Common Ground/Surface Systems/S400A</i>	<b>PROJECT</b> S400A: <i>Distributed Common Ground/Surface Systems/S400A</i>
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Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
Distributed Common Ground/Surface Systems Integration	1	2009	4	2015
DCGS Capabilities Modernization	2	2010	4	2010
Sensor Web Assessment	4	2009	4	2009
DCGS Limited Objective Event (DLOE)	1	2011	4	2011

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**Exhibit R-2, RDT&E Budget Item Justification: PB 2011 United States Special Operations Command** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0305219BB: <i>MQ-1 Predator A UAV/S400B</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	13.642	2.058	0.098	0.000	0.098	0.097	0.097	0.097	0.097	Continuing	Continuing
S400B: <i>MQ-1 Predator A UAV/ S400B</i>	13.642	2.058	0.098	0.000	0.098	0.097	0.097	0.097	0.097	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

This program element identifies, develops, integrates, and tests Special Operations Forces (SOF) - unique mission kits on the MQ-1 Unmanned Aircraft System as a component of the Medium Altitude Long Endurance Tactical (MALET) Program. USSOCOM is designated as the DoD lead for planning, synchronizing, and as directed, executing Overseas Contingency Operations 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 acquisition.

**B. Program Change Summary (\$ in Millions)**

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	13.642	2.067	0.000	0.000	0.000
Current President's Budget	13.642	2.058	0.098	0.000	0.098
Total Adjustments	0.000	-0.009	0.098	0.000	0.098
• Congressional General Reductions		-0.009			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other adjustment	0.000	0.000	0.098	0.000	0.098

**Change Summary Explanation**

Funding:

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0305219BB: <i>MQ-1 Predator A UAV/S400B</i>
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FY09: None.

FY10: Decrease of -\$0.009 million is due to Section 8097 congressional general reduction.

FY11: Increase of \$0.098 million funds integration of MQ-1 SOF-unique mission kits.

Schedule: None.

Technical: None.

**C. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
MQ-1 Predator A UAV/ <i>FY 2009 Accomplishments:</i> MQ-1 Predator A UAV/  <i>FY 2010 Plans:</i> MQ-1 Predator A UAV/  <i>FY 2011 Base Plans:</i> MQ-1 Predator A UAV/	13.642	2.058	0.098	0.000	0.098
Accomplishments/Planned Programs Subtotals	13.642	2.058	0.098	0.000	0.098

**D. Other Program Funding Summary (\$ in Millions)**

N/A

**E. Acquisition Strategy**

N/A

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

**APPROPRIATION/BUDGET ACTIVITY**  
0400: *Research, Development, Test & Evaluation, Defense-Wide*  
BA 7: *Operational Systems Development*

**R-1 ITEM NOMENCLATURE**  
PE 0305219BB: *MQ-1 Predator A UAV/S400B*

**F. Performance Metrics**

N/A

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**Exhibit R-2, RDT&E Budget Item Justification: PB 2011 United States Special Operations Command** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1150219BB: <i>MQ-9 UAV/S851</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	0.000	4.362	0.098	0.000	0.098	0.097	0.097	0.097	0.097	Continuing	Continuing
S400B: <i>MQ-9 UAV/S851</i>	0.000	4.362	0.098	0.000	0.098	0.097	0.097	0.097	0.097	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

MISSION

**B. Program Change Summary (\$ in Millions)**

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	0.000	4.380	0.000	0.000	0.000
Current President's Budget	0.000	4.362	0.098	0.000	0.098
Total Adjustments	0.000	-0.018	0.098	0.000	0.098
• Congressional General Reductions		-0.018			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Adjustment	0.000	0.000	0.098	0.000	0.098

**Change Summary Explanation**

Funding:

FY09: None.

FY10: Decrease of -\$0.018 million is due to Section 8097 congressional general reduction.

FY11: Increase of \$0.098 million to integrate MQ-9 SOF-unique mission kits.

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1150219BB: <i>MQ-9 UAV/S851</i>
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Schedule: None.

Technical: None.

**C. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
1105219BB MQ-9 UAV <i>FY 2010 Plans:</i> 1105219BB MQ-9 UAV  <i>FY 2011 Base Plans:</i> 1105219BB MQ-9 UAV	0.000	4.362	0.098	0.000	0.098
<b>Accomplishments/Planned Programs Subtotals</b>	0.000	4.362	0.098	0.000	0.098

**D. Other Program Funding Summary (\$ in Millions)**

N/A

**E. Acquisition Strategy**

N/A

**F. Performance Metrics**

N/A

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b>			<b>R-1 ITEM NOMENCLATURE</b>								
0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>			PE 1160279BB: <i>Small Business Innovative Research (SBIR)/S050</i>								
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
Total Program Element	10.206	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
S050: <i>Small Business Innovative Research (SBIR)</i>	10.206	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

The Small Business Innovative Research (SBIR) 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. 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 2001. 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. Awards are up to \$0.100 million with a maximum six-month period of performance. Phase II projects expand the results of, and further pursue, the developments of Phase I. Awards are up to \$0.750 million with a maximum two-year period of performance. Phase III is for commercialization of the results of Phase II and requires the use of private or non-SBIR federal funding. DOD publishes government agency proposal projects twice per year for a consolidated DoD Request for Proposal. USSOCOM then awards its proposed SBIR projects.

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b>	<b>R-1 ITEM NOMENCLATURE</b>
0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i>	PE 1160279BB: <i>Small Business Innovative Research (SBIR)/S050</i>
BA 7: <i>Operational Systems Development</i>	

**B. Program Change Summary (\$ in Millions)**

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	0.000	0.000	0.000	0.000	0.000
Current President's Budget	10.206	0.000	0.000	0.000	0.000
Total Adjustments	10.206	0.000	0.000	0.000	0.000
• Congressional General Reductions		0.000			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	10.206	0.000			

**Change Summary Explanation**

Funding:

FY09: Increase of \$10.206 million is due to transfers from baseline accounts to fund the Small Business Innovative Research account.

FY10: None.

FY11: None.

Schedule: None.

Technical: None.

**C. Accomplishments/Planned Program (\$ in Millions)**

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Small Business Innovative Research	10.206	0.000	0.000	0.000	0.000

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160279BB: <i>Small Business Innovative Research (SBIR)/S050</i>
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<b>C. Accomplishments/Planned Program (\$ in Millions)</b>	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2009 Accomplishments:</i> Continued FY09 projects.					
Accomplishments/Planned Programs Subtotals	10.206	0.000	0.000	0.000	0.000

**D. Other Program Funding Summary (\$ in Millions)**

N/A

**E. Acquisition Strategy**

N/A

**F. Performance Metrics**

N/A

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b>			<b>R-1 ITEM NOMENCLATURE</b>								
0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i>			PE 1160403BB: <i>Special Operations Aviation Systems Advanced Development/SF100</i>								
BA 7: <i>Operational Systems Development</i>											
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
Total Program Element	72.225	72.308	68.691	0.000	68.691	76.041	78.689	55.581	35.267	Continuing	Continuing
SF100: <i>1160403BB Special Operations Aviation Systems Advanced Development/Project SF100</i>	72.225	72.308	68.691	0.000	68.691	76.041	78.689	55.581	35.267	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

This program element provides for the development, demonstration, and integration of current and maturing technologies for Special Operations Forces (SOF)-unique aviation requirements. Timely application of SOF-unique technology is critical and necessary to meet requirements in such areas as: low probability of intercept/low probability of detection, terrain following/terrain avoidance radar; Precision Strike Package for MC-130W Multi-Mission Modification, AC-130H Recapitalization, and other SOF airborne platforms; digital terrain elevation data and electronic order of battle; digital maps; 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, and identification technologies; digital broadcast capabilities; and aerial refueling.

**B. Program Change Summary (\$ in Millions)**

	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
Previous President's Budget	43.856	82.621	0.000	0.000	0.000
Current President's Budget	72.225	72.308	68.691	0.000	68.691
Total Adjustments	28.369	-10.313	68.691	0.000	68.691
• Congressional General Reductions		-15.513			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		5.200			
• Congressional Directed Transfers		0.000			
• Reprogrammings	29.860	0.000			
• SBIR/STTR Transfer	-1.491	0.000			
• Other Adjustment	0.000	0.000	68.691	0.000	68.691

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160403BB: <i>Special Operations Aviation Systems Advanced Development/SF100</i>
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**Congressional Add Details (\$ in Millions, and Includes General Reductions)**

**Project:** SF100: *1160403BB Special Operations Aviation Systems Advanced Development/Project SF100*

Congressional Add: *Congressional add: Helicopter Cable Warning Obstacle Avoidance System*

Congressional Add: *EC-130J Multi-Mission Upgrades*

Congressional Add Subtotals for Project: SF100

Congressional Add Totals for all Projects

	FY 2009	FY 2010
	0.000	1.195
	0.000	3.983
	0.000	5.178
	0.000	5.178

**Change Summary Explanation**

Funding:

FY09: Net increase of \$28.369 million is due to Small Business Innovative Research transfer (-\$1.491 million), a reprogramming for risk reduction efforts on a Precision Strike Package MC-130 Multi-Mission Modification (+\$7.600 million), and an above threshold reprogramming to fulfill an urgent USSOCOM requirement to rapidly arm and field multi-mission precision strike platforms (+\$22.260 million).

FY10: Net decrease of -\$10.313 million (decrease of -\$15.209 million in Avionics Modernization Program and -\$0.304 million due to Section 8097 congressional general reduction). Increase of \$1.200 million for Helicopter cable warning obstacle avoidance system as well as increase of \$4.000 million for EC-130J Multi-Mission Upgrades. The \$1.200 million add funding will be moved via DD Form 1415-3 reprogramming action to PE 1160482BB SOF Rotary Wing Aviation.

FY11: Increase of \$68.691 million is due to the DoD not estimating FY 2011 cost when the FY 2010 President's Budget was prepared.

Schedule: None.

Technical: None.

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 United States Special Operations Command								<b>DATE:</b> February 2010			
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 1160403BB: <i>Special Operations Aviation Systems Advanced Development/SF100</i>				<b>PROJECT</b> SF100: <i>1160403BB Special Operations Aviation Systems Advanced Development/Project SF100</i>			
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
SF100: <i>1160403BB Special Operations Aviation Systems Advanced Development/Project SF100</i>	72.225	72.308	68.691	0.000	68.691	76.041	78.689	55.581	35.267	Continuing	Continuing
Quantity of RDT&E Articles											

**A. Mission Description and Budget Item Justification**

This project provides for the investigation, evaluation, demonstration, and integration of current and maturing technologies for Special Operations Forces (SOF)-unique aviation requirements. Timely application of SOF-unique technology is critical and necessary to meet requirements in such areas as: low probability of intercept/low probability of detection (LPI/LPD), terrain following/terrain avoidance (TF/TA) radar; Precision Strike Package MC-130W Multi-Mission Modification; AC-130H Recapitalization; and other SOF airborne platforms; digital terrain elevation data and electronic order of battle; digital maps; 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 and identification technologies; digital broadcast capability; aerial refueling and develop cable warning obstacle avoidance system.

- SOF C-130 Avionics Modifications. Provides for development necessary to maintain current SOF-unique capabilities for SOF C-130 aircraft. Includes, but is not limited to, mission computers and display generators.
- EC-130J Commando Solo 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.
- Aviation Engineering Analysis. Provides a rapid response capability to support SOF fixed wing aircraft and unmanned aircraft 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 sub-project provides the engineering required to improve the design and performance integrity of the aircraft 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. Conducts risk reduction studies, analyses, and demonstrations to support emerging, time critical weapons and sensor enhancements. Note: A new Program Element 1160422BB and Project SF101 were created for Aviation Engineering Analysis in Budget Activity 3. The resources moved beginning in FY 2010.

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160403BB: <i>Special Operations Aviation Systems Advanced Development/SF100</i>	<b>PROJECT</b> SF100: <i>1160403BB Special Operations Aviation Systems Advanced Development/Project SF100</i>
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- Acquisition Development Support. This funding is required to support systems engineering, analysis, and integration. Primary use of funds is to examine commonality and interoperability across systems. Funding will be used in a multitude of avenues across systems to support cost-benefit analysis; provide additional test support; and further reduce cost, schedule, and technical risk. As required, funds will support manpower costs for experts needed to meet certification, safety, reliability, and other requirements required by Office of the Secretary of Defense, Acquisition, Technology and Logistics, as well as commitments for joint programs.
- Precision Strike Package (PSP) MC-130W Multi-Mission Modification. This program fulfills an urgent combat requirement to rapidly arm and field multi-mission precision strike platforms. Provides an armed over-watch capability including sensors, communication systems, precision guided munitions, and a single medium-caliber gun. An interim kit is being fielded and funded under a Combat Mission Needs Statement in FY 2009. The MC-130W will return to its primary mobility role once PSP is fielded on recapitalized AC-130H aircraft.
- Precision Strike Package (PSP) for SOF Airborne Platforms. This funding is required to support systems engineering, analysis, and integration of the baseline PSP onto host MC-130J aircraft provided by the U.S. Air Force for AC-130H recapitalization as well as other SOF airborne platforms. Missions for the AC-130H recap aircraft include, but are not limited to, Close Air Support (CAS), Air Interdiction, Armed Reconnaissance, Escort, and Force Protection – Integrated Base Defense. PSP is modular, scalable, and platform neutral, and includes mission management, sensors, and weapons.
- SOF Common TF/TA Radar. Continues system design and development of a SOF common LPI/LPD radar (Silent Knight Radar) to defeat advanced passive detection threat while maintaining ability to fly safe TF. This radar is targeted for use on all MH-47G Heavy Assault helicopters, MH-60M Blackhawk helicopters, MC-130H Combat Talon II and CV-22 Tilt-Rotor aircraft.
- C-130 Terrain Following Radar System. This funding integrates a TF/TA radar with an on-board processor to provide a multi-mode terrain following capability. This system is targeted for the MC-130W, MC-130H and MC-130J platforms.
- Cable Obstacle Avoidance System. Congressional add to develop a cable warning obstacle avoidance system. This system will allow aircraft to perform evasive actions, significantly increasing the aircrew’s probability of survival during a hostile fire engagement. The funding will be moved via DD 1415 reprogramming action to PE 1160482BB SOF Aviation.

**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
SOF C-130 Avionics Modifications	0.000	4.800	24.542	0.000	24.542

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 United States Special Operations Command				<b>DATE:</b> February 2010		
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160403BB: <i>Special Operations Aviation Systems Advanced Development/SF100</i>	<b>PROJECT</b> SF100: <i>1160403BB Special Operations Aviation Systems Advanced Development/Project SF100</i>				
<b>B. Accomplishments/Planned Program (\$ in Millions)</b>						
		<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
<i>FY 2009 Accomplishments:</i> FY09 Continued engineering studies and analyses for fixed wing aviation SOF-unique equipment and missions. Conducted risk reduction studies, analyses, and demonstrations to support Precision Strike Package (PSP) MC-130W Multi-Mission Modification concepts.						
Acquisition Development Support <i>FY 2010 Plans:</i> FY10 Conducts engineering, analysis and integration support across a multitude of systems to examine commonality and interoperability across systems; to support cost-benefit analyses; to provide additional test support; and to further reduce cost, schedule, and technical risk. <i>FY 2011 Base Plans:</i> FY11 Conduct engineering, analysis and integration support across a multitude of systems to examine commonality and interoperability across systems; to support cost-benefit analyses; to provide additional test support; and to further reduce cost, schedule, and technical risk.		0.000	0.407	2.094	0.000	2.094
Precision Strike Package (PSP) MC-130W Multi-Mission Modification <i>FY 2009 Accomplishments:</i> FY09 Integrated and tested PSP on a MC-130W aircraft, mission training device development, and training systems improvements. <i>FY 2010 Plans:</i> FY10 Continues integration and testing for offensive systems, sensors, and mission management of the PSP on a MC-130W aircraft.		22.260	27.148	0.000	0.000	0.000
Precision Strike Package (PSP) for SOF Airborne Platforms		0.000	0.000	4.279	0.000	4.279

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010
Congressional Add: Congressional add: Helicopter Cable Warning Obstacle Avoidance System <i>FY 2010 Plans:</i> FY10 Develop a Cable Warning Obstacle Avoidance System. Funding will be moved via DD 1415-3 reprogramming action to PE 1160482BB, SOF Aviation.		
Congressional Add: EC-130J Multi-Mission Upgrades <i>FY 2010 Plans:</i> FY10 Expand existing capability to a multi-mission configuration to support additional special operations forces capabilities.	0.000	3.983
<b>Congressional Adds Subtotals</b>	0.000	5.178

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

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u> <u>Base</u>	<u>FY 2011</u> <u>OCO</u>	<u>FY 2011</u> <u>Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• PROC:: <i>EC130 Mods</i>	0.728	0.000	0.808		0.808	0.776	0.000	0.000	0.000	Continuing	Continuing
• PROC1:: <i>PSP for SOF Airborne Platforms</i>	0.000	0.000	0.000		0.000	46.410	133.350	190.043	213.740	Continuing	Continuing
• PROC2:: <i>MC-130 Terrain Following</i>							2.932	17.637	19.845	Continuing	Continuing
• PROC3:: <i>PS[ MC-130W Multi-Mission Mod</i>	141.300	32.326	0.000		0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

**D. Acquisition Strategy**

• SOF C-130 Avionics Modifications. Restoration and integration of existing SOF-unique capabilities will be executed via an incremental acquisition strategy based on SOF C-130 avionics obsolescence dates.

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 United States Special Operations Command		<b>DATE:</b> February 2010
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<ul style="list-style-type: none"><li>• EC-130J Commando Solo Upgrades. Block 7.0 will be procured by the Air Force program office using existing development and production contracts. Digital broadcast capabilities will be procured through an incremental acquisition strategy to incorporate readily available equipment into the EC-130J aircraft.</li><li>• Acquisition Development Support. Conduct engineering, analysis and integration support across a multitude of systems to examine commonality and interoperability issues to ensure cost, schedule and technical issues are addressed.</li><li>• Precision Strike Package (PSP) MC-130W Multi-Mission Modifications. Provides incremental acquisition strategy with integration and testing for offensive systems, sensors, and mission management.</li><li>• PSP for SOF Airborne Platforms. Provides incremental acquisition strategy to integrate and test the PSP on MC-130J aircraft provided by the U.S. Air Force and other SOF airborne platforms.</li><li>• Terrain Following/Terrain Avoidance Radar (Silent Knight). Incremental acquisition strategy with the MH-47G as the lead platform. A competitive engineering and manufacturing development contract with an option for six low-rate initial production (LRIP) units was awarded to Raytheon in FY 2007. A follow-on radar production contract using LRIP price points will be awarded. MH-47G installation and follow-on platform group A design and integration efforts will be awarded.</li><li>• MC-130W Terrain Following Radar System. A competitive engineering and manufacturing development contract will be awarded for integration and test.</li><li>• SOF Aviation. Develop cable warning obstacle avoidance system.</li></ul>		
<b><u>E. Performance Metrics</u></b> N/A		

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis: PB 2011 United States Special Operations Command</b>										<b>DATE:</b> February 2010			
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**Product Development (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
SOF C-130 Avionics Modification	TBD	TBD TBD	0.000	4.800	Jul 2010	21.084	Jun 2011	0.000		21.084	Continuing	Continuing	Continuing
EC-130J Block Cycle Engineering	C/CPIF	Lockheed Martin Aero Marietta, GA	1.128	0.974	Dec 2009	0.581	Dec 2010	0.000		0.581	Continuing	Continuing	Continuing
Precision Strike Package MC-130W	TBD/TBD	VARIOUS VARIOUS	8.486	23.862	Jan 2010	0.000		0.000		0.000	Continuing	Continuing	Continuing
Precision Strike Package SOF Air	TBD/TBD	TBD TBD	0.000	0.000		4.000	Dec 2010	0.000		4.000	Continuing	Continuing	Continuing
Terrain Following/Terrain Avoidance (TF/TA) Radar Risk Reduction	C/CPIF	Raytheon and Northrop Grumman McKinney, TX ; Baltimore, MD	8.042	0.000		0.000		0.000		0.000	0.000	8.042	Continuing
TF/TA Radar Eng & Mfr Dev (EMD)	C/CPIF	Raytheon Dallas, TX	28.676	0.000		0.000		0.000		0.000	0.000	28.676	Continuing
TF/TA Radar Eng & Mfr Dev (EMD) Prime Mission Product	C/CPIF	Raytheon Dallas, TX	57.230	17.046	Dec 2009	3.511	Dec 2010	0.000		3.511	Continuing	Continuing	Continuing
TF/TA Radar Eng & Mfr Dev (EMD) Systems Engineering	C/CPIF	Raytheon Dallas, TX	9.992	3.259	Dec 2009	0.944	Dec 2010	0.000		0.944	Continuing	Continuing	Continuing
MC-130W Terrain Following	TBD/TBD	TBD TBD	0.000	0.000		1.990	Dec 2010	0.000		1.990	Continuing	Continuing	Continuing
<b>Subtotal</b>			113.554	49.941		32.110		0.000		32.110	0.000	36.718	

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 United States Special Operations Command** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160403BB: <i>Special Operations Aviation Systems Advanced Development/SF100</i>	<b>PROJECT</b> SF100: <i>1160403BB Special Operations Aviation Systems Advanced Development/Project SF100</i>
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**Product Development (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			

**Remarks**

**Support (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Aviation Engineering Analysis	Various/ Various	VARIOUS VARIOUS	75.864	0.000		0.000		0.000		0.000	0.000	75.864	Continuing
Acquisition Development Support	Various/ Various	VARIOUS VARIOUS	0.000	0.407		2.094		0.000		2.094	0.000	2.501	Continuing
PSP MC-130W Dev Spt	TBD/TBD	VARIOUS VARIOUS	1.050	0.498	Oct 2010	0.000		0.000		0.000	Continuing	Continuing	Continuing
Precision Strike Package SOF Air	TBD/TBD	VARIOUS VARIOUS	0.000	0.000		0.279	Dec 2010	0.000		0.279	Continuing	Continuing	Continuing
SOF C-130 Avionics Modernization	Various/ Various	656th AESS Wright Patterson, OH	0.000	0.000		3.458	Apr 2011	0.000		3.458	Continuing	Continuing	Continuing
PSP MC-130W Training	Various/ Various	VARIOUS VARIOUS	6.200	0.000		0.000		0.000		0.000	0.000	6.200	Continuing
<b>Subtotal</b>			83.114	0.905		5.831		0.000		5.831	0.000	84.565	

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**Support (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			

**Remarks**

**Test and Evaluation (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Precision Strike Package MC-130W	TBD/TBD	VARIOUS VARIOUS	0.000	2.290		0.000		0.000		0.000	Continuing	Continuing	Continuing
TF/TA Radar EMD	C/CPIF	Raytheon Dallas, TX	0.000	5.583	Dec 2009	25.470	Dec 2010	0.000		25.470	Continuing	Continuing	Continuing
<b>Subtotal</b>			0.000	7.873		25.470		0.000		25.470			

**Remarks**

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 United States Special Operations Command** **DATE:** February 2010

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**Management Services (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Precision Strike Package MC-130W	TBD/TBD	VARIOUS VARIOUS	0.000	0.498		0.000		0.000		0.000	Continuing	Continuing	Continuing
TF/TA Radar EMD	C/CPIF	Raytheon Dallas, TX	6.091	7.913	Dec 2009	5.280	Dec 2010	0.000		5.280	Continuing	Continuing	Continuing
EC-130 130J Multi-Mission Upgrades (CP)	TBD/TBD	TBD TBD	0.000	3.983		0.000		0.000		0.000	Continuing	Continuing	Continuing
Helicopter Cable Warning and Obstacle Avoidance (CP)	TBD/TBD	TBD TBD	0.000	1.195		0.000		0.000		0.000	Continuing	Continuing	Continuing
<b>Subtotal</b>			6.091	13.589		5.280		0.000		5.280			

**Remarks**

	Total Prior Years Cost	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
<b>Project Cost Totals</b>	202.759	72.308	68.691	0.000	68.691	0.000	121.283	

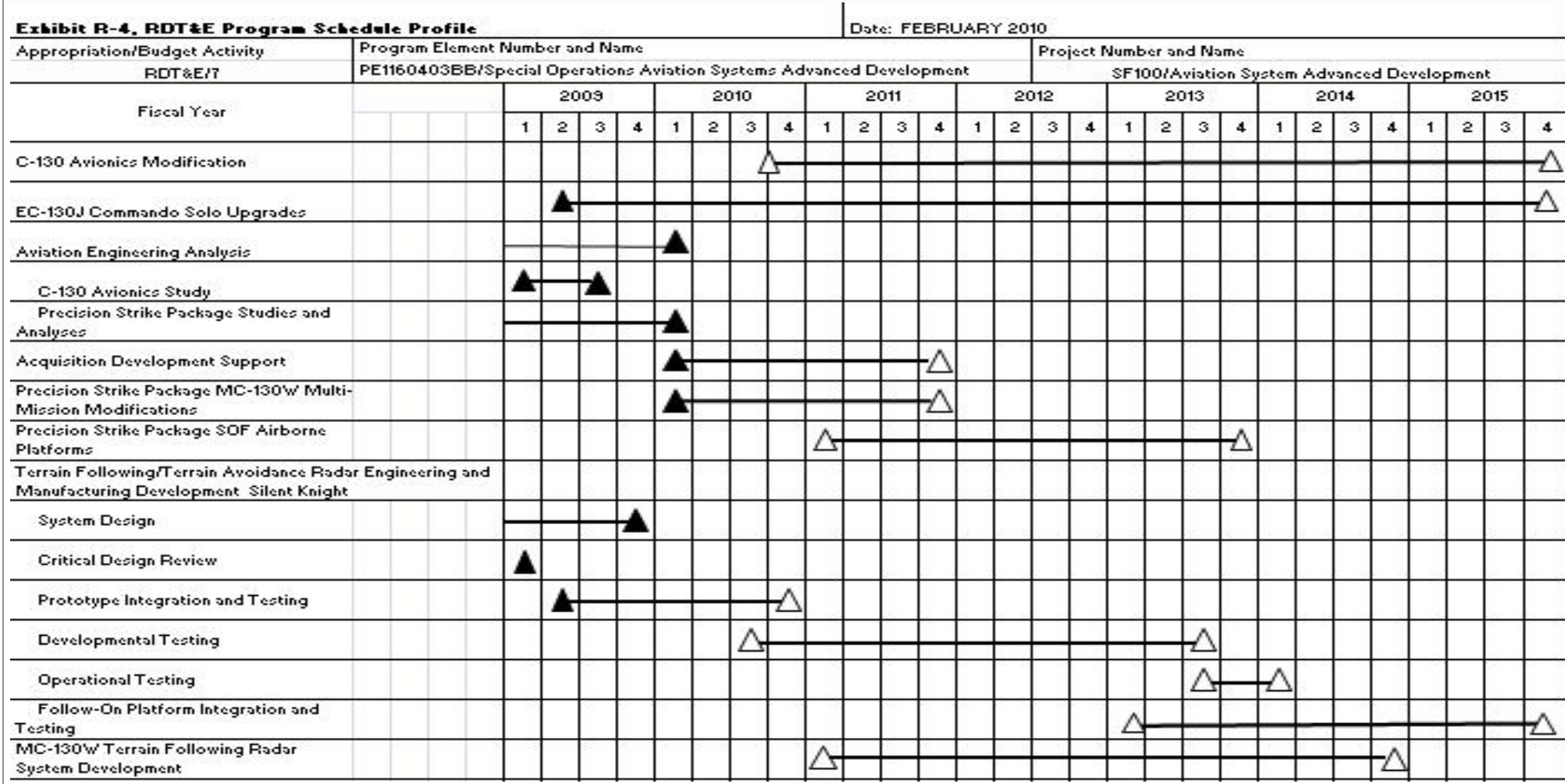
**Remarks**

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**Exhibit R-4, RDT&E Schedule Profile: PB 2011 United States Special Operations Command** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: Research, Development, Test & Evaluation, Defense-Wide BA 7: Operational Systems Development	<b>R-1 ITEM NOMENCLATURE</b> PE 1160403BB: Special Operations Aviation Systems Advanced Development/SF100	<b>PROJECT</b> SF100: 1160403BB Special Operations Aviation Systems Advanced Development/Project SF100
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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2011 United States Special Operations Command		<b>DATE:</b> February 2010
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Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
C-130 Avionics Modification	4	2010	4	2015
EC-130J Commando Solo Upgrades	2	2009	4	2015
Aviation Engineering Analysis	1	2009	1	2010
C-130 Avionics Study	1	2009	3	2009
PSP Studies and Analyses	1	2009	1	2010
Acquisition Development Support	1	2010	3	2011
Precision Strike Package MC-130W Multi-Mission Modifications	1	2010	4	2011
Precision Strike Package for SOF Airborne Platforms	1	2011	4	2013
Terrain Following/Terrain Avoidance Radar Engineering and Manufacturing Development Silent Knight - System Design	1	2009	4	2009
Terrain Following/Terrain Avoidance Radar Engineering and Manufacturing Development Silent Knight - Critical Design Review	1	2009	1	2009
Terrain Following/Terrain Avoidance Radar Engineering and Manufacturing Development Silent Knight - Prototype Integration and Testing	2	2009	4	2010
Terrain Following/Terrain Avoidance Radar Engineering and Manufacturing Development Silent Knight - Developmental Testing	3	2010	3	2013
Terrain Following/Terrain Avoidance Radar Engineering and Manufacturing Development Silent Knight - Operational Testing	3	2013	1	2014
	1	2013	4	2015

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**Exhibit R-4A, RDT&E Schedule Details:** PB 2011 United States Special Operations Command **DATE:** February 2010

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Event	Start		End	
	Quarter	Year	Quarter	Year
Terrain Following/Terrain Avoidance Radar Engineering and Manufacturing Development Silent Knight - Follow-On Platform Integration and Testing				
MC-130W Terrain Following Radar System	1	2011	4	2014

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	15.143	6.845	1.582	0.000	1.582	1.608	1.638	1.667	1.695	Continuing	Continuing
S710: <i>Special Operations (SO) Tactical Systems (Automation) Development/S710</i>	15.143	6.845	1.582	0.000	1.582	1.608	1.638	1.667	1.695	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

This program element 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.

**B. Program Change Summary (\$ in Millions)**

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	19.884	6.182	0.000	0.000	0.000
Current President's Budget	15.143	6.845	1.582	0.000	1.582
Total Adjustments	-4.741	0.663	1.582	0.000	1.582
• Congressional General Reductions		-4.617			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		5.280			
• Congressional Directed Transfers		0.000			
• Reprogrammings	-4.251	0.000			
• SBIR/STTR Transfer	-0.490	0.000			
• Other Adjustment	0.000	0.000	1.582	0.000	1.582

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

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**Congressional Add Details (\$ in Millions, and Includes General Reductions)**

**Project:** S710: *Special Operations (SO) Tactical Systems (Automation) Development/S710*

Congressional Add: *Congressional Add: Advanced Long Endurance Unattended Ground Sensors*

Congressional Add: *Congressional Add: Common Unmanned Ground Vehicle Command and Control for PSYOP Programs*

Congressional Add: *Congressional Add: Integration of Force XXI Battle Command, Bridge and Below with Tactical Handheld Digital Devices*

Congressional Add: *Congressional Add: Covert Waveform Communications for SOF*

Congressional Add: *Congressional Add: SOC-R Armor Development for Small Arms Armor Piercing Ammo*

Congressional Add Subtotals for Project: S710

Congressional Add Totals for all Projects

	FY 2009	FY 2010
	3.588	0.000
	0.797	0.000
	1.196	0.000
	1.594	2.759
	0.000	2.499
	7.175	5.258
	7.175	5.258

**Change Summary Explanation**

Funding:

FY09: Net decrease of -\$4.741 million is due to FY 2009 Omnibus 1415-1 Prior Approval Reprogramming (09-26 PA) (-\$2.000 million), Small Business Innovative Research transfer (-\$0.490 million), and reprogramming to support Foliage Penetration efforts (-\$2.251 million).

FY10: Net increase of \$0.663 million is due to Congressional Adds for Covert Communication for Software Defined Radios (\$2.765 million) and for SOC-R Armor Development for Small Arms Armor Piercing Ammo (\$2.499 million), decrease of -\$4.588 million for a Congressional reduction against the Special Operations Resource Business Information System, and -\$0.029 million due to Section 8097 Congressional general reduction. Funding for SOC-R Armor Development for Small Arms Armor Piercing Ammo Congressional Add will be moved via 1415 reprogramming action into PE 1160481BB SOF Munitions.

FY11: Increase of \$1.582 million is due to the DoD not estimating FY 2011 cost when the FY 2010 President's Budget was prepared.

Schedule: None.

Technical: None.

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 United States Special Operations Command								<b>DATE:</b> February 2010			
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 1160404BB: <i>Special Operations (SO) Tactical Systems (Automation) Development/S710</i>				<b>PROJECT</b> S710: <i>Special Operations (SO) Tactical Systems (Automation) Development/S710</i>			
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
<i>S710: Special Operations (SO) Tactical Systems (Automation) Development/S710</i>	15.143	6.845	1.582	0.000	1.582	1.608	1.638	1.667	1.695	Continuing	Continuing
Quantity of RDT&E Articles											

**A. Mission Description and Budget Item Justification**

The Special Operations Forces (SOF) Automation Systems Project provides for automation systems to meet emergent requirements to support SOF. The SOF mission mandates that SOF systems remain technologically superior to any threat to provide a maximum degree of survivability. SOF Automation Systems is a continuing effort to procure interoperable SOF Command, Control, Communications, and Computer (C4) capabilities.

United States Special Operations Command (USSOCOM) has developed an overall strategy to ensure that Command, Control, Communications, Computer 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 the 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 within the Global Information Grid (GIG). The GIG infosphere is a multitude of existing and projected national assets that allows SOF elements to operate with any force combination in multiple environments. The C4 programs funded in this project meet annual emergent requirements.

**OPERATIONAL ELEMENT (TEAM)**

- The Tactical Local Area Network program provides SOF operational commanders and forward deployed forces advanced automated data processing and display capabilities to support situational awareness, mission planning and execution, and command and control of forces. The program consists of suites, mission planning kits and field computing devices. Each suite consists of three easily transportable, multiple integrated networks; 60 general use laptops; 10 intelligence laptops; routers; and ancillary equipment used by SOF Command and Control Nodes, forming a deployed Local Area Network (LAN). Mission planning kits consist of four general use laptops and ancillary equipment used by SOF teams for detailed mission planning support. Field computing devices are small hand-held computing devices used by the most forward deployed SOF teams to automatically interface with the suite via tactical communications.
- Advanced Long Endurance Unattended Ground Sensors is an FY 2009 Congressional Add that will continue the research and development of small, low power, unattended ground sensor technologies.

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160404BB: <i>Special Operations (SO) Tactical Systems (Automation) Development/S710</i>	<b>PROJECT</b> S710: <i>Special Operations (SO) Tactical Systems (Automation) Development/S710</i>
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- Common Unmanned Ground Vehicle (UGV) Command and Control for PSYOP Programs is an FY 2009 Congressional add. The device will provide a wireless command and control capability. The device will consist of a hand-held computer that will be wirelessly connected to a payload or multiple payloads.
- Integration of Force XXI Battle Command, Brigade and Below Tactical Handheld Digital Devices is an FY 2009 Congressional add that will provide vertical and horizontal integration of the digital battlespace at the brigade and below tactical unit levels.
- Covert Communications for SOF is an FY 2009 Congressional Add that will advance the development of covert waveform technologies.

**ABOVE OPERATIONAL ELEMENT**

A. The Special Operations Resource Business Information System will provide an enterprise-wide solution that will bring together resource and acquisition management data from disparate systems and databases (both internal and external) used throughout USSOCOM into an integrated business system that can provide a common user interface and common source view of the data. It will enable users to perform acquisition management, as well as planning, programming, and budgeting collaborative decision processes. The system will retain information on validated mission requirements, generate standard and ad hoc reports, graphically display performance metrics and data, and conduct in-depth data analysis and reporting.

**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Tactical Local Area Network  <i>FY 2009 Accomplishments:</i> FY09 Continued development and integration of Blue Force Tracking secure wireless biometrics, Embedded National Tactical Receiver and Distributed Common Ground System data sharing capabilities.  <i>FY 2010 Plans:</i> FY10 Continue development and integration of Blue Force Tracking secure wireless biometrics, Embedded National Tactical Receiver and Distributed Common Ground System data sharing capabilities.	2.051	1.587	1.582	0.000	1.582

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160404BB: <i>Special Operations (SO) Tactical Systems (Automation) Development/S710</i>	<b>PROJECT</b> S710: <i>Special Operations (SO) Tactical Systems (Automation) Development/S710</i>
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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2011 Base Plans:</i> FY11 Continues development and integration of Blue Force Tracking secure wireless biometrics, Embedded National Tactical Receiver, and Distributed Common Ground System data sharing capabilities.					
Special Operations Resource Business Information System <i>FY 2009 Accomplishments:</i> FY10 Completed software application testing and implementation for resource planning, programming, and budgeting capabilities.	5.917	0.000	0.000	0.000	0.000
<b>Accomplishments/Planned Programs Subtotals</b>	7.968	1.587	1.582	0.000	1.582

	FY 2009	FY 2010
Congressional Add: Congressional Add: Advanced Long Endurance Unattended Ground Sensors <i>FY 2009 Accomplishments:</i> FY09 Continues the research and development of small, low power, unattended ground sensor technologies.	3.588	0.000
Congressional Add: Congressional Add: Common Unmanned Ground Vehicle Command and Control for PSYOP Programs <i>FY 2009 Accomplishments:</i> FY09 Continue development of a wireless command and control capability. This capability is applicable to the Next Generation Loudspeaker System Unmanned Ground Vehicle Variant.	0.797	0.000

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160404BB: <i>Special Operations (SO) Tactical Systems (Automation) Development/S710</i>	<b>PROJECT</b> S710: <i>Special Operations (SO) Tactical Systems (Automation) Development/S710</i>
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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010
Congressional Add: Congressional Add: Integration of Force XXI Battle Command, Bridge and Below with Tactical Handheld Digital Devices  <i>FY 2009 Accomplishments:</i> FY09 Integrate vertical and horizontal digital battlespace at the brigade and below tactical unit levels.	1.196	0.000
Congressional Add: Congressional Add: Covert Waveform Communications for SOF  <i>FY 2009 Accomplishments:</i> FY09 Continue development of new covert communication capability. Develop Low Probability of Intercept/Low Probability of Detection waveforms for SOCOM tactical radio application, an effort that began in FY 2005 under project S700.  <i>FY 2010 Plans:</i> FY10 Continue development of LPI/LPD.	1.594	2.759
Congressional Add: Congressional Add: SOC-R Armor Development for Small Arms Armor Piercing Ammo  <i>FY 2010 Plans:</i> FY10 Develop armor for the Special Operations Craft-Riverine (SOC-R) that can withstand small arms fire.	0.000	2.499
<b>Congressional Adds Subtotals</b>	7.175	5.258

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160404BB: <i>Special Operations (SO) Tactical Systems (Automation) Development/S710</i>	<b>PROJECT</b> S710: <i>Special Operations (SO) Tactical Systems (Automation) Development/S710</i>
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**C. Other Program Funding Summary (\$ in Millions)**

<b>Line Item</b>	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>	<b>FY 2012</b>	<b>FY 2013</b>	<b>FY 2014</b>	<b>FY 2015</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
• PROC:: <i>SOF Automation Systems</i>	55.373	54.966	52.353		52.353	54.090	54.467	54.366	56.681	Continuing	Continuing
• PROC1:: <i>Communications Equipment and Electronics</i>			0.498		0.498	0.979	2.497	2.466	4.580	Continuing	Continuing

**D. Acquisition Strategy**

- Tactical Local Area Network is a post-Milestone C fielded program that is being upgraded to reduce the footprint of deployable networks and related equipment.
- Special Operations Resource Business Information System acquisition strategy seeks to optimize a cost, schedule, and performance mix, pursuing a commercial-off-the-shelf materiel solution through full and open competition. Commercial and government agency sources will be leveraged for required certifications, functional and operational test, and acceptance support.

**E. Performance Metrics**

N/A

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 United States Special Operations Command** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160404BB: <i>Special Operations (SO) Tactical Systems (Automation) Development/S710</i>	<b>PROJECT</b> S710: <i>Special Operations (SO) Tactical Systems (Automation) Development/S710</i>
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**Product Development (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Tactical Local Area Network - Develop/ Integrate Evolutionary Technology Insertion Capabilities	TBD/TBD	iGov Technologies Tampa, FL	2.051	1.587	Oct 2009	1.582	Oct 2010	0.000		1.582	Continuing	Continuing	Continuing
Advanced Long Endurance Unattended Ground Sensors	TBD/TBD	TBD TBD	3.588	0.000		0.000		0.000		0.000	0.000	3.588	Continuing
<b>Subtotal</b>			5.639	1.587		1.582		0.000		1.582	0.000	3.588	

**Remarks**

**Support (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Special Operations Resource Business Information System - Software Application Implementation & Training	C/CPFF	IBM Bethesda, MD	5.917	0.000		0.000		0.000		0.000	0.000	5.917	Continuing
	MIPR	SPAWAR	0.797	0.000		0.000		0.000		0.000	0.000	0.797	Continuing

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 United States Special Operations Command** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160404BB: <i>Special Operations (SO) Tactical Systems (Automation) Development/S710</i>	<b>PROJECT</b> S710: <i>Special Operations (SO) Tactical Systems (Automation) Development/S710</i>
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**Support (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Common UGV Command and Control for PSYOP Programs		SPAWAR											
<b>Subtotal</b>			6.714	0.000		0.000		0.000		0.000	0.000	6.714	

**Remarks**

**Test and Evaluation (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Integration of FBCB2 Tactical Handheld Digital Devices	MIPR	USASPO Alexandria, VA	1.196	0.000		0.000		0.000		0.000	0.000	1.196	Continuing
Covert Communications for SOF	MIPR	Air Force Research Laboratory (AFRL) Rome, NY	1.594	2.759	Jan 2010	0.000		0.000		0.000	0.000	4.353	Continuing
SOC-R Armor Development for Small Arms Armor Piercing Ammo	TBD/TBD	TBD TBD	0.000	2.499	Jan 2010	0.000		0.000		0.000	Continuing	Continuing	Continuing

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 United States Special Operations Command** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160404BB: <i>Special Operations (SO) Tactical Systems (Automation) Development/S710</i>	<b>PROJECT</b> S710: <i>Special Operations (SO) Tactical Systems (Automation) Development/S710</i>
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**Test and Evaluation (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total		Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date			
<b>Subtotal</b>			2.790	5.258		0.000		0.000		0.000	0.000	5.549		

Remarks

Project Cost Totals	Total Prior Years Cost	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract	
	15.143	6.845		1.582		0.000		1.582	0.000

Remarks

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<b>Exhibit R-4, RDT&amp;E Schedule Profile: PB 2011 United States Special Operations Command</b>		<b>DATE:</b> February 2010
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160404BB: <i>Special Operations (SO) Tactical Systems (Automation) Development/S710</i>	<b>PROJECT</b> S710: <i>Special Operations (SO) Tactical Systems (Automation) Development/S710</i>

<b>Exhibit R-4, RDT&amp;E Program Schedule Profile</b>		Date: FEBRUARY 2010																														
Appropriation/Budget Activity	Program Element and Name	Project Number and Name																														
RDT&E/7	PE1160404BB/Special Operations Tactical Systems (Automation) Development	Project S710/SO Tactical Systems (Automation)																														
Fiscal Year	2009				2010				2011				2012				2013				2014				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				
Tactical Local Area Network - Develop/Integrate Evolutionary Technology Insertion Capabilities		▲	—	▲	▲	—	▲	▲	—	▲	▲	—	▲	▲	—	▲	▲	—	▲	▲	—	▲	▲	—	▲	▲	—	▲	▲	—	▲	
Special Operations Resource Business Information System - Software Application Development				▲																												
Covert Waveform Communications for SOF - Congressional Add			▲	▲			▲	▲																								
SOC-R Armor Development for Small Arms Armor Piercing Ammo - Congressional Add							▲	▲																								

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**Exhibit R-4A, RDT&E Schedule Details:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160404BB: <i>Special Operations (SO) Tactical Systems (Automation) Development/S710</i>	<b>PROJECT</b> S710: <i>Special Operations (SO) Tactical Systems (Automation) Development/S710</i>
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Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
Tactical Local Area Network - Develop/Integrate Evolutionary Technology Insertion Capabilities	2	2009	4	2015
Special Operations Resource Business Information System - Software Application Development	4	2009	4	2009
Covert waveform Communications for SOF - Congressional Add	3	2009	4	2010
SOC-R Armor Development for Small Arms Armor Piercing Ammo - Congressional Add	2	2010	4	2010

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160405BB: <i>Special Operations (SO) Intelligence Systems Development/S400</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	39.866	41.223	23.879	9.440	33.319	27.760	27.867	27.479	27.933	Continuing	Continuing
S400: <i>Special Operations (SO) Intelligence Systems Development/S400</i>	39.866	41.223	23.879	9.440	33.319	27.760	27.867	27.479	27.933	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

This program element 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, 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.

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b>	<b>R-1 ITEM NOMENCLATURE</b>
0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i>	PE 1160405BB: <i>Special Operations (SO) Intelligence Systems Development/S400</i>
BA 7: <i>Operational Systems Development</i>	

**B. Program Change Summary (\$ in Millions)**

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	39.866	21.273	0.000	0.000	0.000
Current President's Budget	39.866	41.223	23.879	9.440	33.319
Total Adjustments	0.000	19.950	23.879	9.440	33.319
• Congressional General Reductions		-0.170			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		20.120			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Adjustment	0.000	0.000	23.879	9.440	33.319

**Congressional Add Details (\$ in Millions, and Includes General Reductions)**

**Project:** S400: *Special Operations (SO) Intelligence Systems Development/S400*

Congressional Add: *Congressional Add: Multi-Spectral Laboratory & Services*

Congressional Add: *Congressional Add: Advanced Tactical Threat Warning Radio*

Congressional Add: *Congressional Add: Picoceptor and Processor for Manportable Threat Warning*

Congressional Add: *Congressional Add: Biometrics Signature Research*

Congressional Add: *Signal Intelligence (SIGINT) and Electronic Warfare (EW) Development for Integration of SOF Systems*

Congressional Add: *Advanced Long Endurance Unattended Ground Sensor*

Congressional Add: *SOCRATES High Assurance Program*

Congressional Add: *CAPS*

Congressional Add Subtotals for Project: S400

Congressional Add Totals for all Projects

	<u>FY 2009</u>	<u>FY 2010</u>
	1.596	1.992
	1.197	0.000
	3.491	3.187
	1.995	5.975
	1.596	0.000
	0.000	3.904
	0.000	0.990
	0.000	3.901
Congressional Add Subtotals for Project: S400	9.875	19.949
Congressional Add Totals for all Projects	9.875	19.949

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160405BB: <i>Special Operations (SO) Intelligence Systems Development/S400</i>
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**Change Summary Explanation**

Funding:

FY09: None.

FY10: Net increase is due to a decrease of -\$0.133 million for Section 8097 Congressional general reductions and the following Congressional Adds (\$20.120 million):

- Multi-Spectral Laboratory & Services (\$2.000 million)
- Picoceptor and Processor for Manportable Threat Warning (\$3.200 million)
- Biometrics Optical Surveillance System (BOSS) (\$6.000 million)
- Advanced Long Endurance Unattended Ground Sensor (\$3.920 million)
- Counter-Proliferation Analysis and Planning System (CAPS) (\$4.000 million)
- SOCRATES High Assurance Program (\$1.000 million)

FY11: Increase of \$33.319 million is due to the DoD not estimating FY 2011 cost when the FY 2010 President's Budget was prepared.

Schedule: None.

Technical: None.

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 1160405BB: <i>Special Operations (SO) Intelligence Systems Development/S400</i>				<b>PROJECT</b> S400: <i>Special Operations (SO) Intelligence Systems Development/S400</i>			
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
S400: <i>Special Operations (SO) Intelligence Systems Development/S400</i>	39.866	41.223	23.879	9.440	33.319	27.760	27.867	27.479	27.933	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

This project provides for the identification, development, and testing of 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, integrated threat warning to SOF mission platforms, and tactical exploitation of national system capabilities. The systems acquired in this line item are Special Operations Command, Research, Analysis and Threat Evaluation System (SOCRATES); Special Operations Tactical Video System (SOTVS); Joint Threat Warning System (JTWS); Tactical Local Area Network (TACLAN); Special Operations Joint Interagency Collaboration Center (SOJICC); Hostile Forces-Tagging, Tracking, and Locating (HF-TTL); Distributed Common Ground System (DCGS); and Sensitive Site Exploitation (SSE).

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)**

- The National Systems Support to SOF (NSSS) is a research and development rapid prototyping program which functions as HQSOCOM's TENCAP (Tactical Exploitation of National Capabilities) program. NSSS improves the combat effectiveness of USSOCOM, its components, and the Theater Special Operations Commands (TSOCs) by leveraging National Agency and Service development efforts focused on improving space-based intelligence products and communications and special communications capabilities to tactical SOF units, to include GEOINT, SIGINT, and Intelligence Fusion and Processing. The R&D efforts pursued by NSSS are of a rapid development, fielding and deployment character and focus on USSOCOM's manhunting mission. Though not exclusive, they are usually adjunct support efforts to USSOCOM's existing MIP programs, to include SOCRATES, Global Video Surveillance, HF-TTL, JTWS, DCGS-SOF, and TACLAN.

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<p>• Joint Threat Warning System (JTWS) is an evolutionary acquisition (EA) program that provides threat warning, force protection, enhanced situational awareness, and target identification/acquisition information to SOF via signal intercept, direction finding and Signals Intelligence (SIGINT). JTWS will employ continuing technology updates to address the changing threat environment. SOF SIGINT operators are globally deployed and fully embedded within SO teams and aircrews in every operational environment. This state-of-the-art technology enables SOF operators to provide critical time sensitive targeting and actionable intelligence to the operational commander during mission execution. Intelligence derived from operations supports campaign objectives and the National Military Strategy. This system has variants that utilize common technologies and interfaces allowing operators to task, organize, and scale equipment based on anticipated signal environments and areas of operation. Variants will be modular; lightweight with minimal power requirements; and configurable to support body worn/mobile or static, air, maritime and precision geo-location operations in support of all SOF missions. Each variant, except static, will be capable of operation by a single trained operator. The four variants are Ground SIGINT Kit (GSK) body worn/mobile and Team Transportable Ground SIGINT Kit static, Air, Maritime, and Precision Geo-Location.</p> <p>ABOVE OPERATIONAL ELEMENT (GARRISON)</p> <p>• Counter-Proliferation Analysis and Planning System (CAPS). Department of Defense (DoD) has a planning mission for counter-proliferation (CP) contingency operations. The Office of the Secretary of Defense (OSD) has identified CAPS as the standard CP planning toolset for DoD, and the Assistant to the Secretary of Defense for Nuclear and Chemical and Biological Defense Program has consolidated RDT&amp;E funding at USSOCOM for overall program management. U.S. Strategic Command serves as the coordinator for CAPS production requirements and provides O&amp;M funding. The Defense Threat Reduction Agency provides science and technology expertise and integration support to enhance CAPS capabilities. CAPS provides tools and assessments to DoD and SOF mission planners to aid in worldwide identification and analysis of suspected weapons of mass destruction and potential targets; assesses the associated effectiveness, costs and risks of various CP options and their collateral effects; and develops alternative plans. CAPS is a primary source of CP mission planning information for Combatant Commanders who are the principal customers. CAPS requires ongoing development, integration and testing of leading edge technology for operational planning and processes in order to provide the best possible engineering analysis and to support consequence engineering to meet changing threats.</p> <p>• The Special Operations Command Research, Analysis and Threat Evaluation System (SOCRATES) is an umbrella program that acquires and supports the network and computing infrastructure for Special Operations Forces (SOF) intelligence information up to and including the Top Secret, Sensitive Compartmented Information (TS/SCI) level. SOCRATES integrates intelligence information from national, theater, Service and SOF-specific databases; provides news service and message traffic; automated imagery processing, dissemination, and archival; analyst-to-analyst electronic mail and collaborative tools; web interfaces/search capabilities and browse-down capability to Secret web servers;</p> <p>and secure voice and facsimile. It provides a seamless and interoperable interface enabling SOF-unique intelligence support to mission planning and intelligence preparation of the battlespace. Effective FY2010 the Joint Interagency Collaboration Center program becomes part of the SOCRATES program.</p>		

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<ul style="list-style-type: none"> <li>• The Special Operations Joint Interagency Collaboration Center (SOJICC) is an executive agency program providing a state-of-the-art capability designed to process, analyze, visualize and collaborate operations and intelligence data supporting SOF core missions, with an emphasis on counter-terrorism, counter-proliferation, information operations, and unconventional warfare. Its applications fuse data from both open source and classified intelligence and operational data for use by SOF mission planners and intelligence personnel as directed by the Commander, USSOCOM. The program continues to employ technology updates to bridge the gap between operations and intelligence to support deliberate and crisis action planning while addressing the changing threat environment. Operational Preparation of the Environment provides a mechanism for research, awareness for pre-deployment, and a bridge to mitigate the information gaps and seams between theaters. Effective FY2010 the Joint Interagency Collaboration Center program becomes part of the SOCRATES program.</li> <li>• The Hostile Forces-Tagging, Tracking, and Locating (HF-TTL) Program provides SOF with the capability to tag, track and locate targets such as enemy personnel, mobility platforms and objects using TTL devices. The HF-TTL capability portfolio includes tagging/tracking, close-target audio and video tracking, optical tracking, and close-target reconnaissance systems. The HF-TTL Program annually fields state-of-the-art, SOF user defined mission sets to each Component and Theater SOC, based upon dynamic and emergent SOF operational requirements.</li> <li>• Classified. FY11 Overseas Contingency Operations (provided under separate cover).</li> <li>• Projects also include the following Congressional adds:             <ul style="list-style-type: none"> <li>• University Multi-Spectral Laboratory &amp; Services is a research effort concentrating on next-generation, multi-spectral sensors to support both the warfighter and first responder communities. Testing of biometrics and Psychological Operations efforts is conducted. Also performs testing, integration and commercialization of chemical, biological, radiological, nuclear and explosive (CBRNE) and command, control, communications computers intelligence surveillance, reconnaissance (C4ISR), sensor-related technologies.</li> <li>• Advanced Tactical Threat Warning Radio. Develop a handheld threat warning and communications radio through the use of reconfigurable software radio techniques. Radio should be minimal in size, weight and power consumption. Include innovative use of reliable and durable packaging for mixed-signal product.</li> <li>• Picoceptor and Processor for Manportable Threat Warning. This is a continuation of an FY2007 initiative for pico-processor development. The proof-of concept was tested in FY2008. FY09 continued development of Picoceptor and processor for Manportable Threat Warning for insertion into GSK as an Evolutionary Technology Insertion (ETI). FY10 completes prototype development and initiates conduct of operational and integration testing.</li> <li>• Biometric Signature Research project will develop 3-dimensional facial identification software and integrate it with existing Special Operations Tactical Video System collection platforms. This effort will leverage research gained from an ongoing project that is working to develop an independent (self-contained) system capable of collecting images from a distance and generating 3-dimensional images of subjects that can be stored and matched against full or partial facial images.</li> </ul> </li> </ul>		

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- The Signals Intelligence (SIGINT) and Electronic Warfare (EW) development for integration of SOF Systems will be used for further development and integration of Advanced SIGINT and EW Capabilities into the networked Joint Threat Warning System.
- The Advanced Long Endurance Unattended Ground Sensor development. This effort conducts research and development of advanced, low power unattended ground sensor (UGS) technologies that will provide the special operations warfighter with total, reliable and up-to-the minute situational awareness.
- SOCRATES High Assurance Program will establish the High Assurance Platform (Trusted Virtual Environment) to provide the capability for a secure solution allowing the user to access multi-level information (TS/SCI) to unclassified, as well as, a multi-domain information (NATO, Coalition) on a single desktop/laptop. Significant cost savings will be realized by the DoD throughout the life cycle of this technology while combating the Global War on Terrorism (GWOT).
- Counter-Proliferation Analysis and Planning System (CAPS) will support military planners and intelligence analysts in identifying facilities and buildings that are critical nodes in the weapons of mass destruction manufacturing process.

**B. Accomplishments/Planned Program (\$ in Millions, Articles in Whole Units)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
National Systems Support to SOF	0.995	0.972	0.979	0.000	0.979
<p><i>FY 2009 Accomplishments:</i> FY09 Continued to leverage space Intelligence Surveillance and Reconnaissance (ISR) technology developments with SOF utility from the National Community and Military Services. Assessed the operational utility of leveraged and developed technology.</p> <p><i>FY 2010 Plans:</i> FY10 Develop Special Operations Force SOF-required prototype capabilities, primarily through leveraging current or developing technologies and assets in the National Intelligence Community (NIC), while coordinating with other SOCOM and NIC Programs of Record for production and operational fielding of the successful capabilities. Emphasis areas include Intelligence, Surveillance, and Reconnaissance (ISR) support for Tagging, Tracking, and higher-accuracy Geolocating hostile</p>					

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<b>B. Accomplishments/Planned Program (\$ in Millions, Articles in Whole Units)</b>						
		<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
capability; and multiple technology insertions. In collaboration with the Distributed Common Ground System – Special Operations Forces (DCGS-SOF) program, SIDMS will support net-centric data sharing with USSOCOM partners.						
Joint Interagency Collaboration Center <i>FY 2009 Accomplishments:</i> FY09 Continued systems engineering and program management efforts to achieve data compatibility by integrating different commercial off-the-shelf hardware and software applications for data mining and retrieval, link and nodal analysis, and data visualization.		2.975	0.000	0.000	0.000	0.000
Hostile Forces Tagging, Tracking, and Locating <i>FY 2009 Accomplishments:</i> FY09 Provided capability to rapidly integrate commercial/government available tagging, tracking, and locating hardware into specialized mission products.		1.496	0.000	0.000	0.000	0.000
Classified <i>FY 2011 Base Plans:</i> None.  <i>FY 2011 OCO Plans:</i> FY11 Overseas Contingency Operations. Classified (provided under separate cover).		0.000	0.000	0.000	9.440	9.440
Accomplishments/Planned Programs Subtotals		29.991	21.274	23.879	9.440	33.319
		<b>FY 2009</b>	<b>FY 2010</b>			
Congressional Add: Congressional Add: Multi-Spectral Laboratory & Services		1.596	1.992			

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<b>B. Accomplishments/Planned Program (\$ in Millions, Articles in Whole Units)</b>		
	<b>FY 2009</b>	<b>FY 2010</b>
<p><i>FY 2009 Accomplishments:</i> FY09 Continued research of sensor-related technologies.</p> <p><i>FY 2010 Plans:</i> FY10 Performs testing, integration and commercialization of Chemical, Biological, Radiological, Nuclear, high-yield Explosives (CBRNE) and Command, Control, Communications, and Computers (C4) Intelligence, Surveillance, and Reconnaissance (ISR) sensor-related technologies.</p>		
<p>Congressional Add: Congressional Add: Advanced Tactical Threat Warning Radio</p> <p><i>FY 2009 Accomplishments:</i> FY09 Continued to develop a handheld threat warning and communications radio using reconfigurable software radio techniques.</p>	1.197	0.000
<p>Congressional Add: Congressional Add: Picoceptor and Processor for Manportable Threat Warning</p> <p><i>FY 2009 Accomplishments:</i> FY09 Initiated for Picoceptor and-processor development.</p> <p><i>FY 2010 Plans:</i> FY10 Completes Picoceptor prototype development and effects conduct of operational and integration testing to JTWS GSK Bodyworn/Mobile and Static systems.</p>	3.491	3.187
<p>Congressional Add: Congressional Add: Biometrics Signature Research</p> <p><i>FY 2009 Accomplishments:</i> FY09 Included research focused on developing 3-dimensional facial identification software that can be used with existing SOF imagery collection systems</p>	1.995	5.975

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<b>B. Accomplishments/Planned Program (\$ in Millions, Articles in Whole Units)</b>		
	<b>FY 2009</b>	<b>FY 2010</b>
<i>FY 2010 Plans:</i> FY10 Enable BOSS to develop prototypes for the Department of Defense and provide them with a new capability to use remote monitoring of unique biometric identifiers to increase national security.		
Congressional Add: Signal Intelligence (SIGINT) and Electronic Warfare (EW) Development for Integration of SOF Systems  <i>FY 2009 Accomplishments:</i> FY09 Further development and integration of Advanced SIGINT and EW capabilities into the networked Joint Threat Warning System.	1.596	0.000
Congressional Add: Advanced Long Endurance Unattended Ground Sensor  <i>FY 2010 Plans:</i> FY10 Conduct research and development of advanced, low power unattended ground sensor (UGS) technologies that will provide the special operations warfighter with total, reliable and up-to-the minute situational awareness.	0.000	3.904
Congressional Add: SOCRATES High Assurance Program  <i>FY 2010 Plans:</i> FY 2010 Establish the High Assurance Platform (Trusted Virtual Environment) to provide the capability for a secure solution allowing users to access multi-level information to unclassified on a single desktop/laptop.	0.000	0.990
Congressional Add: CAPS	0.000	3.901

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**B. Accomplishments/Planned Program (\$ in Millions, Articles in Whole Units)**

	FY 2009	FY 2010
<i>FY 2010 Plans:</i> FY 2010 Support military planners and intelligence analysts in identifying facilities and buildings that are critical nodes in the weapons of mass destruction manufacturing process.		
Congressional Adds Subtotals	9.875	19.949

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

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u> <u>Base</u>	<u>FY 2011</u> <u>OCO</u>	<u>FY 2011</u> <u>Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• PROC:: <i>SOF Intelligence Systems</i>	66.448	95.846	81.117		81.117	72.197	66.134	74.075	71.274	Continuing	Continuing

**D. Acquisition Strategy**

- National Systems Support to SOF is a project to introduce and integrate national systems capabilities into the SOF force structure and operations. Activities include increasing national and commercial systems awareness, demonstrating the tactical utility of national systems and commercial data, testing technologies and evaluating operational concepts in biennial Joint Staff Special Projects, and transitioning promising concepts and technologies to other SOF program offices for execution.
- Joint Threat Warning System is an EA program that provides threat warning, force protection, enhanced situational awareness, and target identification/ acquisition information to SOF via signals intercept, direction finding and signals intelligence SIGINT. This program will employ continuing technology updates to address the changing threat environment.
- Counter-Proliferation Analysis and Planning System is an on-going developmental initiative chartered by the Assistant to the Secretary of
- Defense for Nuclear, Chemical and Biological Defense Programs, which was transferred to USSOCOM from the Defense Threat Reduction Agency to develop, integrate and test "leading edge technology" for operational planning to provide engineering analysis and support consequence engineering tools to meet changing threats.

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<ul style="list-style-type: none"><li>• Special Operations Command, Research, Analysis and Threat Evaluation System will integrate a SOF-peculiar cross-domain solution to support the seamless integration of intelligence data into mission planning and command and control capabilities in both a garrison and tactical environment. USSOCOM will leverage available funds against ongoing efforts by other government agencies to meet SOF-peculiar documented requirements.</li></ul>		
<b>E. Performance Metrics</b> N/A		

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**Product Development (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Joint Threat Warning System Air Increment 2	MIPR	SPAWAR Charleston, SC	1.125	0.920	Mar 2010	0.945	Nov 2010	0.000		0.945	Continuing	Continuing	Continuing
Joint Threat Warning System Team Transportable - GSK Static	MIPR	SPAWAR Charleston, SC	8.790	0.258	Mar 2010	0.266	Nov 2010	0.000		0.266	Continuing	Continuing	Continuing
Joint Threat Warning System Ground Signal Intelligence Kit, Increment 2	MIPR	SPAWAR Charleston, SC	11.914	2.028	Mar 2010	2.073	Nov 2010	0.000		2.073	Continuing	Continuing	Continuing
Joint Threat Warning System Advanced Tactical Threat Warning Radio	Reqn	Agilent Technologies Santa Clara, CA	2.786	0.000		0.000		0.000		0.000	0.000	2.786	Continuing
Joint Threat Warning System Picoceptor and Processor for Manportable Threat Warning	Reqn	DRS Signal Solutions Merrimack, NH	5.876	3.187	Sep 2010	0.000		0.000		0.000	0.000	9.063	Continuing
Joint Threat Warning System Signal Intel and Elec Warfare Deve	Reqn	SRC Charleston, SC	1.596	0.000		0.000		0.000		0.000	0.000	1.596	Continuing
Counter-Proliferation Analysis and Planning System (CAPS)	MIPR	Lawrence Livermore National Labs Livermore, CA	94.439	18.465	Nov 2009	16.800	Nov 2010	0.000		16.800	Continuing	Continuing	Continuing
	MIPR	VARIOUS	1.834	0.496	Dec 2009	0.426	Nov 2010	0.000		0.426	Continuing	Continuing	Continuing

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**Product Development (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
National System Support to SOF		VARIOUS											
Special Operations Command, Research, Analysis, and Threat Evaluation	Reqn	SRC Charleston, SC	0.000	2.490	Dec 2009	1.516	Nov 2010	0.000		1.516	0.000	4.006	Continuing
Biometric Signatures Research	Reqn	EWA Bowling Green, KY	1.995	5.975	Sep 2010	0.000		0.000		0.000	0.000	7.970	Continuing
University Multi Spectral Lab and Analytical Services Center	Reqn	Oklahoma State University Stillwater, OK	1.596	1.992	Sep 2010	0.000		0.000		0.000	0.000	3.588	Continuing
Advanced Long Endurance Unattended Ground Sensor	TBD/TBD	TBD TBD	0.000	3.904	Sep 2010	0.000		0.000		0.000	0.000	3.904	Continuing
FY11 Overseas Contingency Operations (Classified)	TBD/TBD	TBD TBD	0.000	0.000		0.000		9.440	Dec 2010	9.440	0.000	9.440	Continuing
Joint Threat Warning System Maritime	MIPR	SPAWAR Charleston, SC	0.000	0.198	Mar 2010	0.204	Nov 2010	0.000		0.204	0.000	0.402	Continuing
<b>Subtotal</b>			131.951	39.913		22.230		9.440		31.670	0.000	42.755	

**Remarks**

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**Support (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
CAPS Support	MIPR	VARIOUS VARIOUS	3.976	0.450	Nov 2010	0.701	Nov 2010	0.000		0.701	Continuing	Continuing	Continuing
<b>Subtotal</b>			3.976	0.450		0.701		0.000		0.701			

**Remarks**

**Test and Evaluation (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Joint Threat Warning System	MIPR	JITC Ft. Huachuca, AZ	0.903	0.384	Jun 2010	0.395	Jun 2011	0.000		0.395	Continuing	Continuing	Continuing
<b>Subtotal</b>			0.903	0.384		0.395		0.000		0.395			

**Remarks**

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**Management Services (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Joint Interagency Collaboration Center	MIPR	MITRE Tampa, FL	9.384	0.000		0.000		0.000		0.000	0.000	9.384	Continuing
Joint Interagency Collaboration Center	C/CPAF	L3 Communications Tampa, FL	3.309	0.000		0.000		0.000		0.000	0.000	3.309	Continuing
National System Support to SOF Program Support	C/CPAF	Jacobs Tampa, FL	3.380	0.476	Oct 2009	0.553	Oct 2010	0.000		0.553	Continuing	Continuing	Continuing
Hostile Forces-Tagging, Tracking, and Locating	C/CPFF	AT&T TBD	2.992	0.000		0.000		0.000		0.000	0.000	2.992	Continuing
<b>Subtotal</b>			19.065	0.476		0.553		0.000		0.553	0.000	15.685	

**Remarks**

	Total Prior Years Cost	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
<b>Project Cost Totals</b>	155.895	41.223	23.879	9.440	33.319	0.000	58.440	

**Remarks**

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**Exhibit R-4, RDT&E Schedule Profile: PB 2011 United States Special Operations Command** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160405BB: <i>Special Operations (SO) Intelligence Systems Development/S400</i>	<b>PROJECT</b> S400: <i>Special Operations (SO) Intelligence Systems Development/S400</i>
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<b>Exhibit R-4, RDT&amp;E Program Schedule Profile</b>		Date: FEBRUARY 2010																												
Appropriation/Budget Activity	Program Element and Name	Project Number and Name																												
RDT&E/T	PE1160405BB/Special Operations Intelligence Systems Development (MIP)	Project S400/SO Intelligence Systems																												
Fiscal Year	2009				2010				2011				2012				2013				2014				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		
National Systems Support to SOF Participation in Space Technology Development and Demonstrations	▲																								△					
Joint Threat Warning System Ground - Signal Intelligence Kit Future Increment Development	▲																								△					
Joint Interagency Collaboration Center Integration and Test				▲				△																						
Counter-Proliferation Analysis and Planning System Integration	▲																								△					
Special Operations Command, Research, Analysis, and Threat Evaluation								△																	△					
Hostile Forces-Tagging, Tracking, and Locating			▲								△																			
FY11 Overseas Contingency Operations Classified (provided under separate cover)												△	—																	
Counter-Proliferation Analysis and Planning System Integration (Cong Add)												△	—																	
Special Operations Command, Research, Analysis, and Threat Evaluation High Assurance Platform (Cong Add)												△	—																	
Biometric Optical Surveillance System (Cong Add)												△	—																	
Picoceptor and Processor or Man-portable Threat Warning (Cong Add)												△	—																	
Multi-Spectral Laboratory & Services (Cong Add)												△	—																	
Advanced Long Endurance Unattended Ground Sensor (Cong Add)												△	—																	

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**Exhibit R-4A, RDT&E Schedule Details:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160405BB: <i>Special Operations (SO) Intelligence Systems Development/S400</i>	<b>PROJECT</b> S400: <i>Special Operations (SO) Intelligence Systems Development/S400</i>
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Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
National Systems Support to SOF Participation in Space Technology Development and Demonstrations	1	2009	4	2015
Joint Threat Warning System Ground - Signal Intelligence Kit Future Increment Development	1	2009	4	2015
Joint Interagency Collaboration Center Integration and Test	4	2009	3	2010
Counter-Proliferation Analysis and Planning System Integration	1	2009	4	2015
Special Operations Command, Research, Analysis, And Threat Evaluation	1	2010	4	2015
Hostile Forces-Tagging, Tracking, and Locating	3	2009	2	2010
FY11 Overseas Contingency Operations Classified (provided under separate cover)	1	2011	4	2011
Counter-Proliferation Analysis and Planning System Integration (Cong Add)	4	2010	3	2011
Special Operations Command, Research, Analysis, And Threat Evaluation High Assurance Platform (Cong Add)	4	2010	3	2011
Biometric Optical Surveillance System (Cong Add)	4	2010	3	2011
Picoceptor and Processor or Man-portable Threat Warning (Cong Add)	4	2010	3	2011
Multi-Spectral Laboratory & Services (Cong Add)	4	2010	3	2011
Advanced Long Endurance Unattended Ground Sensor (Cong Add)	4	2010	3	2011

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b>			<b>R-1 ITEM NOMENCLATURE</b>								
0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>			PE 1160421BB: <i>Special Operations CV-22 Development/SF200</i>								
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
Total Program Element	30.970	12.634	14.406	0.000	14.406	0.000	0.000	0.000	0.000	0.000	518.537
SF200: <i>Special Operations CV-22 Development/SF200</i>	30.970	12.634	14.406	0.000	14.406	0.000	0.000	0.000	0.000	0.000	518.537

**A. Mission Description and Budget Item Justification**

The CV-22 is a Special Operations Forces (SOF) variant of the V-22 vertical lift, multi-mission aircraft. The CV-22 will provide 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 existing aircraft. The V-22 Joint Program Office is developing improved capabilities in block increments. The funding in this project supports these block increments as well as associated flight test support. The Block 10 increment was completed in FY 2007, and the Block 20 increment started in FY 2008.

Block 10: Integrate and test Directional Infrared Countermeasures, a system that protects against infrared guided missiles; design, integrate and validate the Troop Commander Situational Awareness Station to provide the embarked troop commander access to the CV-22's communication, navigation and mission management system; relocate the ALE-47 chaff and flare dispenser control head to allow any cockpit crew member to activate defensive countermeasures; add a second forward firing chaff and flare dispenser to provide an adequate quantity of consumable countermeasures for the extended duration of SOF infiltration, exfiltration, and resupply missions; and incorporate a dual access feature to the Digital Map System to allow both the pilot and co-pilot to independently access and control the digital map display from the mission computer.

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, more robust performance in navigation, weapons, avionics, survivability, maneuverability, mission deployment and improved reliability and maintainability of the CV platform. Initial risk reduction and trade studies were initiated in FY 2006, and System Design and Development started in FY 2008.

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b>	<b>R-1 ITEM NOMENCLATURE</b>
0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i>	PE 1160421BB: <i>Special Operations CV-22 Development/SF200</i>
BA 7: <i>Operational Systems Development</i>	

**B. Program Change Summary (\$ in Millions)**

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	40.120	12.687	0.000	0.000	0.000
Current President's Budget	30.970	12.634	14.406	0.000	14.406
Total Adjustments	-9.150	-0.053	14.406	0.000	14.406
• Congressional General Reductions		-0.053			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	-7.600	0.000			
• SBIR/STTR Transfer	-1.550	0.000			
• Other Adjustment	0.000	0.000	14.406	0.000	14.406

**Change Summary Explanation**

Funding:

FY09: Decrease of -\$9.150 million is due to Small Business Innovative Research transfer (-\$1.550 million) and a reprogramming for risk reduction efforts on a Precision Strike Package MC-130 Multi-Mission Modification (-\$7.600 million).

FY10: Decrease of -\$0.053 million is due to Section 8097 congressional general reduction.

FY11: Net increase of \$14.406 million is due to the DoD not estimating FY 2011 cost when the FY 2010 President's Budget was prepared.

Schedule: None.

Technical: None.

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b>				<b>R-1 ITEM NOMENCLATURE</b>				<b>PROJECT</b>			
0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>				PE 1160421BB: <i>Special Operations CV-22 Development/SF200</i>				SF200: <i>Special Operations CV-22 Development/SF200</i>			
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
SF200: <i>Special Operations CV-22 Development/SF200</i>	30.970	12.634	14.406	0.000	14.406	0.000	0.000	0.000	0.000	0.000	518.537
Quantity of RDT&E Articles											

**A. Mission Description and Budget Item Justification**

The CV-22 is a Special Operations Forces (SOF) variant of the V-22 vertical lift, multi-mission aircraft. The CV-22 will provide 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 existing aircraft. The V-22 Joint Program Office is developing improved capabilities in block increments supported with rapid prototyping. The funding in this project supports these block increments as well as associated flight test support. The Block 10 increment completed in FY 2007, and the Block 20 increment started in FY 2008.

Block 10: Integrate and test Directional Infrared Countermeasures, a system that protects against infrared guided missiles; design, integrate and validate the Troop Commander Situational Awareness Station to provide the embarked troop commander access to the CV-22's communication, navigation and mission management system; relocate the ALE-47 chaff and flare dispenser control head to allow any cockpit crew member to activate defensive countermeasures; add a second forward firing chaff and flare dispenser to provide an adequate quantity of consumable countermeasures for the extended duration of SOF infiltration, exfiltration, and resupply missions; and incorporate a dual access feature to the Digital Map System to allow both the pilot and co-pilot to independently access and control the digital map display from the mission computer.

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 navigation, weapons, avionics, survivability, maneuverability, mission deployment, improved reliability and maintainability of the CV platform. Initial risk reduction and trade studies were initiated in FY 2006, and System Development and Demonstration started in FY 2008.

**B. Accomplishments/Planned Program (\$ in Millions)**

	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
CV-22 Block 20	30.970	12.634	14.406	0.000	14.406

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160421BB: <i>Special Operations CV-22 Development/SF200</i>	<b>PROJECT</b> SF200: <i>Special Operations CV-22 Development/SF200</i>
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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p><i>FY 2009 Accomplishments:</i> FY09 Continued flight test support and design and development of Block 20.</p> <p><i>FY 2010 Plans:</i> FY10 Continues flight test support and design and development of Block 20.</p> <p><i>FY 2011 Base Plans:</i> FY11 Continue flight test support and design and development of Block 20.</p>					
<b>Accomplishments/Planned Programs Subtotals</b>	30.970	12.634	14.406	0.000	14.406

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

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• PROC:: CV-22 SOF MOD	155.030	114.200	124.035		124.035	108.002	114.185	84.158	6.308	Continuing	Continuing

**D. Acquisition Strategy**

The CV-22 program is managed by the Navy V-22 Joint Program Office (NAVAIRSYSCOM PMA-275). This ensures that the CV-22 changes are incorporated into the ongoing V-22 production line with minimum impact. Funding for the baseline CV-22 Engineering Manufacturing and Development, known as Block 0, is embedded in the Navy budget. Block 10 Research, Development, Testing, and Evaluation funding was sent from USSOCOM to NAVAIRSYSCOM to be placed on contract with the V-22 prime contractor. Block 10 capability is required for compliance with the Joint Operational Requirements Document and associated Milestone III Capabilities Production Document. Block 20 and subsequent block upgrades are planned to follow the same acquisition strategy, with NAVAIRSYSCOM PMA-275 ensuring the integration of SOF-unique systems with the ongoing basic vehicle improvements supporting both the CV-22 and the Marine Corps MV 22.

**E. Performance Metrics**

N/A

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 United States Special Operations Command** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160421BB: <i>Special Operations CV-22 Development/SF200</i>	<b>PROJECT</b> SF200: <i>Special Operations CV-22 Development/SF200</i>
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**Product Development (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Prior Year Completed Efforts	Various/ Various	VARIOUS VARIOUS	384.605	0.000		0.000		0.000		0.000	0.000	384.605	Continuing
Integration, Assembly, Test, and Checkout (Block 20)	SS/CPFF	Bell-Boeing Amarillo, TX	36.012	0.000		6.513	Dec 2010	0.000		6.513	2.874	45.399	Continuing
Systems Engineering	SS/CPFF	Raytheon Indianapolis, IN	5.882	4.709	Dec 2009	0.012	Dec 2010	0.000		0.012	0.000	10.603	Continuing
<b>Subtotal</b>			426.499	4.709		6.525		0.000		6.525	2.874	440.607	

**Remarks**

**Test and Evaluation (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Prior Year Completed Efforts	Various/ Various	VARIOUS VARIOUS	43.653	0.000		0.000		0.000		0.000	0.000	43.653	Continuing
Systems Test and Evaluation (Block 20)	Various/ Various	Bell-Boeing, Amarillo, TX, and 413FLTS Hurlburt Field, FL	2.250	3.786	Nov 2009	5.117	Nov 2010	0.000		5.117	3.780	14.933	Continuing
System Test and Evaluation (ATA)	Various/ Various	Bell-Boeing and DynCorp	9.565	4.139	Dec 2009	2.764	Nov 2010	0.000		2.764	2.876	19.344	Continuing

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 United States Special Operations Command** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160421BB: <i>Special Operations CV-22 Development/SF200</i>	<b>PROJECT</b> SF200: <i>Special Operations CV-22 Development/SF200</i>
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**Test and Evaluation (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total		Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date			
		Amarillo, TX ;Fort Worth, TX												
<b>Subtotal</b>			55.468	7.925		7.881		0.000		7.881	6.656	77.930		

**Remarks**

Project Cost Totals	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
	481.967	12.634		14.406		0.000		14.406	9.530	518.537	

**Remarks**

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<b>Exhibit R-4, RDT&amp;E Schedule Profile: PB 2011 United States Special Operations Command</b>		<b>DATE:</b> February 2010
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160421BB: <i>Special Operations CV-22 Development/SF200</i>	<b>PROJECT</b> SF200: <i>Special Operations CV-22 Development/SF200</i>

<b>Exhibit R-4, RDT&amp;E Program Schedule Profile</b>		Date: FEBRUARY 2010																															
Appropriation/Budget Activity		Program Element Number and Name																Project Number and Name															
RDT&E/7		PE1160421BB/Special Operations CV-22 Development																SF200/CV-22															
Fiscal Year		2009				2010				2011				2012				2013				2014				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				
CV-22 Block 20 Development/Test		▲																															
CV-22 Initial Operational Capability			▲																														

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**Exhibit R-4A, RDT&E Schedule Details:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160421BB: <i>Special Operations CV-22 Development/SF200</i>	<b>PROJECT</b> SF200: <i>Special Operations CV-22 Development/SF200</i>
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Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
CV-22 Block 20 Development/Test	1	2009	4	2012
CV-22 Initial Operational Capability	2	2009	2	2009

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b>			<b>R-1 ITEM NOMENCLATURE</b>								
0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i>			PE 1160423BB: <i>Joint Multi-Mission Submersible/S0419</i>								
BA 7: <i>Operational Systems Development</i>											
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
Total Program Element	0.000	33.273	14.924	0.000	14.924	0.000	0.000	0.000	0.000	0	48.197
S0419: <i>Joint Multi-Mission Submersible</i>	0.000	33.273	14.924	0.000	14.924	0.000	0.000	0.000	0.000	0	48.197

**A. Mission Description and Budget Item Justification**

The Joint Multi-Mission Submersible (JMMS) is a manned, dry combatant submersible that provides a clandestine mobility platform. It will be capable of operating in a wide range of littoral and threat environments and will be tactically transported by specially modified submarines. The JMMS will provide improved performance over the Advanced SEAL Delivery System and will permit small, highly trained forces to operate in denied areas increasingly controlled by a sophisticated threat. The project provides RDT&E funds for materiel solutions analysis and technology development phase efforts.

**B. Program Change Summary (\$ in Millions)**

	<u><b>FY 2009</b></u>	<u><b>FY 2010</b></u>	<u><b>FY 2011 Base</b></u>	<u><b>FY 2011 OCO</b></u>	<u><b>FY 2011 Total</b></u>
Previous President's Budget	0.000	43.412	0.000	0.000	0.000
Current President's Budget	0.000	33.273	14.924	0.000	14.924
Total Adjustments	0.000	-10.139	14.924	0.000	14.924
• Congressional General Reductions		-10.139			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Adjustment	0.000	0.000	14.924	0.000	14.924

**Change Summary Explanation**

Funding:

FY09: None.

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b>	<b>R-1 ITEM NOMENCLATURE</b>
0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	PE 1160423BB: <i>Joint Multi-Mission Submersible/S0419</i>

FY10: Congressional reduction in FY10.

FY11: Funds were added to continue the development through FY 2011.

Schedule: Program was restructured to continue the technology development phase and other Milestone A activities through FY 2011.

Technical: None.

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160423BB: <i>Joint Multi-Mission Submersible/S0419</i>	<b>PROJECT</b> S0419: <i>Joint Multi-Mission Submersible</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
S0419: <i>Joint Multi-Mission Submersible</i>	0.000	33.273	14.924	0.000	14.924	0.000	0.000	0.000	0.000	0	48.197
Quantity of RDT&E Articles											

**A. Mission Description and Budget Item Justification**

The Joint Multi-Mission Submersible (JMMS) is a manned, dry combatant submersible that provides a clandestine mobility platform. It will be capable of operating in a wide range of littoral and threat environments and will be tactically transported by specially modified submarines. The JMMS will provide improved performance over the Advanced SEAL Delivery System and will permit small, highly trained forces to operate in denied areas increasingly controlled by a sophisticated threat. The project provides RDT&E funds for materiel solutions analyses and technology development phase efforts.

**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
JMMS <i>FY 2010 Plans:</i> Conduct materiel solutions analyses and technology development phase efforts prior to lead ship detailed design. Pursue common component development or commercial-off-the-shelf solutions for submersible subsystems such as, but not limited to, batteries and sonar.  <i>FY 2011 Base Plans:</i> Completes materiel solutions analyses and technology development phase. Lead ship design is funded in the procurement appropriation.	0.000	33.273	14.924	0.000	14.924
Accomplishments/Planned Programs Subtotals	0.000	33.273	14.924	0.000	14.924

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160423BB: <i>Joint Multi-Mission Submersible/S0419</i>	<b>PROJECT</b> S0419: <i>Joint Multi-Mission Submersible</i>
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**C. Other Program Funding Summary (\$ in Millions)**

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u> <u>Base</u>	<u>FY 2011</u> <u>OCO</u>	<u>FY 2011</u> <u>Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• PROC: <i>JMMS</i>						102.990	151.917	207.302	79.273	Continuing	Continuing

**D. Acquisition Strategy**

- The competitive acquisition strategy is still in development. The draft acquisition strategy includes a full and open competition leading to the selection of at least two capable offerors based on a best value source selection in FY10 for pre-design refinement contracts with options for detailed design and construction. Technology risk will be reduced by encouraging re-use of the reliable technology proven in the Advanced Seal Delivery System, while permitting industry to compete and propose a low risk design solution for JMMS.

**E. Performance Metrics**

N/A

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 United States Special Operations Command** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160423BB: <i>Joint Multi-Mission Submersible/S0419</i>	<b>PROJECT</b> S0419: <i>Joint Multi-Mission Submersible</i>
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**Product Development (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Pre-Design refinement	C/FFP	TBD TBD	0.000	10.000	Aug 2010	0.000		0.000		0.000	0	10.000	Continuing
Batteries, sonar, other subsystems	Various/ Various	TBD TBD	0.000	13.718		7.928		0.000		7.928	0	21.646	Continuing
<b>Subtotal</b>			0.000	23.718		7.928		0.000		7.928	0.000	31.646	

**Remarks**

**Test and Evaluation (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Mgmt & Government Support	Various/ Various	Various Various	0.000	9.555		6.996		0.000		6.996	0	16.551	Continuing
<b>Subtotal</b>			0.000	9.555		6.996		0.000		6.996	0.000	16.551	

**Remarks**

	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
<b>Project Cost Totals</b>											
	0.000	33.273		14.924		0.000		14.924	0.000	48.197	

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<b>Exhibit R-4, RDT&amp;E Schedule Profile:</b> PB 2011 United States Special Operations Command		<b>DATE:</b> February 2010
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160423BB: <i>Joint Multi-Mission Submersible/S0419</i>	<b>PROJECT</b> S0419: <i>Joint Multi-Mission Submersible</i>

<b>Exhibit R-4, RDT&amp;E Program Schedule Profile</b>																<b>Date: FEBRUARY 2010</b>													
Appropriation/Budget Activity				Program Element Number and Name												Project Number and Name													
RDT&E/7				PE1160423BB/Joint Multi-Mission Submersible												Project S0419/Joint Multi-Mission													
Fiscal Year	2009				2010				2011				2012				2013				2014				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	
JMMS																													
Materiel Solution Analysis & Technology Development					▲	—————							▲																
Milestone A				□		▲																							
Component Design & Development					▲	—————					▲																		
Pre-Design Refinement							▲	—————			▲																		
Milestone B												▲																	

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**Exhibit R-4A, RDT&E Schedule Details:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160423BB: <i>Joint Multi-Mission Submersible/S0419</i>	<b>PROJECT</b> S0419: <i>Joint Multi-Mission Submersible</i>
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Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
Matériel Solution Analysis & Technology Development	1	2010	1	2012
Milestone A	3	2010	3	2010
Component Development & Demonstration	2	2010	4	2011
Pre-Design Refinement	4	2010	4	2011
Milestone B	4	2011	4	2011

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b>			<b>R-1 ITEM NOMENCLATURE</b>								
0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>			PE 1160426BB: <i>SO Advanced SEAL Delivery System Dev/S0418</i>								
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
Total Program Element	5.643	3.485	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	496.342
S0418: <i>SO Advanced SEAL Delivery System Dev</i>	5.643	3.485	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	496.342

**A. Mission Description and Budget Item Justification**

This program element provides for development, testing, and integration of specialized equipment for the Advanced SEAL Delivery System (ASDS). Specifically, this program element provides for the ASDS-1 Improvement Program with the goal of improving the performance to the required level and insertion of technologies to avoid obsolescence. The Improvement Program consisted of integration, testing and installation of reliability improvements resulting from a series of critical system reviews. Congressional add funding will continue studies and analysis of improved components for future systems.

**B. Program Change Summary (\$ in Millions)**

	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
Previous President's Budget	8.666	1.321	0.000	0.000	0.000
Current President's Budget	5.643	3.485	0.000	0.000	0.000
Total Adjustments	-3.023	2.164	0.000	0.000	0.000
• Congressional General Reductions		-1.321			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		3.485			
• Congressional Directed Transfers		0.000			
• Reprogrammings	-2.806	0.000			
• SBIR/STTR Transfer	-0.217	0.000			

**Congressional Add Details (\$ in Millions, and Includes General Reductions)**

**Project:** S0418: *SO Advanced SEAL Delivery System Dev*

Congressional Add: *Lithium Battery Safety Detection*

Congressional Add: *Materiel Design and Fabrication Solutions for External Structural Components*

	<b>FY 2009</b>	<b>FY 2010</b>
	1.556	1.500
	0.000	1.985

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160426BB: <i>SO Advanced SEAL Delivery System Dev/S0418</i>
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<b><u>Congressional Add Details (\$ in Millions, and Includes General Reductions)</u></b>	<b>FY 2009</b>	<b>FY 2010</b>
Congressional Add Subtotals for Project: S0418	1.556	3.485
Congressional Add Totals for all Projects	1.556	3.485

**Change Summary Explanation**

Funding:

FY09: Decrease of -\$3.023 million is due to Small Business Innovative Research transfer (-\$0.217 million), FY09 Omnibus reprogramming action FY09-26PA (-\$1.073 million), and reprogramming for Foliage Penetration efforts (-\$1.733 million).

FY10: Net increase of \$2.164 is due to congressional mark and two congressional adds (\$3.485):

- Lithium-ion Battery Safety Detection and Control (\$1.500 million)
- Materiel Design and Fabrication Solutions for External Structural Components (\$1.985 million)

FY11: None.

Schedule: None.

Technical: None.

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 United States Special Operations Command									<b>DATE:</b> February 2010		
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 1160426BB: <i>SO Advanced SEAL Delivery System Dev/S0418</i>				<b>PROJECT</b> S0418: <i>SO Advanced SEAL Delivery System Dev</i>			
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
S0418: <i>SO Advanced SEAL Delivery System Dev</i>	5.643	3.485	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	496.342
Quantity of RDT&E Articles											
<b>A. Mission Description and Budget Item Justification</b>											
<p>This project provides for development, testing, and integration of specialized equipment for the Advanced SEAL Delivery System (ASDS). Specifically, this project provides for the ASDS-1 Improvement Program (AIP) with the goal of improving the performance to the required level and insertion of technologies to avoid obsolescence and address emergent issues. The AIP consisted of a series of critical system reviews, at sea operations, and the development, integration, and testing of a series of modifications to improve the performance of the ASDS-1.</p>											
<b>B. Accomplishments/Planned Program (\$ in Millions)</b>											
						<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>	
ASDS						4.087	0.000	0.000	0.000	0.000	
<i>FY 2009 Accomplishments:</i> Executed the AIP. A fire in November 2008 severely damaged many ASDS sub-systems that are no longer in production. The AIP supported planning for fire repair efforts by examining, developing, and testing alternate technology and sub-systems to replace obsolete fire-damaged systems.											
Accomplishments/Planned Programs Subtotals						4.087	0.000	0.000	0.000	0.000	0.000
						<b>FY 2009</b>	<b>FY 2010</b>				
Congressional Add: Lithium Battery Safety Detection						1.556	1.500				

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160426BB: <i>SO Advanced SEAL Delivery System Dev/S0418</i>	<b>PROJECT</b> S0418: <i>SO Advanced SEAL Delivery System Dev</i>
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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010
<i>FY 2009 Accomplishments:</i> Continues research and development of failure detection and control for an improved battery system.		
<i>FY 2010 Plans:</i> Continues research and development of failure detection and control for an improved battery system.		
Congressional Add: Materiel Design and Fabrication Solutions for External Structural Components  <i>FY 2010 Plans:</i> Performs research on improved materiel and structural components for the hull system.	0.000	1.985
Congressional Adds Subtotals	1.556	3.485

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

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u> <u>Base</u>	<u>FY 2011</u> <u>OCO</u>	<u>FY 2011</u> <u>Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u> <u>Continuing</u>
• PROC: ASDS-1	0.243									Continuing	Continuing

**D. Acquisition Strategy**

Industry proposals for technology development activities will be solicited via competitive processes or modification to existing previously competed contracts.

**E. Performance Metrics**

N/A

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**Exhibit R-2, RDT&E Budget Item Justification: PB 2011 United States Special Operations Command** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b>			<b>R-1 ITEM NOMENCLATURE</b>								
0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>			PE 1160427BB: <i>Mission Training and Preparation Systems (MTPS)/S750</i>								
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	5.496	3.178	2.915	0.000	2.915	1.417	6.228	8.898	9.807	Continuing	Continuing
<i>S750: Mission Training and Preparation Systems (MTPS)</i>	5.496	3.178	2.915	0.000	2.915	1.417	6.228	8.898	9.807	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

This program element 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 systems' configurations; support mission planning and rehearsal systems enhancements required to meet Special Operations Forces (SOF)-unique mission requirements and correct deficiencies identified in previous testing; and support mission planning and rehearsal capabilities in current MTPS. The MTPS program element 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.

**B. Program Change Summary (\$ in Millions)**

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	5.637	3.192	0.000	0.000	0.000
Current President's Budget	5.496	3.178	2.915	0.000	2.915
Total Adjustments	-0.141	-0.014	2.915	0.000	2.915
• Congressional General Reductions		-0.014			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	-0.141	0.000			
• Other Adjustments	0.000	0.000	2.915	0.000	2.915

**Congressional Add Details (\$ in Millions, and Includes General Reductions)**

**Project:** *S750: Mission Training and Preparation Systems (MTPS)*

FY 2009	FY 2010

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160427BB: <i>Mission Training and Preparation Systems (MTPS)/S750</i>
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**Congressional Add Details (\$ in Millions, and Includes General Reductions)**

Congressional Add: : *Distributed Mission Training Rehearsal System – (DMTRS)*

Congressional Add Subtotals for Project: S750

Congressional Add Totals for all Projects

	FY 2009	FY 2010
	1.556	0.000
	1.556	0.000
	1.556	0.000

**Change Summary Explanation**

Funding:

FY09: Decrease of -\$0.141 million is due to Small Business Innovative Research transfer.

FY10: Decrease is due to Section 8097 congressional general reduction (-\$0.014 million).

FY11: Increase of \$2.915 million is due to the DoD not estimating FY 2011 cost when the FY 2010 President's Budget was prepared.

Schedule: None.

Technical: None.

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b>				<b>R-1 ITEM NOMENCLATURE</b>				<b>PROJECT</b>			
0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>				PE 1160427BB: <i>Mission Training and Preparation Systems (MTPS)/S750</i>				S750: <i>Mission Training and Preparation Systems (MTPS)</i>			
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
<i>S750: Mission Training and Preparation Systems (MTPS)</i>	5.496	3.178	2.915	0.000	2.915	1.417	6.228	8.898	9.807	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 systems' 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.

Sub-projects include:

- **Distributed Mission Training Rehearsal System:** Consolidates existing common environment and common database components and conducts further development of those components to provide a complete system for Distributed Mission Operations, Training and Rehearsal. This development is focused on a common database and common environment solution that can be applied to all MTPS. The development builds on an existing SOF Common Database specification. The mission rehearsal capability will enable the SOF community to plan and rehearse a mission utilizing virtual simulation technologies. This capability is focused on ground and maritime forces.
- **Special Operations Mission Planning Environment (SOMPE):** Develops, integrates, tests, and validates enhancements required to meet SOF-unique requirements for, and correct deficiencies to, mission planning, preview, rehearsal and execution 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 & Control. This project also provides the integration of SOMPE with three-dimensional visualization systems, providing immersive mission rehearsal in minimal timeframes from the SOMPE mission plan. Spanning all elements of USSOCOM, SOMPE is embedded in the USSOCOM Headquarters, Theater Special Operations Commands, Joint Special Operations Task Force, Joint Special Operations Aviation Components, SOF warfighters, and SOF warfighting platforms.

**B. Accomplishments/Planned Program (\$ in Millions)**

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 United States Special Operations Command				<b>DATE:</b> February 2010		
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160427BB: <i>Mission Training and Preparation Systems (MTPS)/S750</i>	<b>PROJECT</b> S750: <i>Mission Training and Preparation Systems (MTPS)</i>				
<b>B. Accomplishments/Planned Program (\$ in Millions)</b>						
		<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
Special Operations Mission Planning Environment (SOMPE)  <i>FY 2009 Accomplishments:</i> Continued software development for mission data loading software to interface with mission planning and rehearsal systems. Improved ground and maritime planning modules and capabilities.  <i>FY 2010 Plans:</i> Continue software development for mission data loading software to interface with mission planning and rehearsal systems and improvement of ground and maritime planning modules and capabilities. Integrate virtual mission rehearsal system into the software baseline.  <i>FY 2011 Base Plans:</i> Continues software development for mission data loading software to interface with mission planning system and integration of virtual mission rehearsal system into the software baseline.		3.940	3.178	2.915	0.000	2.915
Accomplishments/Planned Programs Subtotals		3.940	3.178	2.915	0.000	2.915
		<b>FY 2009</b>	<b>FY 2010</b>			
Congressional Add: : Distributed Mission Training Rehearsal System – (DMTRS)  <i>FY 2009 Accomplishments:</i> Initiated systems interoperability studies to support integration, systems engineering requirements, configuration management of MTPS and Distributed Mission Operations, Training and Rehearsal.		1.556	0.000			
Congressional Adds Subtotals		1.556	0.000			

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160427BB: <i>Mission Training and Preparation Systems (MTPS)/S750</i>	<b>PROJECT</b> S750: <i>Mission Training and Preparation Systems (MTPS)</i>
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**C. Other Program Funding Summary (\$ in Millions)**

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u> <u>Base</u>	<u>FY 2011</u> <u>OCO</u>	<u>FY 2011</u> <u>Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• PROC: <i>MTPS</i>	36.044	20.865	28.354		28.354	33.777	16.882	18.083	17.224	Continuing	Continuing

**D. Acquisition Strategy**

- DMTRS: Funding is sent from USSOCOM to program management offices to be placed on contracts via competition or sole source with selected contractors. Individual acquisition strategies are developed as projects are identified.
  
- SOMPE: Funding is sent from USSOCOM to program management offices to be awarded via competition or sole source with various contractors under each project. Individual acquisition strategies are developed as projects are identified.

**E. Performance Metrics**

N/A

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 United States Special Operations Command** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160427BB: <i>Mission Training and Preparation Systems (MTPS)/S750</i>	<b>PROJECT</b> S750: <i>Mission Training and Preparation Systems (MTPS)</i>
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**Product Development (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Distributed Mission Training & Rehearsal System (DMTRS) Development and Integration	TBD/TBD	PM STS, PEO STRI Orlando, FL	1.556	0.000		0.000		0.000		0.000	0	1.556	Continuing
Special Operations Mission Planning Environment (SOMPE) Software Development	C/CPFF	CAS Huntsville, AL	0.500	0.000		0.000		0.000		0.000	0	0.500	Continuing
Special Operations Mission Planning Environment (SOMPE) Software Development	SS/CPFF	Naval Surface Warfare Div Crane, IN	0.290	0.250	Mar 2010	0.000		0.000		0.000	0	0.540	Continuing
Special Operations Mission Planning Environment (SOMPE) Software Development	TM	Tybrin Ft. Walton Beach, FL	0.000	0.485	Nov 2009	0.000		0.000		0.000	0	0.485	Continuing
Special Operations Mission Planning Environment (SOMPE) Software Development	Various	Various Various	1.920	0.000		0.895	Jan 2011	0.000		0.895	Continuing	Continuing	Continuing
Special Operations Mission Planning Environment (SOMPE) Software Development	SS/CPFF	Redstone Arsenal Huntsville, AL	2.081	1.773	May 2010	0.235	Mar 2011	0.000		0.235	Continuing	Continuing	Continuing
Special Operations Mission Planning	SS/CPFF	FTI/BAI San Diego, CA	0.293	0.000		1.098	Dec 2010	0.000		1.098	Continuing	Continuing	Continuing

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 United States Special Operations Command** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160427BB: <i>Mission Training and Preparation Systems (MTPS)/S750</i>	<b>PROJECT</b> S750: <i>Mission Training and Preparation Systems (MTPS)</i>
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**Product Development (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Environment (SOMPE) Software Development													
Special Operations Mission Planning Environment (SOMPE) Software Development	C/CPFF	Navy Systems Mgmt Activity Crane, IN	0.215	0.000		0.000		0.000		0.000	0	0.215	Continuing
Special Operations Mission Planning Environment (SOMPE) Software Development	C/CPFF	SPAWARS Charleston, SC	0.256	0.000		0.000		0.000		0.000	0	0.256	Continuing
<b>Subtotal</b>			7.111	2.508		2.228		0.000		2.228	0.000	3.552	

**Remarks**

**Support (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
SOMPE Development Support	Various	Special Operations Mission Planning Office Ft Eustis, VA	0.230	0.239	Dec 2009	0.244	Mar 2011	0.000		0.244	Continuing	Continuing	Continuing
<b>Subtotal</b>			0.230	0.239		0.244		0.000		0.244			

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 United States Special Operations Command** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160427BB: <i>Mission Training and Preparation Systems (MTPS)/S750</i>	<b>PROJECT</b> S750: <i>Mission Training and Preparation Systems (MTPS)</i>
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**Support (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			

**Remarks**

**Test and Evaluation (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
SOMPE DT&E / OT&E	C/CPFF	CAS Huntsville, AL	0.418	0.431	Dec 2009	0.443	Feb 2011	0.000		0.443	Continuing	Continuing	Continuing
<b>Subtotal</b>			0.418	0.431		0.443		0.000		0.443			

**Remarks**

Project Cost Totals	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
		Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
<b>Project Cost Totals</b>	7.759	3.178		2.915		0.000		2.915	0.000	3.552	

**Remarks**

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**Exhibit R-4, RDT&E Schedule Profile: PB 2011 United States Special Operations Command** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160427BB: <i>Mission Training and Preparation Systems (MTPS)/S750</i>	<b>PROJECT</b> S750: <i>Mission Training and Preparation Systems (MTPS)</i>
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Exhibit R-4, RDT&E Program Schedule Profile																Date: FEBRUARY 2010															
Appropriation/Budget Activity								Program Element Number and Name								Project Number and Name															
RDT&E/7								PE1160427BB/Mission Training and Preparation Systems (MTPS)								Project S750/MTPS															
Fiscal Year		2009				2010				2011				2012				2013				2014				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		
Distributed Mission Training & Rehearsal System (DMTRS) Development and Integration		▲					△																								
Special Operations Mission Planning Environment (SOMPE) - Software Development		▲																												△	
SOMPE Development Support		▲																												△	
SOMPE Test & Evaluation		▲																												△	
SOMPE Test & Evaluation; Command and Control Mission Manager Spiral 5		▲			▲																										

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**Exhibit R-4A, RDT&E Schedule Details:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160427BB: <i>Mission Training and Preparation Systems (MTPS)/S750</i>	<b>PROJECT</b> S750: <i>Mission Training and Preparation Systems (MTPS)</i>
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Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
Distributed Mission Training & Rehearsal System (DMTRS) Development and Integration	1	2009	2	2010
Special Operations Mission Planning Environment (SOMPE) - Software Development	1	2009	4	2015
SOMPE Development Support	1	2009	4	2015
SOMPE Test & Evaluation	1	2009	4	2015
SOMPE Test & Evaluation: Command and Control Mission Manager Spiral 5	1	2009	4	2009

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160428BB: <i>Unmanned Vehicles/S850</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	41.352	0.996	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
S850: <i>Unmanned Vehicles</i>	41.352	0.996	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 addresses spiral development efforts validated in requirements documents; supports development testing; and integrates system upgrades for increased aircraft endurance, reduced aircraft signature, increased telemetry range, and increased payload capacity for the Small Unmanned Aircraft System, Multi-Mission Unmanned Aircraft System, and Global Observer to meet Special Operations Forces mission requirements.

**B. Program Change Summary (\$ in Millions)**

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	41.409	0.000	0.000	0.000	0.000
Current President's Budget	41.352	0.996	0.000	0.000	0.000
Total Adjustments	-0.057	0.996	0.000	0.000	0.000
• Congressional General Reductions		0.000			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.996			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	-0.057	0.000			

**Congressional Add Details (\$ in Millions, and Includes General Reductions)**

**Project:** S850: *Unmanned Vehicles*

Congressional Add: *Global Observer*

Congressional Add: *Lethal Miniature Air Munitions System*

Congressional Add Subtotals for Project: S850

	FY 2009	FY 2010
	39.886	0.000
	0.000	0.996
	39.886	0.996

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160428BB: <i>Unmanned Vehicles/S850</i>
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<b>Congressional Add Details (\$ in Millions, and Includes General Reductions)</b>	<b>FY 2009</b>	<b>FY 2010</b>
Congressional Add Totals for all Projects	39.886	0.996

**Change Summary Explanation**

Funding:

FY09: Decrease of -\$0.057 million is due to a Small Business Innovative Research adjustment.

FY10: Increase is due to a congressional add, less economic assumptions.

FY11: None.

Schedule: None.

Technical: None.

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160428BB: <i>Unmanned Vehicles/S850</i>	<b>PROJECT</b> S850: <i>Unmanned Vehicles</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
S850: <i>Unmanned Vehicles</i>	41.352	0.996	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 addresses spiral development efforts validated in requirements documents; supports development testing; integrates system upgrades under an evolutionary acquisition strategy to obtain objective SOF mission requirements; develops upgrades which include improved flight endurance for the Rucksack Portable Unmanned Aircraft System (RPUAS); high altitude, long endurance unmanned aircraft system development with the Global Observance (GO) Joint Capability Technology Demonstration; and hand-held, lethal small unmanned aircraft system technologies with the Lethal Miniature Air Munitions System.

**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
RPUAS <i>FY 2009 Accomplishments:</i> Develop and test RPUAS aircraft flight endurance improvements.	1.466	0.000	0.000	0.000	0.000
Accomplishments/Planned Programs Subtotals	1.466	0.000	0.000	0.000	0.000

	FY 2009	FY 2010
Congressional Add: Global Observer <i>FY 2009 Accomplishments:</i> This initiative was a Congressional Add for Global Observer JCTD. Designs, develops, test, and evaluate high-altitude, long-endurance unmanned aircraft system technologies	39.886	0.000
	0.000	0.996

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160428BB: <i>Unmanned Vehicles/S850</i>	<b>PROJECT</b> S850: <i>Unmanned Vehicles</i>
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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010
Congressional Add: Lethal Miniature Air Munitions System  <i>FY 2010 Plans:</i> This initiative is a Congressional Add. Develops, tests, and evaluates hand-held, lethal small unmanned aircraft system technologies		
Congressional Adds Subtotals	39.886	0.996

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

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u> <u>Base</u>	<u>FY 2011</u> <u>OCO</u>	<u>FY 2011</u> <u>Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• PROC: <i>Unmanned Vehicle</i>	41.362	0.996								0	239.909

**D. Acquisition Strategy**

Preplanned product improvements to be implemented as evolutionary upgrades to RPUAS.

Hand-held, lethal small unmanned aircraft system technologies implemented into LMANS

**E. Performance Metrics**

N/A

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160429BB: <i>MC-130J SOF Tanker Recapitalization/S875</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	4.474	5.932	7.624	0.000	7.624	49.866	27.423	13.042	7.079	Continuing	Continuing
S875: <i>MC-130J SOF Tanker Recapitalization</i>	4.474	5.932	7.624	0.000	7.624	49.866	27.423	13.042	7.079	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

The Special Operations Forces (SOF) MC-130J SOF Tanker Recapitalization program element funds core SOF-unique modifications to recapitalize aging MC-130E Combat Talon I, MC-130P Combat Shadow, and AC-130H Spectre airframes. These platforms 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; airdrop of leaflets, small special operations teams, resupply bundles and combat rubber raiding craft; and close air support (CAS), air interdiction, armed reconnaissance, escort, and force protection – integrated base defense. Additional capabilities include low-light navigation and in-flight refueling as a receiver. 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.

Variable Speed Drogue: Develop, integrate, and test a variable speed air refueling drogue that will permit refueling over a wide range of speed supporting both helicopters and tilt-rotor aircraft without tanker aircraft reconfiguration.

SOF Unique Modification Development & Analysis: Conduct trade-off analysis, development, integration, and testing of aircraft enhancements to meet SOF-unique mission requirements. Enhancements include, but are not limited to, SOF communications, aircraft performance enhancements, situational awareness enhancements, survivability systems, and integration of the Precision Strike Package.

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b>	<b>R-1 ITEM NOMENCLATURE</b>
0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i>	PE 1160429BB: <i>MC-130J SOF Tanker Recapitalization/S875</i>
BA 7: <i>Operational Systems Development</i>	

**B. Program Change Summary (\$ in Millions)**

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	4.646	5.957	0.000	0.000	0.000
Current President's Budget	4.474	5.932	7.624	0.000	7.624
Total Adjustments	-0.172	-0.025	7.624	0.000	7.624
• Congressional General Reductions		-0.025			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	-0.172	0.000			
• Other Adjustment	0.000	0.000	7.624	0.000	7.624

**Change Summary Explanation**

Funding:

FY09: Decrease of -\$0.172 million is due to Small Business Innovative Research transfer.

FY10: Decrease of -\$0.025 million is due to Section 8097 congressional general reduction.

FY11: Increase of \$7.624 million for the integration of the Precision Strike Package on the AC-130H.

Schedule: None.

Technical: None.

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b>			<b>R-1 ITEM NOMENCLATURE</b>					<b>PROJECT</b>			
0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>			PE 1160429BB: <i>MC-130J SOF Tanker Recapitalization/S875</i>					S875: <i>MC-130J SOF Tanker Recapitalization</i>			
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
S875: <i>MC-130J SOF Tanker Recapitalization</i>	4.474	5.932	7.624	0.000	7.624	49.866	27.423	13.042	7.079	Continuing	Continuing
Quantity of RDT&E Articles											

**A. Mission Description and Budget Item Justification**

The Special Operations Forces (SOF) MC-130J SOF Tanker Recapitalization program element funds core SOF-unique modifications to recapitalize aging MC-130E Combat Talon I, MC-130P Combat Shadow, and AC-130H Spectre airframes. These platforms 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; airdrop of leaflets, small special operations teams, resupply bundles and combat rubber raiding craft; and close air support (CAS), air interdiction, armed reconnaissance, escort, and force protection – integrated base defense. Additional capabilities include low-light navigation and in-flight refueling as a receiver. 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.

Variable Speed Drogue: Complete development, integration, and test of a variable speed air refueling drogue to meet SOF Initial Operational Capability.

SOF-Unique Modification Development & Analysis: Trade-off analysis, development, integration, and testing of aircraft enhancements to meet SOF-unique mission requirements.

**B. Accomplishments/Planned Program (\$ in Millions)**

	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
Variable Speed Drogue <i>FY 2009 Accomplishments:</i> Completed development of the variable speed drogue and conducted flight test.	1.524	0.000	0.000	0.000	0.000
SOF-Unique Modification Dev & Analysis	2.950	5.932	7.624	0.000	7.624

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160429BB: <i>MC-130J SOF Tanker Recapitalization/S875</i>	<b>PROJECT</b> S875: <i>MC-130J SOF Tanker Recapitalization</i>
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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p><i>FY 2009 Accomplishments:</i> Continued development of SOF-unique mission improvements to include SOF communications, aircraft performance enhancement, situational awareness enhancements and defensive systems.</p> <p><i>FY 2010 Plans:</i> Continues development of SOF-unique mission improvements to include SOF communications, aircraft performance enhancement, situational awareness enhancements and defensive systems.</p> <p><i>FY 2011 Base Plans:</i> Continue development of SOF-unique mission improvements and initiate integration of Precision Strike Package.</p>					
<b>Accomplishments/Planned Programs Subtotals</b>	4.474	5.932	7.624	0.000	7.624

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

<b>Line Item</b>	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>	<b>FY 2012</b>	<b>FY 2013</b>	<b>FY 2014</b>	<b>FY 2015</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
• PROC1: <i>SOF C-130 Recap</i>	11.253	34.095	19.996		19.996	62.542	75.890	80.651	104.429	Continuing	Continuing
• PROC2: <i>PSP for SOF Airborne platform</i>						46.410	133.350	190.043	213.740	Continuing	Continuing
• RDTE: <i>SF100</i>	72.225	72.308	68.691		68.691	76.041	78.689	55.581	35.267	Continuing	Continuing

**D. Acquisition Strategy**

The MC-130J SOF Tanker Recapitalization aircraft will be acquired under the United States Air Force HC/MC-130J Recapitalization procurement program. USSOCOM will fund development, integration, test, and production/retrofit of SOF-unique mission equipment under this program and the USSOCOM Precision Strike Package for SOF Airborne Platform program.

**E. Performance Metrics**

N/A

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 United States Special Operations Command** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160429BB: <i>MC-130J SOF Tanker Recapitalization/S875</i>	<b>PROJECT</b> S875: <i>MC-130J SOF Tanker Recapitalization</i>
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**Product Development (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Variable Speed Drogue	C/CPIF	Various Various	7.409	0.000		0.000		0.000		0.000	0	7.409	Continuing
SOF Unique Mod Dev & Anal	TM	Lockheed Martin Aero Marietta, GA	6.232	5.932	Mar 2010	7.624	Mar 2011	0.000		7.624	Continuing	Continuing	Continuing
<b>Subtotal</b>			13.641	5.932		7.624		0.000		7.624	0.000	7.409	

**Remarks**

**Support (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Development Support	Allot	668 AESS Wright Patterson AFB, OH	0.613	0.000		0.000		0.000		0.000	0	0.613	Continuing
<b>Subtotal</b>			0.613	0.000		0.000		0.000		0.000	0.000	0.613	

**Remarks**

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**Exhibit R-4, RDT&E Schedule Profile: PB 2011 United States Special Operations Command** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160429BB: <i>MC-130J SOF Tanker Recapitalization/S875</i>	<b>PROJECT</b> S875: <i>MC-130J SOF Tanker Recapitalization</i>
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Exhibit R-4, RDT&E Program Schedule Profile												Date: FEBRUARY 2010																
Appropriation/Budget Activity				Program Element Number and Name												Project Number and Name												
RDT&E, Defense-Wide/7				PE1160429BB/MC-130J SOF Tanker Recapitalization												Project S875/MC-130J SOF Tanker Recapitalization												
Fiscal Year	2009				2010				2011				2012				2013				2014				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
Variable Speed Drogue																												
Development																												
Integration and Test																												
SOF-Unique Modification Development & Analysis																												
<div style="display: flex; justify-content: space-between; width: 100%;"> <span>Increment 3</span> <span>Increment 4</span> </div>																												
Development																												
Integration and Test																												
<div style="display: flex; justify-content: space-between; width: 100%;"> <span>Increment 3</span> <span>Increment 4</span> </div>																												

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**Exhibit R-4A, RDT&E Schedule Details:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160429BB: <i>MC-130J SOF Tanker Recapitalization/S875</i>	<b>PROJECT</b> S875: <i>MC-130J SOF Tanker Recapitalization</i>
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Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
Variable Speed Drogue: Development	1	2009	2	2010
Variable Speed Drogue: Integration and Test	1	2009	2	2010
SOF-Unique Mod Development & Analysis: Development	1	2009	1	2014
SOF-Unique Mod Development & Analysis: Integration and Test	1	2009	4	2015

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160474BB: <i>SOF Communications Equipment and Electronics Systems/S225</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	0.000	0.730	1.922	0.000	1.922	1.392	0.787	0.800	0.814	Continuing	Continuing
S700: <i>SOF Communications Equipment and Electronics Systems</i>	0.000	0.730	1.922	0.000	1.922	1.392	0.787	0.800	0.814	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

This program element provides for communication systems to meet emergent requirements to support Special Operations Forces (SOF). The SOF mission mandates that SOF systems remain technologically superior to any threat to provide a maximum degree of survivability. SOF units require communications equipment that improves their warfighting capability without degrading their mobility. Therefore, SOF Communications Advanced Development is a continuing effort to develop lightweight and efficient SOF Command, Control, Communications, and Computer (C4) capabilities.

**B. Program Change Summary (\$ in Millions)**

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	0.000	0.733	0.000	0.000	0.000
Current President's Budget	0.000	0.730	1.922	0.000	1.922
Total Adjustments	0.000	-0.003	1.922	0.000	1.922
• Congressional General Reductions		-0.003			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Adjustments	0.000	0.000	1.922	0.000	1.922

**Change Summary Explanation**

Funding:

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b>	<b>R-1 ITEM NOMENCLATURE</b>
0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	PE 1160474BB: <i>SOF Communications Equipment and Electronics Systems/S225</i>

FY09: None.

FY10: Decrease of -\$0.003 million is due to Section 8097 Congressional general reductions.

FY11: Increase of \$1.922 million is due to the DoD not estimating FY 2011 cost when the FY 2010 President's Budget was prepared.

Schedule: None.

Technical: None.

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160474BB: <i>SOF Communications Equipment and Electronics Systems/S225</i>	<b>PROJECT</b> S700: <i>SOF Communications Equipment and Electronics Systems</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
<i>S700: SOF Communications Equipment and Electronics Systems</i>	0.000	0.730	1.922	0.000	1.922	1.392	0.787	0.800	0.814	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). The SOF mission mandates that SOF systems remain technologically superior to any threat to provide a maximum degree of survivability. SOF units require communications equipment that improves their warfighting capability without degrading their mobility. Therefore, SOF Communications Advanced Development is a continuing effort to develop lightweight and efficient SOF Command, Control, Communications, and Computer (C4) capabilities.

United States Special Operations Command (USSOCOM) has developed an overall strategy to ensure that Command, Control, Communications, Computer 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 the 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 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. The sub-projects funded in this project meet annual emergent requirements and are grouped by the level of organizational element they support: Operational Element (Team), Above Operational Element (Deployed) and Above Operational Element (Garrison).

**OPERATIONAL ELEMENT (TEAM)**

- The SOF Deployable Node provides new technology for the next generation antenna capability for all systems: heavy, medium, and light. This program consists of a family of deployable super high frequency, multi-band, satellite communications assemblages capable of supporting high-capacity, voice, data, video teleconferencing and video at all levels of classification.

**B. Accomplishments/Planned Program (\$ in Millions)**

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160474BB: <i>SOF Communications Equipment and Electronics Systems/S225</i>	<b>PROJECT</b> S700: <i>SOF Communications Equipment and Electronics Systems</i>
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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
SOF Deployable Node  <i>FY 2010 Plans:</i> Develop and test next generation antennas for the family of SOF Deployable Nodes. Continue to develop, test and evaluate an interim mobile strategic entry point. Refine, test and evaluate tropospheric beyond line of sight capability. Test and evaluate new 1.2 meter Hawkeye III Lite antenna. Test and evaluate communications-on-the-move capability and the AN/PSC-14 Broadband Global Area Network SATCOM.  <i>FY 2011 Base Plans:</i> Develop, test, and evaluate next generation SOF Deployable Node4 Lite manpack and multi-purpose baseband, and the next generation SOF Deployable Medium terminal. Test and evaluate migration to Ka-band 1.6 meter antenna. Develop and test next generation enhanced line of sight capability. Test and evaluate new wideband SATCOM systems and encryption devices.	0.000	0.730	1.922	0.000	1.922
Accomplishments/Planned Programs Subtotals	0.000	0.730	1.922	0.000	1.922

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

Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• PROC: <i>Comm/Equip and Electronics</i>	83.162	56.910	58.390		58.390	79.935	99.202	79.884	74.911	Continuing	Continuing

**D. Acquisition Strategy**

- SOF Deployable Node is a fielded program being upgraded for next generation evolutionary technology insertions for all systems: heavy, medium, and light variants.

**E. Performance Metrics**

N/A

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 United States Special Operations Command** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160474BB: <i>SOF Communications Equipment and Electronics Systems/S225</i>	<b>PROJECT</b> S700: <i>SOF Communications Equipment and Electronics Systems</i>
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**Product Development (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
SOF Deployable Node Antenna	MIPR	AFRL AFRL	0.000	0.730	Apr 2010	1.922	Apr 2011	0.000		1.922	Continuing	Continuing	Continuing
<b>Subtotal</b>			0.000	0.730		1.922		0.000		1.922			

**Remarks**

Project Cost Totals	Total Prior Years Cost	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
	0.000	0.730	1.922	0.000	1.922			

**Remarks**

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**Exhibit R-4, RDT&E Schedule Profile: PB 2011 United States Special Operations Command** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160474BB: <i>SOF Communications Equipment and Electronics Systems/S225</i>	<b>PROJECT</b> S700: <i>SOF Communications Equipment and Electronics Systems</i>
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**Exhibit R-4, RDT&E Program Schedule Profile**

Date: FEBRUARY 2010

Appropriation/Budget Activity	Program Element Number and Name																Project Number and Name														
	RDT&E7																Project S700/SOF Communications Equipment and Electronics Systems														
Fiscal Year	2009				2010				2011				2012				2013				2014				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			
SOF Deployable Node Evolutionary Technology Insertions							▲	▲			▲	▲	▲			▲	▲	▲	▲			▲	▲	▲	▲			▲	▲	▲	▲

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**Exhibit R-4A, RDT&E Schedule Details:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160474BB: <i>SOF Communications Equipment and Electronics Systems/S225</i>	<b>PROJECT</b> S700: <i>SOF Communications Equipment and Electronics Systems</i>
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Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
SOF Deployable Node Evolutionary Technology Insertions	3	2010	4	2015

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160476BB: <i>SOF Tactical Radio Systems/S725</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	0.000	2.358	2.347	0.000	2.347	0.000	0.000	0.000	0.000	Continuing	Continuing
<i>S725: SOF Tactical Radio Systems</i>	0.000	2.358	2.347	0.000	2.347	0.000	0.000	0.000	0.000	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

The Special Operations Forces (SOF) Tactical Radio Systems program element is for development of all SOF tactical radio programs. The SOF mission mandates that SOF systems remain technologically superior to any threat to provide a maximum degree of survivability. SOF units require radio communication equipment that improves their warfighting capability without degrading their mobility.

United States Special Operations Command has developed an overall strategy to ensure that Tactical Radio Systems continue to provide SOF with the required capabilities throughout the 21st century. The Tactical Radios provide the critical Command, Control, and Communication link between SOF Commanders and SOF Teams involved in overseas contingency operations (OCO) 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 rapidly and seamlessly establish and maintain mobile and fixed Command and Control communications between infiltrated/operational elements and higher echelon headquarters, allowing SOF to operate with any force combination in multiple environments.

**B. Program Change Summary (\$ in Millions)**

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	0.000	2.368	0.000	0.000	0.000
Current President's Budget	0.000	2.358	2.347	0.000	2.347
Total Adjustments	0.000	-0.010	2.347	0.000	2.347
• Congressional General Reductions		-0.010			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Adjustments	0.000	0.000	2.347	0.000	2.347

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160476BB: <i>SOF Tactical Radio Systems/S725</i>
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**Change Summary Explanation**

Funding:

FY09: None.

FY10: Decrease of -\$0.010 million is due Section 8097 Congressional general reductions.

FY11: Increase of \$2.347 million is due to the DoD not estimating FY 2011 cost when the FY 2010 President's Budget was prepared.

Schedule: None

Technical: None

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160476BB: <i>SOF Tactical Radio Systems/ S725</i>	<b>PROJECT</b> S725: <i>SOF Tactical Radio Systems</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
S725: <i>SOF Tactical Radio Systems</i>	0.000	2.358	2.347	0.000	2.347	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles											

**A. Mission Description and Budget Item Justification**

The SOF Tactical Radio Systems project is for development of all SOF radio programs. The SOF mission mandates that SOF systems remain technologically superior to any threat to provide a maximum degree of survivability. SOF units require radio communication equipment that improves their warfighting capability without degrading their mobility. Sub-project:

- Special Mission Radio System (SMRS). Effort develops Low Probability of Intercept/Low Probability of Detection (LPI/LPD) waveforms for SOCOM tactical radio application.

**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
SMRS <i>FY 2010 Plans:</i> Develop and test LPI/LPD transceiver board upgrades and waveforms for SOCOM tactical radio application.  <i>FY 2011 Base Plans:</i> Continue developing and testing LPI/LPD transceiver board upgrades and waveforms for SOCOM tactical radio application.	0.000	2.358	2.347	0.000	2.347
Accomplishments/Planned Programs Subtotals	0.000	2.358	2.347	0.000	2.347

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 United States Special Operations Command		<b>DATE:</b> February 2010
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160476BB: <i>SOF Tactical Radio Systems/</i> S725	<b>PROJECT</b> S725: <i>SOF Tactical Radio Systems</i>

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

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u> <u>Base</u>	<u>FY 2011</u> <u>OCO</u>	<u>FY 2011</u> <u>Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• PROC1: <i>Tactical Radios</i>	30.973	62.306	35.234		35.234	71.915	74.814	70.779	62.808	Continuing	Continuing
• PROC2: <i>Comm/Equip &amp; Electronics</i>	83.162	56.910	58.390		58.390	79.935	99.202	79.884	74.911	Continuing	Continuing

**D. Acquisition Strategy**

- SMRS LPI/LPD transceiver board upgrades and waveform development continues under Technical Support Group management and oversight.

**E. Performance Metrics**

N/A

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 United States Special Operations Command** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160476BB: <i>SOF Tactical Radio Systems/</i> S725	<b>PROJECT</b> S725: <i>SOF Tactical Radio Systems</i>
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**Product Development (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Special Mission Radio System	MIPR	Technical Support Group (TSG) Norfolk, VA	0.000	2.358	Jan 2010	2.347	Jan 2011	0.000		2.347	0	4.705	Continuing
<b>Subtotal</b>			0.000	2.358		2.347		0.000		2.347	0.000	4.705	

**Remarks**

Project Cost Totals	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
		Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
<b>Project Cost Totals</b>	0.000	2.358		2.347		0.000		2.347	0.000	4.705	

**Remarks**

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<b>Exhibit R-4, RDT&amp;E Schedule Profile: PB 2011 United States Special Operations Command</b>		<b>DATE:</b> February 2010
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160476BB: <i>SOF Tactical Radio Systems/</i> S725	<b>PROJECT</b> S725: <i>SOF Tactical Radio Systems</i>

<b>Exhibit R-4, RDT&amp;E Program Schedule Profile</b>																Date: FEBRUARY 2010															
Appropriation/Budget Activity																Program Element Number and Name								Project Number and Name							
RDT&E7																PE1160476BB/SOF Tactical Radio Systems								Project S725/SOF Tactical Radio Systems							
Fiscal Year	2009				2010				2011				2012				2013				2014				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			
Special Mission Radio System																															
Waveform Development																															

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**Exhibit R-4A, RDT&E Schedule Details:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160476BB: <i>SOF Tactical Radio Systems/</i> S725	<b>PROJECT</b> S725: <i>SOF Tactical Radio Systems</i>
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Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
Special Mission Radio System Waveform Development	2	2010	4	2011

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160477BB: <i>SOF Weapon Systems/S375</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	3.857	1.077	0.479	0.000	0.479	0.249	0.249	0.253	0.255	Continuing	Continuing
S375: <i>SOF Weapon Systems</i>	3.857	1.077	0.479	0.000	0.479	0.249	0.249	0.253	0.255	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

SOF Weapon Systems

**B. Program Change Summary (\$ in Millions)**

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	3.952	1.081	0.000	0.000	0.000
Current President's Budget	3.857	1.077	0.479	0.000	0.479
Total Adjustments	-0.095	-0.004	0.479	0.000	0.479
• Congressional General Reductions		-0.004			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	-0.095	0.000			
• Other Adjustments	0.000	0.000	0.479	0.000	0.479

**Change Summary Explanation**

Funding:

FY09: Decrease of -\$0.095 million is due to Small business Innovation Research transfer.

FY10: Decrease of -\$0.004 million is due to Section 8097 congressional general reduction.

FY11: Increase of \$0.479 million is due to the DoD not estimating FY 2011 cost when the FY 2010 President's Budget was prepared.

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160477BB: <i>SOF Weapon Systems/S375</i>
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Schedule: None.

Technical: None.

**C. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
SOF Weapon Systems	3.857	1.077	0.479	0.000	0.479
<i>FY 2009 Accomplishments:</i> SOF Weapon Systems					
<i>FY 2010 Plans:</i> SOF Weapon Systems					
<i>FY 2011 Base Plans:</i> SOF Weapon Systems					
<b>Accomplishments/Planned Programs Subtotals</b>	3.857	1.077	0.479	0.000	0.479

**D. Other Program Funding Summary (\$ in Millions)**

N/A

**E. Acquisition Strategy**

N/A

**F. Performance Metrics**

N/A

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**Exhibit R-2, RDT&E Budget Item Justification: PB 2011 United States Special Operations Command** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160478BB: <i>SOF Soldier Protection and Survival Systems/S385</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	3.040	0.594	0.593	0.000	0.593	0.599	0.909	0.927	0.942	Continuing	Continuing
S385: <i>SOF Soldier Protection and Survival Systems</i>	3.040	0.594	0.593	0.000	0.593	0.599	0.909	0.927	0.942	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

N/A

**B. Program Change Summary (\$ in Millions)**

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	3.181	0.597	0.000	0.000	0.000
Current President's Budget	3.040	0.594	0.593	0.000	0.593
Total Adjustments	-0.141	-0.003	0.593	0.000	0.593
• Congressional General Reductions		-0.003			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	-0.141	0.000			
• Other Adjustments	0.000	0.000	0.593	0.000	0.593

**Change Summary Explanation**

Funding:

FY09: Decrease of -\$0.141 million is due to a Small Business Innovative Research transfer.

FY10: Decrease of -\$0.003 million is due to Section 8097 congressional reduction.

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160478BB: <i>SOF Soldier Protection and Survival Systems/S385</i>
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FY11: Increase of \$0.593 million is due to the DoD not estimating FY 2011 cost when the FY 2010 President's Budget was prepared.

Schedule: None.

Technical: None.

**C. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
SOF Soldier Protection and Survival Systems	3.040	0.594	0.593	0.000	0.593
<i>FY 2009 Accomplishments:</i>					
SOF Soldier Protection and Survival Systems.					
<i>FY 2010 Plans:</i>					
SOF Soldier Protection and Survival Systems					
<i>FY 2011 Base Plans:</i>					
SOF Soldier Protection and Survival SystemsSOF Soldier Protection and Survival Systems					
<b>Accomplishments/Planned Programs Subtotals</b>	3.040	0.594	0.593	0.000	0.593

**D. Other Program Funding Summary (\$ in Millions)**

N/A

**E. Acquisition Strategy**

N/A

**F. Performance Metrics**

N/A

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160479BB: <i>SOF Visual Augmentation, Lasers and Sensor Systems/S395</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	6.485	8.533	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
S395: <i>SOF Visual Augmentation, Lasers and Sensor Systems</i>	6.485	8.533	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

**Note**

MISSION

**A. Mission Description and Budget Item Justification**

N/A

**B. Program Change Summary (\$ in Millions)**

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	6.967	3.369	0.000	0.000	0.000
Current President's Budget	6.485	8.533	0.000	0.000	0.000
Total Adjustments	-0.482	5.164	0.000	0.000	0.000
• Congressional General Reductions		-0.036			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		5.200			
• Congressional Directed Transfers		0.000			
• Reprogrammings	-0.364	0.000			
• SBIR/STTR Transfer	-0.118	0.000			

**Change Summary Explanation**

Funding:

FY09: Net decrease of -\$0.482 million due to Small Business Innovative Research transfer (-\$0.118 million) and decreased for higher command priorities (-\$0.364 million).

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160479BB: <i>SOF Visual Augmentation, Lasers and Sensor Systems/S395</i>
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FY10: Net increase of \$5.164 million due to decrease of (-\$.036 million) due to Section 8097 congressional general reduction and an increase of \$5.200 million for three congressional adds:

- Thermal Pointer/Illuminator for Force Protection (\$1.600 million)
- ASIC Miniaturizations for Lasers and Sensors Development (\$2.400 million)
- Miniature Day Night Sight for Crew Served Weapons (\$1.200 million)

FY11: None.

Schedule: None.

Technical: None.

**C. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
SOF Visual Augmentation, Lasers and Sensor Systems	6.485	8.533	0.000	0.000	0.000
<i>FY 2009 Accomplishments:</i>					
SOF Visual Augmentation, Lasers and Sensor Systems					
<i>FY 2010 Plans:</i>					
SOF Visual Augmentation, Lasers and Sensor Systems					
Accomplishments/Planned Programs Subtotals	6.485	8.533	0.000	0.000	0.000

**D. Other Program Funding Summary (\$ in Millions)**

N/A

**E. Acquisition Strategy**

N/A

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160479BB: <i>SOF Visual Augmentation, Lasers and Sensor Systems/S395</i>
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**F. Performance Metrics**

N/A

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160480BB: <i>SOF Tactical Vehicles/S910</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	1.600	1.965	1.994	0.000	1.994	2.027	2.783	2.829	2.877	Continuing	Continuing
S910: <i>SOF Tactical Vehicles</i>	1.600	1.965	1.994	0.000	1.994	2.027	2.783	2.829	2.877	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

This program element provides for the development and testing of a variety of spiral upgrades to Special Operations Vehicles and ancillary equipment. The current family of Special Operations Forces (SOF) tactical vehicles include: individual mobility vehicles (lightweight all terrain vehicles), light mobility vehicles, medium mobility vehicles (ground mobility vehicle), non-standard commercial vehicles and heavy mobility vehicles (Mine Resistant Ambush Protected). 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)**

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	1.600	1.973	0.000	0.000	0.000
Current President's Budget	1.600	1.965	1.994	0.000	1.994
Total Adjustments	0.000	-0.008	1.994	0.000	1.994
• Congressional General Reductions		-0.008			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Adjustments	0.000	0.000	1.994	0.000	1.994

**Change Summary Explanation**

Funding:

FY09: None.

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

**APPROPRIATION/BUDGET ACTIVITY**  
0400: *Research, Development, Test & Evaluation, Defense-Wide*  
BA 7: *Operational Systems Development*

**R-1 ITEM NOMENCLATURE**  
PE 1160480BB: *SOF Tactical Vehicles/S910*

FY10: Decrease of -\$0.008 million is due to Section 8097 congressional general reduction.

FY11: Increase of \$1.994 million is due to the DoD not estimating FY 2011 cost when the FY 2010 President's Budget was prepared.

Schedule: None.

Technical: None.

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160480BB: <i>SOF Tactical Vehicles/S910</i>	<b>PROJECT</b> S910: <i>SOF Tactical Vehicles</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
S910: <i>SOF Tactical Vehicles</i>	1.600	1.965	1.994	0.000	1.994	2.027	2.783	2.829	2.877	Continuing	Continuing
Quantity of RDT&E Articles											

**A. Mission Description and Budget Item Justification**

This project funds the development, testing, and evaluation of Special Operations vehicles. 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 vehicle, light mobility vehicle, medium mobility vehicles, non-standard commercial vehicles and heavy mobility vehicles. Sub-projects funded in this project include:

- Light mobility vehicle/ internally transportable vehicles. This FY2009 Congressional add develops and improves a lightweight, highly mobile, wheeled vehicle platform capable of transport by the family of V-22 aircraft.
- Medium mobility vehicle. 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. Improvements include, but are not limited to, new engineering change proposals (ECPs), field safety issues, and theater endorsed needs. These various engineering modifications make it essential to keep up with the increased weight and minimize the impact that it has on the basic vehicle.

**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Light Mobility Vehicle/Internally Transportable Vehicles <i>FY 2009 Accomplishments:</i> Initiated development of a prototype light mobility vehicle and testing for safety and certification for family of V-22 aircraft	1.600	0.000	0.000	0.000	0.000
Medium Mobility Vehicles	0.000	1.965	1.994	0.000	1.994

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160480BB: <i>SOF Tactical Vehicles/S910</i>	<b>PROJECT</b> S910: <i>SOF Tactical Vehicles</i>
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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p><i>FY 2010 Plans:</i> Initiate development of ECPs that implement spiral upgrades and improve the design and manufacturing process for the medium mobility tactical vehicles currently in production.</p> <p><i>FY 2011 Base Plans:</i> development of ECPs that implement spiral upgrades and improve the design of the medium mobility vehicles.</p>					
<b>Accomplishments/Planned Programs Subtotals</b>	1.600	1.965	1.994	0.000	1.994

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

Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• Tactical Vehicles Procurement: <i>Tactical Vehicles Procurement</i>	163.591	26.226	63.379		63.379	28.837	43.858	44.742	59.034	Continuing	Continuing

**D. Acquisition Strategy**

- Vehicle improvements integrate emerging technology or commercial-off-the-shelf/non-developmental items to correct problems with the current suspension, electrical, and armor of the existing vehicles.

**E. Performance Metrics**

N/A

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 United States Special Operations Command** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160480BB: <i>SOF Tactical Vehicles/S910</i>	<b>PROJECT</b> S910: <i>SOF Tactical Vehicles</i>
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**Product Development (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Internally Transportable Vehicle /Light Mobility Vehicle Prototyping	Reqn	TBD TBD	1.270	0.000		0.000		0.000		0.000	0	1.270	Continuing
<b>Subtotal</b>			1.270	0.000		0.000		0.000		0.000	0.000	1.270	

**Remarks**

**Support (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Engineering Change Proposal Development	MIPR	Letterkenny Army Depot Chambersburg, PA	0.000	0.223	Jan 2010	0.000		0.000		0.000	Continuing	Continuing	Continuing
Engineering Change Proposal Development	MIPR	Tank Automotive Research Development Engineering Command Warren, MI	0.000	0.250	Jan 2010	0.494	Dec 2010	0.000		0.494	Continuing	Continuing	Continuing
Engineering Change Proposal Development	MIPR	Naval Air Systems Command	0.000	0.492	Jan 2010	0.000		0.000		0.000	Continuing	Continuing	Continuing

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis: PB 2011 United States Special Operations Command</b>										<b>DATE:</b> February 2010			
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 1160480BB: <i>SOF Tactical Vehicles/S910</i>				<b>PROJECT</b> S910: <i>SOF Tactical Vehicles</i>					

**Support (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
		Patuxent, MD											
Engineering Change Proposal Development	Reqn	TBD TBD	0.000	1.000	Jan 2010	1.500	Dec 2010	0.000		1.500	Continuing	Continuing	Continuing
<b>Subtotal</b>			0.000	1.965		1.994		0.000		1.994			

**Remarks**

**Test and Evaluation (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Internally Transportable Vehicle/Light Mobility Vehicle Family of V-22 Certification	MIPR	Naval Air System Command Patuxent, MD	0.230	0.000		0.000		0.000		0.000	0.000	0.230	Continuing
Internally Transportable Vehicle /Light Mobility Vehicle Testing and Safety	MIPR	Aberdeen Test Center Aberdeen MD	0.100	0.000		0.000		0.000		0.000	0.000	0.100	Continuing
<b>Subtotal</b>			0.330	0.000		0.000		0.000		0.000	0.000	0.330	

**Remarks**

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<b>Exhibit R-4, RDT&amp;E Schedule Profile: PB 2011 United States Special Operations Command</b>		<b>DATE:</b> February 2010
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160480BB: <i>SOF Tactical Vehicles/S910</i>	<b>PROJECT</b> S910: <i>SOF Tactical Vehicles</i>

<b>Exhibit R-4, RDT&amp;E Program Schedule Profile</b>		<b>Date: FEBRUARY 2010</b>																														
Appropriation/Budget Activity		Program Element and Name												Project Number and Name																		
RDT&E/7		PE1160480BB/SOF Tactical Vehicles												Project S910/SOF Tactical Vehicles																		
Fiscal Year	2009				2010				2011				2012				2013				2014				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				
Engineering Change Proposals Development					△	—	△	△	△	—	△	△	△	—	△	△	△	—	△	△	△	—	△	△	△	—	△	△	△	—	△	△
Internally Transportable Vehicle/Light Mobility Vehicle Prototyping					△	—	△																									
Internally Transportable Vehicle/Light Mobility Vehicle Family of V-22 Certification					△	—	△																									
Innternally Transportable Vehicle /Light Mobility Vehicle Testing and Safety					△	—	△																									

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2011 United States Special Operations Command		<b>DATE:</b> February 2010
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160480BB: <i>SOF Tactical Vehicles/S910</i>	<b>PROJECT</b> S910: <i>SOF Tactical Vehicles</i>

Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
Engineering Change Proposal Development	2	2010	4	2015
Internally Transportable Vehicle/Light Mobility Vehicle Prototyping	2	2010	3	2010
Internally Transportable Vehicle/Light Mobility Vehicle Family of V-22 Certification	1	2010	2	2010
Internally Transportable Vehicle /Light Mobility Vehicle Testing and Safety	1	2010	2	2010

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160482BB: <i>SOF Rotary Wing Aviation/D615</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	3.202	18.784	14.473	0.000	14.473	2.891	0.000	11.025	1.972	Continuing	Continuing
D615: <i>SOF Rotary Wing Aviation</i>	3.202	18.784	14.473	0.000	14.473	2.891	0.000	11.025	1.972	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

This program element develops/upgrades SOF rotary wing aircraft systems that operate in increasingly hostile environments. Rotary wing aircraft supported by this project include: MH-60L/K/M, MH-47D/E/G, and A/MH-6M. These aircraft provide aviation support to Special Operations Forces (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)**

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	3.162	18.863	0.000	0.000	0.000
Current President's Budget	3.202	18.784	14.473	0.000	14.473
Total Adjustments	0.040	-0.079	14.473	0.000	14.473
• Congressional General Reductions		-0.079			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.040	0.000			
• Other Adjustments	0.000	0.000	14.473	0.000	14.473

**Congressional Add Details (\$ in Millions, and Includes General Reductions)**

**Project:** D615: *SOF Rotary Wing Aviation*

Congressional Add: *Cable Warning Obstacle Avoidance System*

FY 2009	FY 2010
0.799	0.000

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160482BB: <i>SOF Rotary Wing Aviation/D615</i>
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**Congressional Add Details (\$ in Millions, and Includes General Reductions)**

Congressional Add: *Hostile Fire Indicating System*

Congressional Add Subtotals for Project: D615

Congressional Add Totals for all Projects

FY 2009	FY 2010
0.799	0.000
1.598	0.000
1.598	0.000

**Change Summary Explanation**

Funding:

FY09: Increase of \$0.040 million is due to restoration of congressional add funds transferred to Small Business Innovative Research account.

FY10: Decrease is due to Section 8097 congressional general reduction (-\$0.079 million).

FY11: Increase of \$14.473 million is due to the DoD not estimating FY 2011 cost when the FY 2010 President's Budget was prepared.

Schedule: None.

Technical: None.

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160482BB: <i>SOF Rotary Wing Aviation/D615</i>	<b>PROJECT</b> D615: <i>SOF Rotary Wing Aviation</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
D615: <i>SOF Rotary Wing Aviation</i>	3.202	18.784	14.473	0.000	14.473	2.891	0.000	11.025	1.972	Continuing	Continuing
Quantity of RDT&E Articles											

**A. Mission Description and Budget Item Justification**

This project develops/upgrades SOF rotary wing aircraft systems that operate in increasingly hostile environments. Rotary wing aircraft supported by this project include: MH-60L/K/M, MH-47E/G, and A/MH-6M. These aircraft provide aviation support to SOF in worldwide 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. Efforts include:

- MH-47/MH-60/A/MH-6M Aircraft. (1) Develops the Reduced Optical Signature Emission Solution (ROSES), which reduces the optical signature output of the current infrared expendable decoys for purposes of reducing Army Special Operations Aviation aircraft vulnerabilities. This flare solution will have the capability to decoy currently fielded infrared missiles and more sophisticated emerging threats, and is an interim solution pending flare technology advancements. (2) Develops an improved integrated seat system for A/MH-6M aircraft that will provide ballistic protection, crash attenuation, and restraint system upgrades.
- MH-47/MH-60 Survivability Equipment/Sensors. (1) Develops the Aircraft Occupant Ballistic Protection System to reduce weight to permit additional critical payloads on mission aircraft, while maintaining or improving armor effectiveness; (2) Develops and qualifies the Forward Looking Infrared Radar (FLIR) Pre-Planned Product Improvements (P3I), which will provide increased detection ranges, a sensor suite capable of target recognition, short wave infrared marker identification, and illuminator detection regardless of ambient and cultural lighting conditions.
- Congressional Add to develop a Cable Warning Obstacle Avoidance system. This system will allow aircraft to perform evasive actions, significantly increasing the aircrew's probability of survival during a hostile fire engagement.
- Congressional Add to develop a Hostile Fire Indicating System that detects, classifies, and alerts the aircrew to the presence of small caliber weapons fire for SOF rotary wing platforms.

**B. Accomplishments/Planned Program (\$ in Millions)**

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160482BB: <i>SOF Rotary Wing Aviation/ D615</i>	<b>PROJECT</b> D615: <i>SOF Rotary Wing Aviation</i>
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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
MH-47/MH-60/A/MH-6M Aircraft <i>FY 2010 Plans:</i> Begin development of ROSES and the improved integrated crashworthy seat system for the A/MH-6M.  <i>FY 2011 Base Plans:</i> Continue development of both ROSES and the integrated crashworthy seat system for the A/MH-6M	0.000	7.336	6.787	0.000	6.787
MH-47/MH-60 – Survivability Equipment /Sensors <i>FY 2009 Accomplishments:</i> Continued development of the Aircraft Occupant Ballistic Protection System  <i>FY 2010 Plans:</i> Begin development of the FLIR P3I program and begin development of Hostile Fire Indicating System  <i>FY 2011 Base Plans:</i> Continue development of both the FLIR P3I and the Hostile Fire Indicating System programs.	1.604	11.448	7.686	0.000	7.686
<b>Accomplishments/Planned Programs Subtotals</b>	1.604	18.784	14.473	0.000	14.473

	FY 2009	FY 2010
Congressional Add: Cable Warning Obstacle Avoidance System <i>FY 2009 Accomplishments:</i> Began the development of a Cable Warning Obstacle Avoidance System.	0.799	0.000
Congressional Add: Hostile Fire Indicating System	0.799	0.000

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160482BB: <i>SOF Rotary Wing Aviation/D615</i>	<b>PROJECT</b> D615: <i>SOF Rotary Wing Aviation</i>
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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010
<i>FY 2009 Accomplishments:</i> Began the development of a Hostile Fire Indicating System		
Congressional Adds Subtotals	1.598	0.000

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

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u> <u>Base</u>	<u>FY 2011</u> <u>OCO</u>	<u>FY 2011</u> <u>Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• PROC: <i>Rotary Wing Upgs &amp; Sust</i>	93.391	90.936	79.840		79.840	82.562	104.805	104.796	107.595	Continuing	Continuing

**D. Acquisition Strategy**

- A/MH-6M - This effort develops and qualifies the necessary protection from crash loads and airframe vibrations by upgrading the current A/MH-6M seat and restraint system to meet current MIL-STD 1290 requirements. A competitive source selection process will be conducted for the crashworthy seat system replacement to the extent possible. Proprietary considerations may direct some efforts to the original equipment manufacturer.
  
- MH-47/MH-60 Aircraft - This effort develops and qualifies a flare solution that discharges fewer expendables per dispense and emits less visible light to improve aircrew's ability to survive in sophisticated threat environments. A competitive source selection process will be conducted for the Reduced Optical Signature Emissions Solution to the extent possible. Proprietary considerations may direct some efforts to the original equipment manufacturer.
  
- MH-47/MH-60 Survivability Equipment/Sensors - Develops next-generation improvements, enhancements, and upgrades to survivability equipment and sensors. Active and passive survivability acquisition will be conducted using competitive processes to the maximum extent practicable. Proprietary considerations may direct some efforts to the original equipment manufacturer.

**E. Performance Metrics**

N/A

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 United States Special Operations Command** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160482BB: <i>SOF Rotary Wing Aviation/ D615</i>	<b>PROJECT</b> D615: <i>SOF Rotary Wing Aviation</i>
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**Product Development (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
MH-6/47/60 Survivability Equipment Reduced Optical Signature Emissions Solution	Various	PM TAPO Ft Eustis VA	0.000	3.772	Jan 2010	3.954	Jan 2011	0.000		3.954	Continuing	Continuing	Continuing
Aircraft Occupant Ballistic Protection System	Various	PM TAPO Ft Eustis, VA	2.558	0.000		0.000		0.000		0.000	Continuing	Continuing	Continuing
Forward Looking Infrared Radar	Various	PM TAPO Ft Eustis, VA	26.499	8.975	Jan 2010	3.732	Jan 2011	0.000		3.732	0	39.206	Continuing
Hostile Fire Indicating System	Various	PM TAPO Ft Eustis, VA	0.799	2.473	Jan 2010	3.935	Jan 2011	0.000		3.935	0	7.207	Continuing
Cable Warning Obstacle Avoidance System	TBD/TBD	TBD TBD	0.799	0.000		0.000		0.000		0.000	0	0.799	Continuing
A/MH-6M Improved Seat System	Various/ Various	PM MELB Ft. Eustis, VA	0.000	3.564	Jan 2010	2.852	Jan 2011	0.000		2.852	0	6.416	Continuing
<b>Subtotal</b>			30.655	18.784		14.473		0.000		14.473	0.000	53.628	

**Remarks**

	Total Prior Years Cost	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
<b>Project Cost Totals</b>	30.655	18.784	14.473	0.000	14.473	0.000	53.628	

**Remarks**

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**Exhibit R-4, RDT&E Schedule Profile: PB 2011 United States Special Operations Command** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: Research, Development, Test & Evaluation, Defense-Wide BA 7: Operational Systems Development	<b>R-1 ITEM NOMENCLATURE</b> PE 1160482BB: SOF Rotary Wing Aviation/ D615	<b>PROJECT</b> D615: SOF Rotary Wing Aviation
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Exhibit R-4, RDT&E Program Schedule Profile													Date: FEBRUARY 2010																			
Appropriation/Budget Activity	Program Element and Name																Project Number and Name															
RDT&E/7	PE1160482BB/Special Operations Forces (SOF) Rotary Wing Aviation																Project D615/SOF Aviation															
Fiscal Year	2009				2010				2011				2012				2013				2014				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				
Reduced Optical Signature Emissions Solution Development/Qualification/Test								▲	▲	▲	▲	▲	▲	▲	▲	▲																
Aircraft Occupant Ballistic Protection System Development/Qualification/Test	▲	▲	▲	▲																					▲	▲	▲	▲				
Next Generation Forward Looking Infrared Development/Qualification Testing								▲	▲	▲	▲	▲	▲	▲	▲	▲																
A/MH-6 Improved Seat System Development								▲	▲	▲	▲	▲	▲	▲	▲	▲																
Hostile Fire Indicating System Development (Cong Add)				▲				▲	▲	▲	▲	▲	▲	▲	▲	▲																
Helicopter Cable Warning Obstacle Avoidance System (Cong Add)		▲	▲	▲																												

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**Exhibit R-4A, RDT&E Schedule Details:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160482BB: <i>SOF Rotary Wing Aviation/D615</i>	<b>PROJECT</b> D615: <i>SOF Rotary Wing Aviation</i>
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Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
Reduced Optical Signature Emissions Solution Development/Qualification/Test	2	2010	4	2012
Aircraft Occupant Ballistic Protection System Development/Qualification/Test	1	2009	4	2015
Next Generation Forward Looking Infrared Development/Qualification Testing	2	2010	4	2011
A/MH-6 Improved Seat System Development	2	2010	4	2011
Hostile Fire Indicating System Development (Cong Add)	4	2009	4	2011
Helicopter Cable Warning Obstacle Avoidance System (Cong Add)	2	2009	4	2009

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160483BB: <i>SOF Underwater Systems/S0417</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	8.572	18.774	13.986	0.000	13.986	8.461	2.482	1.977	1.774	Continuing	Continuing
S0417: <i>SOF Underwater Systems</i>	8.572	18.774	13.986	0.000	13.986	8.461	2.482	1.977	1.774	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

This program element provides for engineering & manufacturing development and operational systems development of small combat underwater submersibles and underwater support systems and equipment. This program element also provides for pre-acquisition activities (materiel solutions analysis, advanced component development and prototypes) to respond to emergent requirements. These submersibles, systems, and equipment are used by Special Operations Forces (SOF) in the conduct of infiltration/extraction, hydrographic/inland reconnaissance, beach obstacle clearance, underwater ship attack, and other missions. The capabilities of the submersible 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.

**B. Program Change Summary (\$ in Millions)**

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	8.727	3.452	0.000	0.000	0.000
Current President's Budget	8.572	18.774	13.986	0.000	13.986
Total Adjustments	-0.155	15.322	13.986	0.000	13.986
• Congressional General Reductions		-0.014			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		15.336			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	-0.155	0.000			
• Other Adjustments	0.000	0.000	13.986	0.000	13.986

**Congressional Add Details (\$ in Millions, and Includes General Reductions)**

**Project:** S0417: *SOF Underwater Systems*

Congressional Add: *Combat Submersibles Sub-Project: Integrated Combat System*

	<b>FY 2009</b>	<b>FY 2010</b>
	3.118	0.000

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160483BB: <i>SOF Underwater Systems/S0417</i>
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**Congressional Add Details (\$ in Millions, and Includes General Reductions)**

	FY 2009	FY 2010
Congressional Add: <i>Combat Submersibles Sub-Project: Technology for Shallow Water Mobility</i>	2.395	2.880
Congressional Add: <i>Combat Submersibles Sub-Project: Alternative SOF Submersible Concept Design Study</i>	0.000	1.000
Congressional Add: <i>Combat Submersibles Sub-Project: Transformer Technology for Combat Submersibles</i>	0.000	3.600
Congressional Add: <i>Underwater Support Systems and Equipment Sub-Project: Future Dry Deck Shelter</i>	0.000	4.336
Congressional Add: <i>Underwater Support Systems and Equipment Sub-Project: Undersea Special Warfare Engineering Support Office</i>	0.000	2.000
Congressional Add: <i>Underwater Support Systems and Equipment Sub-Project: Non-Gasoline Burning Outboard Engine</i>	0.000	1.520
Congressional Add Subtotals for Project: S0417		
Congressional Add Totals for all Projects		
	5.513	15.336
	5.513	15.336

**Change Summary Explanation**

Funding:

FY09: Decrease of -\$0.155 million is due to transfer to Small Business Innovative Research.

FY10: Net increase of \$15.322 million due to decrease of (-\$.014 million) due to Section 8097 general congressional reduction and an increase of \$15.336 for six congressional adds:

- Technology for Shallow Water Mobility (\$2.880 million)
- Alternative SOF Submersible Concept Design Study (\$1.000 million)
- Transformer Technology for Combat Submersibles (\$3.600 million)
- Future Dry Deck Shelter (\$4.336 million)
- Undersea Special Warfare Engineering Support Office (\$2.000 million)
- Non-Gasoline Burning Outboard Engine (\$1.520 million)

FY11: Increase of \$13.986 million is due to the DoD not estimating FY 2011 cost when the FY 2010 President's Budget was prepared.

Schedule: None.

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

**APPROPRIATION/BUDGET ACTIVITY**  
0400: *Research, Development, Test & Evaluation, Defense-Wide*  
BA 7: *Operational Systems Development*

**R-1 ITEM NOMENCLATURE**  
PE 1160483BB: *SOF Underwater Systems/S0417*

Technical: None.

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160483BB: <i>SOF Underwater Systems/S0417</i>	<b>PROJECT</b> S0417: <i>SOF Underwater Systems</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
S0417: <i>SOF Underwater Systems</i>	8.572	18.774	13.986	0.000	13.986	8.461	2.482	1.977	1.774	Continuing	Continuing
Quantity of RDT&E Articles											

**A. Mission Description and Budget Item Justification**

This project provides for engineering & manufacturing development and operational systems development of small combat underwater submersibles and underwater support systems and equipment. Also provides for pre-acquisition activities (materiel solutions analysis, advanced component development and prototypes) to respond to emergent requirements. These submersibles, systems, and equipment are used by Special Operations Forces (SOF) in the conduct of infiltration/extraction, hydrographic/inland reconnaissance, beach obstacle clearance, underwater ship attack, and other missions. The capabilities of the submersible 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:

- **Combat Submersibles:** Includes conducting product improvement efforts for the in-service SEAL Delivery Vehicle MK 8 and conducting technology development and engineering & manufacturing development for the follow-on combat submersibles such as the various types of shallow water combat submersibles. The shallow water combat submersibles uses an evolutionary acquisition approach to develop a family of submersibles, to include a new wet submersible capable of operating from existing Dry Deck Shelters, and more capable wet or dry submersibles that will operate from future large submarine shelters/systems and/or surface ships. The combat submersible sub-project leverages existing seal delivery vehicle components, develops new state-of-the-art components where appropriate, and leases or purchases commercial-off-the-shelf components and vehicles for test and evaluation and operational assessment.
- **Underwater Support Systems and Equipment:** Includes conducting product improvement efforts for in-service submarine support systems such as the Dry Deck Shelters, unmanned underwater vehicles such as the Semi-autonomous Hydrographic Reconnaissance vehicle, and diver equipment such as the Hydrographic Mapping Unit, Non-gasoline Burning Outboard Engines and Diver Propulsion Devices. Also provides for technology development and engineering & manufacturing development for follow-on underwater support systems and equipment.

**B. Accomplishments/Planned Program (\$ in Millions)**

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 United States Special Operations Command				<b>DATE:</b> February 2010				
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>		<b>R-1 ITEM NOMENCLATURE</b> PE 1160483BB: <i>SOF Underwater Systems/S0417</i>		<b>PROJECT</b> S0417: <i>SOF Underwater Systems</i>				
<b>B. Accomplishments/Planned Program (\$ in Millions)</b>								
				<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
Combat Submersibles Sub-Project: SEAL Delivery Vehicle <i>FY 2009 Accomplishments:</i> Continued concept and technology development for follow-on platform.				3.059	0.000	0.000	0.000	0.000
Combat Submersibles Sub-Project: Shallow Water Combat Submersible <i>FY 2010 Plans:</i> Continue concept and technology development for a new Shallow Water Combat Submersible and conduct source selection activities.  <i>FY 2011 Base Plans:</i> Continues design and development for a new Shallow Water Combat Submersible capability.				0.000	3.438	13.986	0.000	13.986
Accomplishments/Planned Programs Subtotals				3.059	3.438	13.986	0.000	13.986
				<b>FY 2009</b>	<b>FY 2010</b>			
Congressional Add: Combat Submersibles Sub-Project: Integrated Combat System <i>FY 2009 Accomplishments:</i> Integrated electronics suite backbone for combat submersibles.				3.118	0.000			
Congressional Add: Combat Submersibles Sub-Project: Technology for Shallow Water Mobility <i>FY 2009 Accomplishments:</i> Developed advanced hull technologies for combat submersibles.				2.395	2.880			

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160483BB: <i>SOF Underwater Systems/S0417</i>	<b>PROJECT</b> S0417: <i>SOF Underwater Systems</i>
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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010
<i>FY 2010 Plans:</i> Continue to develop advanced hull technologies for combat submersibles.		
Congressional Add: Combat Submersibles Sub-Project: Alternative SOF Submersible Concept Design Study <i>FY 2010 Plans:</i> Study alternative concepts for combat submersibles and surface ship support systems.	0.000	1.000
Congressional Add: Combat Submersibles Sub-Project: Transformer Technology for Combat Submersibles <i>FY 2010 Plans:</i> Develop advanced hull technologies for combat submersibles.	0.000	3.600
Congressional Add: Underwater Support Systems and Equipment Sub-Project: Future Dry Deck Shelter <i>FY 2010 Plans:</i> Perform studies and analysis of potential designs for next generation dry deck shelter capability.	0.000	4.336
Congressional Add: Underwater Support Systems and Equipment Sub-Project: Undersea Special Warfare Engineering Support Office <i>FY 2010 Plans:</i> Provide engineering support for combat submersibles, support systems and equipment.	0.000	2.000
Congressional Add: Underwater Support Systems and Equipment Sub-Project: Non-Gasoline Burning Outboard Engine	0.000	1.520

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160483BB: <i>SOF Underwater Systems/S0417</i>	<b>PROJECT</b> S0417: <i>SOF Underwater Systems</i>
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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010
<i>FY 2010 Plans:</i> Develop and test incremental capabilities of the Non-Gasoline Burning Outboard Engines.		
Congressional Adds Subtotals	5.513	15.336

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

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u> <u>Base</u>	<u>FY 2011</u> <u>OCO</u>	<u>FY 2011</u> <u>Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• PROC1: <i>SOF Maritime Equip</i>	13.410	2.768	0.804		0.804	1.060	1.057	1.075	1.093	Continuing	Continuing
• PROC2: <i>MK8 MOD1 Seal Delivery Vehicle</i>	7.040	1.458	0.823		0.823					Continuing	Continuing
• PROC3: <i>Combat Submersibles</i>						1.492	27.094	25.228	25.568	Continuing	Continuing

**D. Acquisition Strategy**

- **Combat Submersibles:** The acquisition program for Block I will use full and open competition and competitive prototyping to award contracts to develop and produce test articles with options to produce production systems and provide contractor logistics support. The acquisition strategy for other combat submersible systems is under development. Additionally, existing contracts are utilized where appropriate for various component development and prototypes.
- **Underwater Support Systems & Equipment:** Existing contracts are utilized where appropriate, and various new contracts are awarded as necessary.

**E. Performance Metrics**

N/A

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 United States Special Operations Command** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160483BB: <i>SOF Underwater Systems/S0417</i>	<b>PROJECT</b> S0417: <i>SOF Underwater Systems</i>
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**Product Development (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
SEAL Delivery Vehicle MK 8	WR	NSWC Panama City, FL	3.059	0.000		0.000		0.000		0.000	0	3.059	Continuing
Shallow Water Combat Submersible	Various/Various	TBD TBD	0.000	2.342	Aug 2010	9.867	Jun 2011	0.000		9.867	Continuing	Continuing	Continuing
Submersibles Eng & Analysis	TBD/TBD	TBD TBD	0.000	0.000		2.000	Nov 2010	0.000		2.000	Continuing	Continuing	Continuing
<b>Subtotal</b>			3.059	2.342		11.867		0.000		11.867	0.000	3.059	

**Remarks**

**Support (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Technology for Shallow Water Mobility	TBD/TBD	TBD TBD	2.395	2.880	Nov 2010	0.000		0.000		0.000	0	5.275	Continuing
Integrated Combat System	TBD/FFP	TBD TBD	3.118	0.000		0.000		0.000		0.000	0	3.118	Continuing
Cong Adds: Various	TBD/TBD	TBD TBD	0.000	12.456		0.000		0.000		0.000	0	12.456	Continuing
<b>Subtotal</b>			5.513	15.336		0.000		0.000		0.000	0.000	20.849	

**Remarks**

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 United States Special Operations Command** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160483BB: <i>SOF Underwater Systems/S0417</i>	<b>PROJECT</b> S0417: <i>SOF Underwater Systems</i>
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**Test and Evaluation (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Shallow Water Combat Submersible	SS/TBD	Various Comunbia, MD; Panama City, FL; Washington, DC	0.000	0.491	Mar 2010	1.502	Jan 2011	0.000		1.502	Continuing	Continuing	Continuing
<b>Subtotal</b>			0.000	0.491		1.502		0.000		1.502			

**Remarks**

**Management Services (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Shallow Water Combat Submersible	Various/ Various	Various Washington, DC; Panama City, FL	0.000	0.605	Mar 2010	0.617	Jan 2011	0.000		0.617	Continuing	Continuing	Continuing
<b>Subtotal</b>			0.000	0.605		0.617		0.000		0.617			

**Remarks**

	Total Prior Years Cost	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
<b>Project Cost Totals</b>		8.572	18.774	13.986	0.000	13.986	0.000	23.908

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**Exhibit R-4A, RDT&E Schedule Details:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160483BB: <i>SOF Underwater Systems/S0417</i>	<b>PROJECT</b> S0417: <i>SOF Underwater Systems</i>
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Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
SEAL Delivery Vehicle: Develop and Test Improved Electronics	1	2009	4	2009
Shallow Water Combat Submersible Milestone A (FY08): Technology Development	1	2009	2	2010
Shallow Water Combat Submersible Milestone B: Engineering & Manufacturing Development (Block I)	4	2010	4	2013
Shallow Water Combat Submersible Milestone B: Developmental Test	2	2012	4	2013
Shallow Water Combat Submersible Milestone B: Tech Eval	2	2013	4	2013
Shallow Water Combat Submersible Milestone B: Operational Test	4	2013	2	2014
Shallow Water Combat Submersible Milestone B: First Article Test	3	2015	3	2015
Congressional Add: Technology for Shallow Water Mobility	4	2010	2	2012
Congressional Add: Integrated Combat Systems	4	2009	4	2010
Congressional Add: Alternative SOF Submersible Concept Design Study	3	2010	3	2011
Congressional Add: Transformer Technology for Combat Submersibles	4	2010	4	2011
Congressional Add: Future Dry Deck Shelter	4	2010	4	2011
Congressional Add: Undersea Special Warfare Eng Spt Office	4	2010	4	2011
Congressional Add: Non-Gasoline Burning Engine	4	2010	3	2011

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160484BB: <i>SOF Surface Craft/S1684</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	6.232	9.959	2.933	0.000	2.933	1.949	0.972	0.000	0.000	Continuing	Continuing
S1684: <i>SOF Surface Craft</i>	6.232	9.959	2.933	0.000	2.933	1.949	0.972	0.000	0.000	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

This program element provides for engineering & manufacturing development (formerly system development & demonstration) and operational systems development of small to medium surface craft and selected items of specialized equipment to meet the unique requirements of Special Operations Forces (SOF). This program element also provides for pre-acquisition activities (materiel solutions analysis, advanced component development & prototypes) to quickly respond to possible new requirements for surface craft and equipment, such as the notional light and heavy combatant crafts that are currently being studied in the Joint Capabilities Integration and Development System process. The craft capabilities and unique equipment provide small, highly trained forces the ability to successfully engage the enemy and conduct clandestine operations associated with SOF maritime missions.

**B. Program Change Summary (\$ in Millions)**

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	6.392	12.250	0.000	0.000	0.000
Current President's Budget	6.232	9.959	2.933	0.000	2.933
Total Adjustments	-0.160	-2.291	2.933	0.000	2.933
• Congressional General Reductions		-2.291			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	-0.160	0.000			
• Other Adjustments	0.000	0.000	2.933	0.000	2.933

**Congressional Add Details (\$ in Millions, and Includes General Reductions)**

**Project:** S1684: *SOF Surface Craft*

Congressional Add: *Special Operations Craft Riverine Integrated Bridge System (IBS)*

FY 2009	FY 2010
1.167	0.000

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160484BB: <i>SOF Surface Craft/S1684</i>
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**Congressional Add Details (\$ in Millions, and Includes General Reductions)**

	<b>FY 2009</b>	<b>FY 2010</b>
Congressional Add Subtotals for Project: S1684	1.167	0.000
Congressional Add Totals for all Projects	1.167	0.000

**Change Summary Explanation**

Funding:

FY09: Decrease of -\$0.160 million is due to a Small Business Innovative Research transfer.

FY10: Decrease of -\$2.250 million due to new start delay.

FY11: Increase of \$2.933 million is due to the DoD not estimating FY 2011 cost when the FY 2010 President's Budget was prepared.

Schedule: None.

Technical: None.

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160484BB: <i>SOF Surface Craft/S1684</i>	<b>PROJECT</b> S1684: <i>SOF Surface Craft</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
<i>S1684: SOF Surface Craft</i>	6.232	9.959	2.933	0.000	2.933	1.949	0.972	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles											

**A. Mission Description and Budget Item Justification**

This project provides for engineering & manufacturing development and operational systems development of small to medium surface craft and selected items of specialized equipment to meet the unique requirements of Special Operations Forces (SOF). This project element also provides for pre-acquisition activities (materiel solutions analysis, advanced component development & prototypes) to quickly respond to possible new requirements for surface craft and equipment, such as the notional light and heavy combatant crafts that are currently being studied in the Joint Capabilities Integration Development System process. The craft capabilities 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 Medium Combatant Craft sub-project provides a family of next generation craft to replace the current rigid inflatable boat. This sub-project is a continuation of the Rigid Inflatable Boat replacement craft originally started in FY2008 under the RIB sub-project. One version of these craft will be reconfigurable, multi-mission surface tactical mobility craft with a primary mission of insertion and extraction of SOF in a medium threat environment. It will incorporate additional performance capabilities such as shock mitigation, low observability, improved maneuverability and SOF war fighting capabilities required to operate in future threat environments. Other versions of craft will be developed to support foreign security assistance missions and operations in low or permissive threat environments.
- The Rigid Inflatable Boat program provides engineering support for design and specification development of a multi-mission craft with improved sea keeping and maneuverability, reduced detectability with enhanced shock mitigation, and human systems integration. Requirements include being air transportable, air droppable, and increased reliability and maintainability.
- The Forward Looking Infrared sub-project provides for engineering and development of performance improvements to the current system on all SOF combatant craft.
- The Special Operations Craft Riverine sub-project provides for development of performance improvements to the current Riverine craft and pre-acquisition activities for follow-on Riverine craft.

**B. Accomplishments/Planned Program (\$ in Millions)**

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160484BB: <i>SOF Surface Craft/S1684</i>	<b>PROJECT</b> S1684: <i>SOF Surface Craft</i>
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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Medium Combatant Craft <i>FY 2010 Plans:</i> Conducts risk reduction activities, completes source selection and develops components and advanced prototypes.  <i>FY 2011 Base Plans:</i> Build and test components and advanced prototypes	0.000	9.959	2.933	0.000	2.933
Rigid Inflatable Boat <i>FY 2009 Accomplishments:</i> Completed risk reduction activities and requested proposal for design, prototypes, production and sustainment for a replacement combatant craft, initiated source selection activities for next generation crafts.	3.892	0.000	0.000	0.000	0.000
Forward Looking Infrared <i>FY 2009 Accomplishments:</i> Completed developmental testing and conducted operational testing.	1.173	0.000	0.000	0.000	0.000
<b>Accomplishments/Planned Programs Subtotals</b>	5.065	9.959	2.933	0.000	2.933

	FY 2009	FY 2010
Congressional Add: Special Operations Craft Riverine Integrated Bridge System (IBS) <i>FY 2009 Accomplishments:</i> Integration and testing of IBS.	1.167	0.000
<b>Congressional Adds Subtotals</b>	1.167	0.000

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160484BB: <i>SOF Surface Craft/S1684</i>	<b>PROJECT</b> S1684: <i>SOF Surface Craft</i>
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**C. Other Program Funding Summary (\$ in Millions)**

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u> <u>Base</u>	<u>FY 2011</u> <u>OCO</u>	<u>FY 2011</u> <u>Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• PROC: <i>SOF Combatant Craft</i>	21.427	11.122	11.706		11.706	20.757	23.497	26.519	27.635	Continuing	Continuing

**D. Acquisition Strategy**

- Medium Combatant Craft acquisition strategy is a full and open competition using a two phase source selection process. Phase I involves a Small Business Set Aside competition for two or more companies to design and build test articles. Phase II selects a single company to produce a fully integrated baseline craft for test and evaluation with options for production and contractor logistics support. Acquisition strategies for other craft may be based on the rapid acquisition of available non-developmental commercial off-the-shelf/government-off-the-shelf craft.
- Forward Looking Infrared (FLIR) will develop spiral improvements by utilizing existing contract with FLIR Systems, Inc., Boston, MA.
- SOC Riverine develops and tests improvements using various contracts strategies, including Small Business Innovative Research and Broad Area Announcements.

**E. Performance Metrics**

N/A

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 United States Special Operations Command** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160484BB: <i>SOF Surface Craft/S1684</i>	<b>PROJECT</b> S1684: <i>SOF Surface Craft</i>
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**Product Development (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Medium Combatant Craft	TBD/TBD	TBD TBD	0.000	7.959	Apr 2009	0.982	Nov 2010	0.000		0.982	Continuing	Continuing	Continuing
Forward Looking Infrared	C/CPFF	FSI Boston, MA	1.196	0.000		0.000		0.000		0.000	0	1.196	Continuing
Integrated Bridge System	TBD/TBD	TBD TBD	1.474	0.000		0.000		0.000		0.000	0	1.474	Continuing
Integrated Combat System	TBD/TBD	USMI TBD	1.548	0.000		0.000		0.000		0.000	0	1.548	Continuing
<b>Subtotal</b>			4.218	7.959		0.982		0.000		0.982	0.000	4.218	

**Remarks**

**Support (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Rigid Inflatable Boat	Various/ Various	VARIOUS VARIOUS	5.832	0.000		0.000		0.000		0.000	0	5.832	Continuing
Medium Combatant Craft	TBD/TBD	NSWC Norfolk VA; Crane, IN	0.000	1.750	Jan 2010	1.705	Jan 2011	0.000		1.705	Continuing	Continuing	Continuing
Forward Looking Infrared	C/CPFF	FSI Boston, MA	0.659	0.000		0.000		0.000		0.000	0.000	0.659	Continuing

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 United States Special Operations Command** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160484BB: <i>SOF Surface Craft/S1684</i>	<b>PROJECT</b> S1684: <i>SOF Surface Craft</i>
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**Support (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Forward Looking Infrared	C/CPFF	FSI Boston, MA	0.369	0.000		0.000		0.000		0.000	0.000	0.369	Continuing
<b>Subtotal</b>			6.860	1.750		1.705		0.000		1.705	0.000	6.860	

**Remarks**

**Test and Evaluation (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Medium Combatant Craft	TBD/TBD	NSWC Norfolk, VA	0.000	0.250	Jan 2010	0.246	Jan 2011	0.000		0.246	Continuing	Continuing	Continuing
<b>Subtotal</b>			0.000	0.250		0.246		0.000		0.246			

**Remarks**

Project Cost Totals	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
	11.078	9.959		2.933		0.000		2.933	0.000	11.078	

**Remarks**

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2011 United States Special Operations Command		<b>DATE:</b> February 2010
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160484BB: <i>SOF Surface Craft/S1684</i>	<b>PROJECT</b> S1684: <i>SOF Surface Craft</i>

Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
Combatant Craft Medium: Risk Reduction Activities & Prepare Request for Proposal	1	2009	4	2009
Combatant Craft Medium: Proposals & Source Selection	4	2009	3	2010
Combatant Craft Medium: Build Competitive Prototypes	4	2010	3	2011
Combatant Craft Medium: Developmental Test /Operational Test and Analysis	4	2011	1	2012
Combatant Craft Medium: Final Downselect	2	2012	2	2012
Combatant Craft Medium: Integration (C4ISR)	2	2012	4	2012
Combatant Craft Medium: Developmental Test/Operational Test	4	2012	1	2013
Combatant Craft Medium: Low Rate Initial Production	4	2012	2	2013
Combatant Craft Medium: Operational Evaluation	3	2013	3	2013
Combatant Craft Medium: Initial Operational Capability	4	2013	4	2013
Forward Looking Infrared: P3I Development Program	1	2009	4	2010
Forward Looking Infrared: Engineering & Development	1	2009	2	2009
Forward Looking Infrared: Testing	3	2009	4	2009
Forward Looking Infrared: Production Verification	4	2009	1	2010
Congressional Adds: Special Operations Craft Riverine Integrated Bridge System Development, Integration and Testing	1	2009	2	2011

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**Exhibit R-2, RDT&E Budget Item Justification: PB 2011 United States Special Operations Command** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160488BB: <i>SOF PSYOP/D476</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	8.251	9.846	4.193	0.000	4.193	2.990	0.000	0.000	0.000	Continuing	Continuing
D476: <i>SOF PSYOPS</i>	8.251	9.846	4.193	0.000	4.193	2.990	0.000	0.000	0.000	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

The SOF PSYOP program element provides for the development, test and integration of Psychological Operations (PSYOP) equipment. PSYOP 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 program element funds transformational systems and equipment to conduct PSYOP in support of combatant commanders.

**B. Program Change Summary (\$ in Millions)**

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	15.124	9.887	0.000	0.000	0.000
Current President's Budget	8.251	9.846	4.193	0.000	4.193
Total Adjustments	-6.873	-0.041	4.193	0.000	4.193
• Congressional General Reductions		-0.041			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	-6.298	0.000			
• SBIR/STTR Transfer	-0.575	0.000			
• Other Adjustments	0.000	0.000	4.193	0.000	4.193

**Change Summary Explanation**

FY09: Decrease of -\$6.873 million is due to reprogramming for Foliage Penetration efforts (-\$2.688 million), Small Business Innovative Research transfer (-\$0.575 million), and FY09 Omnibus reprogramming FY09-26PA (-\$3.584 million), and other program adjustments (\$0.026 million).

FY10: Decrease of -\$0.041 million is due to Section 8097 Congressional general reductions.

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

**APPROPRIATION/BUDGET ACTIVITY**  
0400: *Research, Development, Test & Evaluation, Defense-Wide*  
BA 7: *Operational Systems Development*

**R-1 ITEM NOMENCLATURE**  
PE 1160488BB: *SOF PSYOP/D476*

FY11: Increase of \$4.193 million is due to the DoD not estimating FY 2011 cost when the FY 2010 President's Budget was prepared.

Schedule: None.

Technical: None.

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160488BB: <i>SOF PSYOP/D476</i>	<b>PROJECT</b> D476: <i>SOF PSYOPS</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
D476: <i>SOF PSYOPS</i>	8.251	9.846	4.193	0.000	4.193	2.990	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles											

**A. Mission Description and Budget Item Justification**

This project provides for the development and acquisition of Psychological Operations (PSYOP) equipment. PSYOP 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 PSYOP in support of combatant commanders. The PSYOP sub-projects funded are grouped by the level of organization they support. Sub-projects include:

- The PSYOP Broadcast System consists of fixed and deployable multi-media production facilities for radio and television programming, distribution systems, and dissemination systems to provide PSYOP support to theater commanders. This program is comprised of several interfacing systems that can stand alone or interoperate with other PSYOP systems as determined by mission requirements. This program includes the fixed site media production center; a lightweight, deployable media production capability; a distribution system that provides a product distribution link to systems worldwide; a media system; a transit case fly-away broadcast systems that consists of a combination of amplitude modulation (AM), frequency modulation (FM), shortwave (SW), and television (TV) transmitters, and radio/TV production systems; software defined radio and a long range broadcast system which transmits analog and digital broadcasts. The long range broadcast system will include unmanned aerial vehicle payloads, scatterable media, telephony, and Internet broadcast. PSYOP media displays will consist of easily transportable, state of the art, electronic media displays designed to disseminate and direct broadcast electronic messages, which will influence foreign target audiences, and will support the PSYOP direct broadcast mission requirements. The Special Operations Media System-B is a tactical deployable radio and television broadcast system. It is designed to act as the forward deployed broadcast platform of products. It has limited production capabilities and consists of two independent systems: a mobile radio broadcast system (AM, FM, SW) and a mobile television broadcast system (VHF, UHF) capable of receiving audio and video products for broadcasting. Additionally, lightweight and tactical media development work stations will allow soldiers to produce PSYOP products in deployed locations.
  
- The Family of Loudspeakers program consists of modular amplifiers and speakers that can be interconnected to form sets of loudspeakers that will provide high quality recorded audio, live dissemination, and acoustic deception capability. Equipment is transported, operated, and mounted in ground vehicles, watercraft, and rotary wing aircraft, and dismounted for ground operations (tripod/manpack). This capability permits loudspeaker missions to be conducted over larger areas than previous equipment and provides a greater standoff distance for U.S. Forces/assets. The next generation loudspeaker system will consist of seven variants: manpack; ground vehicle/watercraft; unmanned air vehicle; unmanned ground vehicle; scatterable media long duration; scatterable media short duration; and sonic projection

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160488BB: <i>SOF PSYOP/D476</i>	<b>PROJECT</b> D476: <i>SOF PSYOPS</i>
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(focused sound). The next generation system will provide capability improvements to include wireless networking, improved acoustic performance, unmanned ground and air vehicle transportability, scatterable speaker, long distance sonic projection sound and solid state modular amplifiers/speakers that can be interconnected using secure wireless technology to form sets of loudspeakers that provide high quality recorded audio, live dissemination, and acoustic deception capability.

Commando Solo: Commando Solo supports combat operations by flying broadcast missions for the purpose of broadcasting analog and digital radio and/or television signals deep into denied territory. These broadcasts are made from EC-130J aircraft that are equipped with high powered transmitters and large antenna arrays that operate in the 0.45 - 1,000 MHz frequency range. The Commando Solo program acquisition strategy includes conducting engineering analyses to develop digital broadcast capabilities for the EC-130J and C-130J aircraft. Commando SOLO will leverage development and hardware from the Fly-Away Broadcast System.

**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
PSYOP Broadcast System  <i>FY 2009 Accomplishments:</i> Continued primary hardware development, systems engineering, and developmental test and evaluation (DT&E) on the long range broadcast technology, broadcast modernization efforts and media displays.  <i>FY 2010 Plans:</i> Continue primary hardware development, systems engineering, and DT&E on the long range broadcast technology, broadcast modernization efforts and media displays.  <i>FY 2011 Base Plans:</i> Continues primary hardware development, systems engineering, and DT&E on the long range broadcast technology, broadcast modernization efforts and media displays.	4.039	8.036	3.169	0.000	3.169
Family of Loudspeakers	4.212	0.828	0.000	0.000	0.000

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 United States Special Operations Command **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160488BB: <i>SOF PSYOP/D476</i>	<b>PROJECT</b> D476: <i>SOF PSYOPS</i>
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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p><i>FY 2009 Accomplishments:</i> Conducted primary hardware and software development, systems engineering, and DT&amp;E on the next generation unmanned ground vehicle, unmanned aerial vehicle, scatterable media long duration and scatterable media short duration variants.</p> <p><i>FY 2010 Plans:</i> Conduct primary hardware and software development, systems engineering and DT&amp;E on sonic projection variant.</p>					
<p>Commando SOLO</p> <p><i>FY 2010 Plans:</i> Initiate engineering study of government and commercial digital broadcast technologies applicable to PSYOP.</p> <p><i>FY 2011 Base Plans:</i> Continues engineering study of government and commercial digital broadcast technologies applicable to PSYOP leading to the development of a performance specification.</p>	0.000	0.982	1.024	0.000	1.024
<b>Accomplishments/Planned Programs Subtotals</b>	8.251	9.846	4.193	0.000	4.193

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

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• PROC: <i>PSYOP Equipment</i>	31.024	42.948	25.266		25.266	4.809	1.367	2.016	1.909	Continuing	Continuing

**D. Acquisition Strategy**

• PSYOP Broadcast System consists of wide-area systems providing radio, television programming and multi-media production, distribution and dissemination support to the theater commander. This system is comprised of several interfacing systems that can stand alone or interoperate with other systems as determined by mission

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 United States Special Operations Command		<b>DATE:</b> February 2010
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160488BB: <i>SOF PSYOP/D476</i>	<b>PROJECT</b> D476: <i>SOF PSYOPS</i>
<p>requirements. These various sub-programs are in a post-Milestone C or various stages of milestone decisions. Media displays consist of electronic media displays, modular systems, electronic paper, and electronic games. The program acquires and modifies, as necessary, commercial off-the-shelf /government off-the-shelf (COTS)/ (GOTS) systems and equipment to provide the system capabilities. The Family of Loudspeakers Next Generation Loudspeaker System consists of seven variants. The program acquires and modifies, as necessary, COTS/GOTS systems and equipment to replace or enhance current system capabilities.</p> <ul style="list-style-type: none"><li>• Commando Solo funds modifications of the Commando Solo special mission equipment that broadcasts television and radio messages to target audiences in denied areas. Enhancements are periodically required to meet theater commander operational requirements and maintain compatibility with forces equipment upgrades to allow in-flight receipt of products for dissemination. The program acquires and integrates into the EC-130J commercial and GOTS systems to replace or enhance current system capabilities and address equipment shortfalls due to obsolescence.</li></ul>		
<b><u>E. Performance Metrics</u></b> N/A		

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 United States Special Operations Command** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160488BB: <i>SOF PSYOP/D476</i>	<b>PROJECT</b> D476: <i>SOF PSYOPS</i>
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**Product Development (\$ in Millions)**

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
PSYOP Broadcast System	Various/ Various	Various Various	9.877	8.036	Jan 2010	3.169	Jan 2011	0.000		3.169	2.990	24.072	Continuing
Family of Loudspeakers	Various/ Various	Various Various	4.937	0.828	Jan 2010	0.000		0.000		0.000	0	5.765	Continuing
Commando SOLO	TBD/TBD	TBD TBD	0.000	0.982	Jan 2010	1.024		0.000		1.024	0	2.006	Continuing
<b>Subtotal</b>			14.814	9.846		4.193		0.000		4.193	2.990	31.843	

**Remarks**

Project Cost Totals	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
<b>Project Cost Totals</b>	14.814	9.846		4.193		0.000		4.193	2.990	31.843	

**Remarks**

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2011 United States Special Operations Command		<b>DATE:</b> February 2010
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 1160488BB: <i>SOF PSYOP/D476</i>	<b>PROJECT</b> D476: <i>SOF PSYOPS</i>

Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
PSYOP Broadcast System-Long Range Broadcast System Unmanned Aerial Vehicle-Payload Hardware Development and Testing	1	2009	4	2012
Family of Loudspeakers Next Generation Loudspeaker	1	2009	4	2010
Commando Solo	2	2010	4	2011

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**Department of Defense  
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**Washington Headquarters Service**

*Justification Book Volume 5B*

***Research, Development, Test & Evaluation, Defense-Wide***

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**Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Washington Headquarters Service** **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b>			<b>R-1 ITEM NOMENCLATURE</b>								
0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i>			PE 0901598D8W: <i>IT Software Development Initiatives</i>								
BA 6: <i>RDT&amp;E Management Support</i>											
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
Total Program Element	0.564	0.976	0.278	0.000	0.278	0.170	0.175	0.183	0.185	Continuing	Continuing
945: <i>945 Miscellaneous IT Initiative</i>	0.564	0.467	0.278	0.000	0.278	0.170	0.175	0.183	0.185	Continuing	Continuing
946: <i>946 Miscellaneous IT Initiative</i>	0.000	0.509	0.000	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, 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)**

	<b><u>FY 2009</u></b>	<b><u>FY 2010</u></b>	<b><u>FY 2011 Base</u></b>	<b><u>FY 2011 OCO</u></b>	<b><u>FY 2011 Total</u></b>
Previous President's Budget	0.597	0.980	0.000	0.000	0.000
Current President's Budget	0.564	0.976	0.278	0.000	0.278
Total Adjustments	-0.033	-0.004	0.278	0.000	0.278
• Congressional General Reductions		0.000			
• Congressional Directed Reductions		-0.004			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	-0.033	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• other program adjustments	0.000	0.000	0.278	0.000	0.278

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Washington Headquarters Service								<b>DATE:</b> February 2010			
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 6: <i>RDT&amp;E Management Support</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0901598D8W: <i>IT Software Development Initiatives</i>				<b>PROJECT</b> 945: <i>945 Miscellaneous IT Initiative</i>			
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
945: <i>945 Miscellaneous IT Initiative</i>	0.564	0.467	0.278	0.000	0.278	0.170	0.175	0.183	0.185	Continuing	Continuing
Quantity of RDT&E Articles											
<b>A. Mission Description and Budget Item Justification</b>											
P945 – Miscellaneous IT Initiative - The Washington Headquarters Services (WHS) provides various IT support for the Office of the Secretary of Defense (OSD) and throughout the Field Activity to align electronic processes and to ensure efficiency by implementing several miscellaneous IT initiatives.											
<b>B. Accomplishments/Planned Program (\$ in Millions)</b>											
						<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>	
OSD Enterprise Storage Cost Model						0.282	0.000	0.000	0.000	0.000	
<i>FY 2009 Accomplishments:</i> The Defense COOP Integrated Network (DCIN)/Pentagon Continuity Integrated Systems (PCIS) system has focused attention on the need to control the total cost of ownership with respect to storage given the fact that all Pentagon tenants, including OSD, are utilizing DCIN/PCIS. This project continues the effort of developing a service provider cost model by populating the model based on previously defined storage-related service levels in an Information Technology Infrastructure Library (ITIL) framework. Additionally, the effort of acquiring applications' COOP requirements populated into the Service Level Requirements Questionnaire (SLRQ) will be included in this project which will aid in the determination of service levels.											
OSD Enterprise Performance and Productivity Analysis						0.282	0.000	0.000	0.000	0.000	
<i>FY 2009 Accomplishments:</i> This project will provide an assessment of existing OSD Enterprise management and operations and strategies for measuring and improving performance and productivity, including areas such as change											

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Washington Headquarters Service				<b>DATE:</b> February 2010				
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<b>B. Accomplishments/Planned Program (\$ in Millions)</b>								
				<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
support personnel and equipment. These funds will ensure all OSD personnel are provided with IT capabilities at required service levels across all network classification levels.								
<b>OSD Enterprise Applications</b>  <i>FY 2010 Plans:</i> This project supports the development of shared OSD business applications and services such as task tracking, coordination, publishing, budgeting, policy development and program management, and common platforms across the OSD IT community. This initiative provides a single point of purchase of software, developer, and engineering services to develop the applications and support common services that have been designated as OSD-wide applications.  <i>FY 2011 Base Plans:</i> This project supports the development of shared OSD business applications and services such as task tracking, coordination, publishing, budgeting, policy development and program management, and common platforms across the OSD IT community. This initiative provides a single point of purchase of software, developer, and engineering services to develop the applications and support common services that have been designated as OSD-wide applications.				0.000	0.304	0.114	0.000	0.114
<b>Defend Systems &amp; Networks</b>  <i>FY 2011 Base Plans:</i> This initiative identifies, plans, and supports the Information Assurance (IA) and Computer Network Defense (CND) current operations and future efforts required to secure the Secretary of Defense's, DepSec's, and front office's Information Technology Community of Interest (COI). Information Assurance (IA) and Computer Network Defense (CND) are catalysts to ensuring that SecDefComms' (staff and customers) information and information systems are protected and defended from potential adversaries, allowing the ability to share awareness, create knowledge, and enhance communications and Information Technology (IT) support to absolute optimum levels. IA are measures that protect and defend information and information systems by ensuring				0.000	0.000	0.100	0.000	0.100

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 Washington Headquarters Service **DATE:** February 2010

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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
946: <i>946 Miscellaneous IT Initiative</i>	0.000	0.509	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**

P946 – Miscellaneous IT Initiative - The Washington Headquarters Services (WHS) provides various business services for the Office of Secretary of Defense and Field Activities in the National Capitol Region. To align electronic processes and to ensure efficiency, several IT efforts are being implemented.

**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
WHS Human Resources Directorate (HRD) Military Personnel System (MILPERS) Modernization <i>FY 2010 Plans:</i> This project includes the redesign, application development, technology upgrade, testing, and deployment of the Military Personnel Systems. This system will replace a system that is 7 years old and not very stable. The Military Personnel Division manages the personnel assignment and award systems for the active and reserve military staff assigned to WHS-serviced activities, to include OSD, the Joint Staff, the White House, and the Capital Hill offices. The MILPERS system performs several automated processes such as manpower and billets tracking, recruitment and placement, performance ratings, awards, physical fitness training, and educational training. This project will increase the availability and reliability of the MILPERS, avoid frequent system malfunctions, and avoid high system software maintenance cost due to obsolescence of the current system.	0.000	0.225	0.000	0.000	0.000
WHS HRD Civilian Systems Integrated Tools Development <i>FY 2010 Plans:</i> This project has three focus areas:	0.000	0.284	0.000	0.000	0.000

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 Washington Headquarters Service **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 6: <i>RDT&amp;E Management Support</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0901598D8W: <i>IT Software Development Initiatives</i>	<b>PROJECT</b> 946: <i>946 Miscellaneous IT Initiative</i>
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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p>1. Reporting Integrated Tools. This project area will focus on the redesign, prototype development, testing, and deployment of various integrated tools to track and to provide various reports of position billets, recruiting, vacancies, on-board end strength, and other ad-hoc personnel data to comply with the new National Security Personnel System's (NSPS) mandates and business rules. It will allow WHS/HRD to expedite the generation of various detailed manpower reporting requirements for OSD, WHS, Joint Staff, and other HRD-serviced customers. The development effort will include retooling the Senior Executive Service Titles (SEST) manpower tracking system, the Wage Grade and General Service Grade manpower tracking system, and the job and Vacancy Announcement system.</p> <p>2. Equal Opportunity and Employment (EEO) Reporting Tools. This project area will focus on requirements analyses, architectural design, and development of integrated tools to assist the WHS/HRD/EEO in collecting EEO data through the new job application system and the existing Defense Civilian Personnel System. Collection of this data is required to meet the new EEO reporting requirements mandated by the U.S. EEO Commissioner. Focusing on software development, this project will identify, acquire, deploy and configure the integrated tools applications to fulfill the WHS/HRD/EEO requirements.</p> <p>3. Security Operations (SECOPS) System Modernization. This project area will focus on retooling and redesigning the current system to comply with the new business rules mandated by the NSPS. This development effort will also include retooling the automated security clearance process to capture metrics and to link the SECOPS system to the new DoD Integrated Staffing Processing System.</p>					
<b>Accomplishments/Planned Programs Subtotals</b>	0.000	0.509	0.000	0.000	0.000

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

N/A

**D. Acquisition Strategy**

N/A

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 Washington Headquarters Service **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b>	<b>R-1 ITEM NOMENCLATURE</b>	<b>PROJECT</b>
0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> BA 6: <i>RDT&amp;E Management Support</i>	PE 0901598D8W: <i>IT Software Development Initiatives</i>	946: <i>946 Miscellaneous IT Initiative</i>

**E. Performance Metrics**

- Maintain Authorization to Operate
- Update Program
- Revise Plan and Implement Changes
- Consolidate Support Contracts when Feasible
- Revise Plan and Implement Changes as Needed

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**Department of Defense  
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February 2010



**Operational Test and Evaluation, Defense**

*Justification Book Volume 5B*

***Operational Test and Evaluation, Defense***

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Operational Test and Evaluation, Defense • President's Budget FY 2011 • RDT&E Program

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Defense-Wide  
 FY 2011 President's Budget  
 Exhibit R-1  
 (Dollars in Thousands)

Appropriation: 0460D Operational Test & Eval, Defense

Date: 21 Jan 2010

Line No	Program Element Number	Item	Act	FY 2009	FY 2010	FY 2011	Sec
1	0605118OTE	Operational Test and Evaluation	06	53,052	57,902	59,430	U
2	0605131OTE	Live Fire Test and Evaluation	06	11,541	12,234	12,899	U
3	0605814OTE	Operational Test Activities and Analyses	06	120,609	118,101	122,581	U
		RDT&E Management Support		185,202	188,237	194,910	
		Total Operational Test & Eval, Defense		185,202	188,237	194,910	

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Operational Test and Evaluation, Defense • President's Budget FY 2011 • RDT&E Program

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

*Budget Activity 06: RDT&E Management Support*  
*Appropriation 0460: Operational Test and Evaluation, Defense*

.....

<b>Line Item</b>	<b>Budget Activity</b>	<b>Program Element Number</b>	<b>Program Element Title</b>	<b>Page</b>
01	06	0605118OTE	Operational Test and Evaluation .....	Volume 5B - 557
02	06	0605131OTE	Live Fire Test and Evaluation .....	Volume 5B - 565
03	06	0605814OTE	Operational Test Activities and Analyses.....	Volume 5B - 573

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Operational Test and Evaluation, Defense • President's Budget FY 2011 • RDT&E Program

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

<b>Program Element Title</b>	<b>Program Element Number</b>	<b>Line Item</b>	<b>Budget Activity</b>	<b>Page</b>
Live Fire Test and Evaluation	0605131OTE	02	06..... Volume 5B - 565	
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Operational Test and Evaluation, Defense • President's Budget FY 2011 • RDT&E Program

Exhibit R-1

(Listing by Budget Activity, then Program Element Number)

**BA# 06: RDT&E Management Support**

**Cost (\$ in Millions)**

Line#	BA#	PE#	PE Title	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
01	06	0605118OTE	Operational Test and Evaluation	53.052	57.902	59.430	0.000	59.430
02	06	0605131OTE	Live Fire Test and Evaluation	11.541	12.234	12.899	0.000	12.899
03	06	0605814OTE	Operational Test Activities and Analyses	120.609	118.101	122.581	0.000	122.581
<b>Total: RDT&amp;E Management Support</b>				185.202	188.237	194.910	0.000	194.910

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 Operational Test and Evaluation, Defense **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0460: <i>Operational Test and Evaluation, Defense</i> BA 6: <i>RDT&amp;E Management Support</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0605118OTE: <i>Operational Test and Evaluation</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	53.052	57.902	59.430	0.000	59.430	61.123	64.548	65.927	67.338	Continuing	Continuing
1: <i>OT&amp;E</i>	53.052	57.902	59.430	0.000	59.430	61.123	64.548	65.927	67.338	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

The Director of Operational Test and Evaluation (DOT&E) is responsible under Title 10 for policy and procedures for all aspects of operational test and evaluation 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 of 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.

DOT&E also oversees and resources OT&E community efforts to plan and execute joint operational evaluations of information assurance and interoperability of fielded systems and networks during major combatant command and Service exercises, and reports the trends and findings in the annual report.

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 program and administrative and financial support services related to the conduct of operational test and evaluation.

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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2011 Operational Test and Evaluation, Defense	<b>DATE:</b> February 2010
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<b>APPROPRIATION/BUDGET ACTIVITY</b> 0460: <i>Operational Test and Evaluation, Defense</i> BA 6: <i>RDT&amp;E Management Support</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0605118OTE: <i>Operational Test and Evaluation</i>
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**B. Program Change Summary (\$ in Millions)**

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	53.052	58.647	0.000	0.000	0.000
Current President's Budget	53.052	57.902	59.430	0.000	59.430
Total Adjustments	0.000	-0.745	59.430	0.000	59.430
• Congressional General Reductions		-0.745			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Program Adjustment	0.000	0.000	59.430	0.000	59.430

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 Operational Test and Evaluation, Defense **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0460: <i>Operational Test and Evaluation, Defense</i> BA 6: <i>RDT&amp;E Management Support</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0605118OTE: <i>Operational Test and Evaluation</i>	<b>PROJECT</b> 1: <i>OT&amp;E</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
1: <i>OT&amp;E</i>	53.052	57.902	59.430	0.000	59.430	61.123	64.548	65.927	67.338	Continuing	Continuing
Quantity of RDT&E Articles											

**A. Mission Description and Budget Item Justification**

The Director is responsible under Title 10 for policy and procedures for all aspects of operational test and evaluation 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 of 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.

DOT&E also oversees and resources OT&E community efforts to plan and execute joint operational evaluations of information assurance and interoperability of fielded systems and networks during major combatant command and Service exercises, and reports the trends and findings in the annual report.

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 program and administrative and financial support services related to the conduct of operational test and evaluation.

**B. Accomplishments/Planned Program (\$ in Millions)**

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 Operational Test and Evaluation, Defense **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0460: <i>Operational Test and Evaluation, Defense</i> BA 6: <i>RDT&amp;E Management Support</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0605118OTE: <i>Operational Test and Evaluation</i>	<b>PROJECT</b> 1: <i>OT&amp;E</i>
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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p>This effort is in direct support of the Director’s Title 10 responsibilities. FY 2010 funds will provide 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&amp;E and the Office of the Under Secretary of Defense for Acquisition, Technology and Logistics (OUSD(AT&amp;L)). Key elements of DOT&amp;E oversight authority are identified in Calendar Year 2010 Office of the Secretary of Defense Test and Evaluation Oversight List.</p> <p>Information Assurance and Interoperability Evaluations</p> <p>Approximately 35 information assurance and interoperability assessments will be executed during FY 2010 COCOM and Service exercises. Full assessment of warfighter responses to computer network attack (ability to protect, detect, react, and restore) will be captured in all information assurance events. Portrayal of advanced threats will be included in several events. Interoperability assessments will be guided by a more rigorous process that includes expanded research and linkage to warfighter mission threads. In partnership with Joint Forces Command, several interoperability assessments will be planned and executed with emphasis on the systems and capabilities contained in the C2 Optimum Capability Mix Study. Assessment support to units deploying to theaters of operation will continue as needed. Fiscal year 2010 information assurance and interoperability evaluations will include trend analyses compared with prior year results, both within and across COCOMs. Critical findings will be transmitted to Service and DoD leadership for their awareness and remediation, as appropriate. The Information Operations Range will be examined in a demonstration as a possible venue for added operational realism and required security during OT&amp;E and exercise assessments.</p> <p><i>FY 2011 Base Plans:</i> Operational Test and Evaluation Oversight</p>					

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Operational Test and Evaluation, Defense		<b>DATE:</b> February 2010
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0460: <i>Operational Test and Evaluation, Defense</i> BA 6: <i>RDT&amp;E Management Support</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0605118OTE: <i>Operational Test and Evaluation</i>	<b>PROJECT</b> 1: <i>OT&amp;E</i>
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A		
<b>D. Acquisition Strategy</b> N/A		
<b>E. Performance Metrics</b> 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.  Actual Performance and Goals:  Operational Test and Evaluation On-Time Completion Rate FY 2009      FY 2010      FY 2011 Actual          Goal          Goal 95%            96%          97%		
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. DOT&E plans to maintain its on-time completion rates for FY 2010 and FY 2011 through continued management emphasis on timely delivery of required products to customer activities.		

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 Operational Test and Evaluation, Defense **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0460: <i>Operational Test and Evaluation, Defense</i> BA 6: <i>RDT&amp;E Management Support</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0605131OTE: <i>Live Fire Test and Evaluation</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	11.541	12.234	12.899	0.000	12.899	13.661	13.996	14.339	14.691	Continuing	Continuing
2: <i>LFT&amp;E</i>	11.541	12.234	12.899	0.000	12.899	13.661	13.996	14.339	14.691	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

This Program Element (PE) 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. The LFT&E program is essential, especially in view of the escalating costs of technologically sophisticated weapons systems.

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.

This program element includes funds to obtain Federally Funded Research and Development Center (FFRDC) expertise in performing analyses in support of described tasks, as well as travel funds to carry out the LFT&E program.

This program element is budgeted in Budget Activity 6, RDT&E Management Support, to support LFT&E management activities for the oversight of RDT&E of new systems, as well as RDT&E of fielded systems.

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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2011 Operational Test and Evaluation, Defense	<b>DATE:</b> February 2010
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<b>APPROPRIATION/BUDGET ACTIVITY</b> 0460: <i>Operational Test and Evaluation, Defense</i> BA 6: <i>RDT&amp;E Management Support</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0605131OTE: <i>Live Fire Test and Evaluation</i>
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**B. Program Change Summary (\$ in Millions)**

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	11.541	12.285	0.000	0.000	0.000
Current President's Budget	11.541	12.234	12.899	0.000	12.899
Total Adjustments	0.000	-0.051	12.899	0.000	12.899
• Congressional General Reductions		-0.051			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Program Adjustment	0.000	0.000	12.899	0.000	12.899

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 Operational Test and Evaluation, Defense **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0460: <i>Operational Test and Evaluation, Defense</i> BA 6: <i>RDT&amp;E Management Support</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0605131OTE: <i>Live Fire Test and Evaluation</i>	<b>PROJECT</b> 2: <i>LFT&amp;E</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
2: <i>LFT&amp;E</i>	11.541	12.234	12.899	0.000	12.899	13.661	13.996	14.339	14.691	Continuing	Continuing
Quantity of RDT&E Articles											

**A. Mission Description and Budget Item Justification**

This Program Element (PE) 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. The LFT&E program is essential, especially in view of the escalating costs of technologically sophisticated weapons systems.

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.

This program element includes funds to obtain Federally Funded Research and Development Center (FFRDC) expertise in performing analyses in support of described tasks, as well as travel funds to carry out the LFT&E program.

This program element is budgeted in Budget Activity 6, RDT&E Management Support, to support LFT&E management activities for the oversight of RDT&E of new systems, as well as RDT&E of fielded systems.

**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Live Fire Test and Evaluation	11.541	12.234	12.899	0.000	12.899

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Operational Test and Evaluation, Defense				<b>DATE:</b> February 2010				
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0460: <i>Operational Test and Evaluation, Defense</i> BA 6: <i>RDT&amp;E Management Support</i>		<b>R-1 ITEM NOMENCLATURE</b> PE 0605131OTE: <i>Live Fire Test and Evaluation</i>		<b>PROJECT</b> 2: <i>LFT&amp;E</i>				
<b>B. Accomplishments/Planned Program (\$ in Millions)</b>								
				<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
<p>improving modeling and simulation tools by providing validation data. JLF Sea projects will continue to develop key components of alternatives to traditional shock trials of ships and submarines, will begin to investigate ship vulnerabilities in the areas of commercial standards, equipment damage, and compartment fires, and will investigate vulnerabilities of designs and components for new ships.</p> <p><i>FY 2011 Base Plans:</i> Major Test and Evaluation Programs</p> <p>This is a continuing effort. The FY 2011 budget provides Live Fire Test and Evaluation input for Test and Evaluation Master Plans, Test Plans, System Acquisition Reports, Defense Acquisition Executive Summary reports, and BLRIP reports for those programs designated for oversight by DOT&amp;E and OUSD(AT&amp;L). The oversight list is developed and approved annually.</p> <p>JLF Programs</p> <p>Conduct tests of fielded systems not previously tested under Air, Land, or Sea Joint Live Fire programs to support DOT&amp;E and warfighter needs. The need for these tests result from systems being exposed to new threats, used in new unanticipated tactics, or being operated in new combat environments, and the subsequent need for an assessment of their performance. As necessary continue to support and partner with the JIEDDO. Continue initiatives with crew survivability. Address urgent requests that directly support deployed warfighters and issues of importance to the Congress.</p>								
Accomplishments/Planned Programs Subtotals				11.541	12.234	12.899	0.000	12.899
<b>C. Other Program Funding Summary (\$ in Millions)</b>								
N/A								
<b>D. Acquisition Strategy</b>								
N/A								

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Operational Test and Evaluation, Defense		<b>DATE:</b> February 2010
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0460: <i>Operational Test and Evaluation, Defense</i> BA 6: <i>RDT&amp;E Management Support</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0605131OTE: <i>Live Fire Test and Evaluation</i>	<b>PROJECT</b> 2: <i>LFT&amp;E</i>

**E. Performance Metrics**

Performance Measure: Percentage of required live fire 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. Percentage of required live fire 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.

Actual Performance and Goals:

Live Fire Testing

FY 2009	FY 2010	FY 2011
Actual	Goal	Goal
96%	97%	98% (On-Time Completion Rate)

The on-time completion rate was computed on the basis of the number of beyond low-rate initial production live fire test and evaluation reports, Joint Live Fire Quick Look Reports, and Joint Live Fire Test reports that were submitted within established time standards relative to the total number of such products that fell due during the fiscal year. DOT&E plans to achieve its goals for FY 2010 and FY 2011 through continued management emphasis on timely delivery of required reports to customer activities.

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 Operational Test and Evaluation, Defense **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0460: <i>Operational Test and Evaluation, Defense</i> BA 6: <i>RDT&amp;E Management Support</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0605814OTE: <i>Operational Test Activities and Analyses</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	120.609	118.101	122.581	0.000	122.581	124.524	126.369	128.327	130.447	Continuing	Continuing
1: OTA&A	120.609	118.101	122.581	0.000	122.581	124.524	126.369	128.327	130.447	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

This program element consists of two programs: Test and Evaluation (T&E) Programs and T&E Independent Activities.

The Test and Evaluation programs are continuing efforts that provide management and oversight of test and evaluation functions and expertise to the Department of Defense (DoD). The T&E programs consist of five activities: Joint Test and Evaluation (JT&E); Threat Systems (TS); Center for Countermeasures (CCM); Joint Technical Coordinating Group for Munitions Effectiveness (JTTCG/ME); and, Joint Aircraft Survivability Program (JASP).

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-materiel 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 test 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 (OUSD(AT&L)). Threat Systems provides DOT&E assessment officers 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) Test and Evaluation Center, serves as DoD's independent tester for CM assessments of U.S. and foreign precision guided weapons (PGWs) and sensor systems, CMs, counter-countermeasures (CCMs), and warning devices. The Center conducts tests, analyzes test results and provides CM expertise that benefits the Services, Joint activities, T&E Agencies, DoD Acquisition Community, the Intelligence Community, Homeland Defense and Overseas Contingency Operations (OCO). Data collected during Center test activities provides valuable information to OSD assessment officers for select oversight

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R-1 Line Item #3

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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2011 Operational Test and Evaluation, Defense **DATE:** February 2010

**APPROPRIATION/BUDGET ACTIVITY**

0460: *Operational Test and Evaluation, Defense*  
BA 6: *RDT&E Management Support*

**R-1 ITEM NOMENCLATURE**

PE 0605814OTE: *Operational Test Activities and Analyses*

programs. The Center assesses current and developing systems, using carefully developed test and evaluation methodologies to provide the basis for understanding how CMs might affect systems used in current and future battlefields. Additionally, the Center develops CM specific test equipment that can be used for both Title 10 programs and OCO urgent operational needs.

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 learned (Enduring Freedom and Iraqi Freedom) and the needs of Combatant Commands, Services, Military Targeting Committee, and Operational Users Working Groups input for specific weapon-target pairings and methodologies.

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 Aeronautical Systems 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 and is also an Executive Agent for the Survivability Vulnerability Information Analysis Center (SURVIAC), the repository for aircraft survivability information.

The Test and Evaluation Independent Activities program is the only source of funding for DOT&E studies, analyses, and management to provide continuing support of policy development oversight of the DoD test and evaluation practices, infrastructure and resources; and transformation of test methods and infrastructure to ensure future defense systems provide necessary joint warfighting capabilities. Studies and analyses examine the implications and consequences of current and proposed policy, plans, operations, strategies, and budgets and are essential for the accomplishment of the DOT&E mission. This program element funds travel in support of its activities.

This program element is budgeted in Budget Activity 6, RDT&E Management Support, to support management activities for the DOT&E oversight responsibility for test and evaluation and test and evaluation resources.

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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2011 Operational Test and Evaluation, Defense	<b>DATE:</b> February 2010
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<b>APPROPRIATION/BUDGET ACTIVITY</b> 0460: <i>Operational Test and Evaluation, Defense</i> BA 6: <i>RDT&amp;E Management Support</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0605814OTE: <i>Operational Test Activities and Analyses</i>
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**B. Program Change Summary (\$ in Millions)**

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	122.429	119.838	0.000	0.000	0.000
Current President's Budget	120.609	118.101	122.581	0.000	122.581
Total Adjustments	-1.820	-1.737	122.581	0.000	122.581
• Congressional General Reductions		-1.737			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	-1.820	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Program Adjustment	0.000	0.000	122.581	0.000	122.581

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Operational Test and Evaluation, Defense									<b>DATE:</b> February 2010		
<b>APPROPRIATION/BUDGET ACTIVITY</b> 0460: <i>Operational Test and Evaluation, Defense</i> BA 6: <i>RDT&amp;E Management Support</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0605814OTE: <i>Operational Test Activities and Analyses</i>				<b>PROJECT</b> 1: <i>OTA&amp;A</i>			
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
1: <i>OTA&amp;A</i>	120.609	118.101	122.581	0.000	122.581	124.524	126.369	128.327	130.447	Continuing	Continuing
Quantity of RDT&E Articles											
<b>A. Mission Description and Budget Item Justification</b>											
This program element consists of two programs: Test and Evaluation (T&E) Programs and T&E Independent Activities.											
The Test and Evaluation programs are continuing efforts that provide management and oversight of test and evaluation functions and expertise to the Department of Defense (DoD). The T&E programs consist of five activities: Joint Test and Evaluation (JT&E); Threat Systems (TS); Center for Countermeasures (CCM); Joint Technical Coordinating Group for Munitions Effectiveness (JTTCG/ME); and Joint Aircraft Survivability Program (JASP).											
The Test and Evaluation Independent Activities program is the only source of funding for DOT&E studies, analyses, and management to provide continuing support of policy development oversight of the DoD test and evaluation practices, infrastructure and resources; and transformation of test methods and infrastructure to ensure future defense systems provide necessary joint warfighting capabilities. Studies and analyses examine the implications and consequences of current and proposed policy, plans, operations, strategies, and budgets and are essential for the accomplishment of the DOT&E mission.											
<b>B. Accomplishments/Planned Program (\$ in Millions)</b>											
						<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>	
Operational Test Activities and Analyses						120.609	118.101	122.581	0.000	122.581	
<i>FY 2009 Accomplishments:</i> Joint Test and Evaluation (JT&E)											
In FY 2009 JT&E had four projects close down, all of which started in FY 2006. The projects closing in this fiscal year work on a broad range of issues, from joint test methods and processes to command and control of network enabled weapons. By the time it closed in FY 2009, the Joint Test and Evaluation Methodology project produced the guidelines and procedures for conducting live, virtual,											

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Operational Test and Evaluation, Defense	<b>DATE:</b> February 2010
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<b>APPROPRIATION/BUDGET ACTIVITY</b> 0460: <i>Operational Test and Evaluation, Defense</i> BA 6: <i>RDT&amp;E Management Support</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0605814OTE: <i>Operational Test Activities and Analyses</i>	<b>PROJECT</b> 1: <i>OTA&amp;A</i>
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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p>and constructive operational testing in simulated joint military operations. This allows the Services to test as they fight. Another project that closed in FY 2009 is the Joint Mobile Network Operations project. It helped the Services integrate their mobile networks so that any Service member can cross through any Service mobile network and have access to his data and services. One of the on-going projects, Joint Air Defense Operations-Homeland, concentrates on two aspects of planning the use of deployable air and cruise missile defense assets: the effective use of combined (U.S. and Canadian) air and cruise missile defense capabilities to defeat asymmetric aerial threats; and, interagency planning to incorporate air and cruise missile defense capabilities. On a continual basis, JT&amp;E reviews nominations for new projects, manages on-going projects, and ensures that closing projects are debriefed, and final reports are distributed to Service organizations as appropriate.</p> <p>Threat Systems</p> <p>During FY 2009, Threat Systems initiated development of standard, DIA-validated airborne jammer models for use throughout the Department to evaluate jamming effects on U.S. aircraft; continued to address testing against advanced threats that may be encountered in such countries as Iran and China; continued test planning working group participation to identify threat shortfalls early in the acquisition process.</p> <p>Special studies were conducted and provided current intelligence support tailored to specific U.S. weapon systems acquisition; design experiments to demonstrate test facility connectivity for enhanced weapons systems testing and improve end-to-end testing of U.S. threat warning and countermeasures systems; continued with the second year of a four-year project to integrate current intelligence community-based missile models into all DoD Hardware-In-The-Loop countermeasure test facilities. Also investigated how to develop and implement a more robust open-air threat environment to make operational testing more realistic; initiated efforts to develop threat test assets that can be used for testing in a joint test environment; developed and validated a new class of armored vehicle target to be used during T&amp;E of mobile armor gun systems; initiated the development of new target</p>					

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 Operational Test and Evaluation, Defense **DATE:** February 2010

<b>APPROPRIATION/BUDGET ACTIVITY</b> 0460: <i>Operational Test and Evaluation, Defense</i> BA 6: <i>RDT&amp;E Management Support</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0605814OTE: <i>Operational Test Activities and Analyses</i>	<b>PROJECT</b> 1: <i>OTA&amp;A</i>
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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p>control interface standards; and completed Phase I of a comprehensive study to determine which 5th Generation fighter aircraft attributes will be critical for future full scale threat representations.</p> <p>These activities help DOT&amp;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>Center for Countermeasures (the Center)</p> <p>The Center tested, analyzed, and reported on more than 25 U.S. and foreign PGW systems/ components in a CM environment as well as CM equipment and threat-warning systems. Each program supported received an independent assessment of our findings and test support for CM/CCM evaluations. Approximately 33% of the programs that received support were under DOT&amp;E oversight; 29% of the programs were subsystems on DOT&amp;E oversight platforms; 19% were smaller programs that do not meet oversight criteria; 5% were foreign systems and 14% were pre-deployment events and training, tactics and procedures (TTP) assistance for exercise support. Thirty-eight percent of the Center's efforts were directly tied to OCO. The Center continued development of the Central Test and Evaluation Investment Program (CTEIP) sponsored, Joint IRCM Threat System (JMITS), Towed Aerial Plume Simulator (TAPS) and Multi-Spectral Sea and Land Target Simulator (MSALTS) that will be used in support of testing for both Title 10 programs and OCO aircraft survivability equipment (ASE) urgent operational needs. Our support was distributed across all the Services as well as intelligence agencies and research and development activities.</p> <p>The Center provided expertise to many organizations and was actively involved in the following panels: the Technical Cooperation Program, Foreign Material Exploitation Working Group, Foreign Material Program Test and Evaluation Subcommittee, Joint Project Milari Working Group, Foreign Material Exploitation Working Group, Joint Expendable Countermeasures (JECM) Integrated Product Team, Joint Technical Coordinating Group for Munitions Effectiveness (JTCEG/ME), Infrared</p>					

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**Exhibit R-2A, RDT&E Project Justification:** PB 2011 Operational Test and Evaluation, Defense **DATE:** February 2010

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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p>Countermeasures Test Resources and Requirements Study, Infrared Countermeasures Multi Sensing Symposia Working Group, Joint Aircraft Survivability Program and an OSD special interest working group, Joint IRCM T&amp;E working group.</p> <p>Joint Technical Coordinating Group for Munitions Effectiveness (JTCG/ME)</p> <p>In support of operational commanders, DoD targeteers, weaponeers, and planners, the JTCG/ME developed and released JMEM Weaponeering System (JWS) v2.0 in March 2009 and Joint-Anti-air Combat Effectiveness System (J-ACE) Air Superiority (AS) v3.2.1 in December 2008 and v4.0 in August 2009.</p> <p>JWS v2.0, a capabilities-based JMEM, provides a single weaponeering process (“one-stop shop” weaponeering) by integrating air-to-surface and surface-to-surface methods; provides the capability to “sanitize” for easy release to foreign customers and coalition partners; and, improves external interfaces for Mission Planning Systems and other external JMEM users. JWS determines the probabilistic effectiveness of air-to-surface and surface-to-surface munitions against a wide variety of targets and multiple target element scenes. JWS v2.0 provides capabilities to weaponeer against bridges, buildings, complex targets, hardened targets, materiel targets, personnel targets, and produce risk estimates to friendly troops. In addition, to support product training, checklists and wizards provide step-by-step instructions on using JWS to weaponeer a target and familiarize user with the graphical user interface (GUI). The JTCG/ME conducted Roll-out Training of JWS at 18 locations worldwide; this effort to train the trainers in the correct use of JWS 2.0 netted 305 users.</p> <p>J-ACE: AS v4.0 and Joint Anti-air Model (JAAM) v4.0 were released in August 2009. This release provides a major architecture modernization, software modularization and GUI improvements. The architecture allows for better interface with force level simulations, engineering models and facilitates potential future releases to coalition partners. Eight new air-to-air missiles and four surface-to-air missiles were added. JAAM is also being integrated into Tactical Aircrew Combat Training Systems</p>					

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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p>(TACTS) at various ranges; at NAS Oceana, for each of the daily training missions, JAAM integrates aircraft Time Space Position Information (TSPI) telemetry into flight operation video playback which is then used for formal pilot debriefs, authoritative shot/tactics validation and performance evaluation.</p> <p>During FY 2009, JTCG/ME continued to: (i) implement a capabilities-based JMEM, accounting for newly fielded systems employing traditional and non-traditional damage mechanisms; (ii) expand existing databases to incorporate newly fielded weapons (i.e., Air-to-Surface, Surface-to-Surface Direct/Indirect Fire, and Anti-air); (iii) enhance collateral damage methods; and, improve methods for estimating weapons effects against above/below ground hardened target to include MOUT structures; (iv) improve connectivity to real time planning systems assessing time sensitive targets; and, (v) develop JMEM data for most critical Combatant Commander identified systems, reduce DVD-ROM update cycles through incremental updates; and develop tri-Service JMEM operation tools for JMEM/ FX and IO programs.</p> <p>Joint Aircraft Survivability Program (JASP)</p> <p>In FY 2009 the JASP continued work on 30 multi-year RDT&amp;E projects and initiated 17 new projects approved by the JASP Principal Members Steering Group and OSD/DOT&amp;E. In the area of susceptibility reduction, the JASP addressed improving directed energy infrared countermeasures, electronic countermeasures technology and techniques, aircrew situational awareness and immediate warfighter needs. In the area of vulnerability reduction, the JASP continued to address requirements for lighter and more effective armor, fuel containment, fire suppression; aircraft flare systems and aircrew and passenger protection. In aircraft survivability M&amp;S, the JASP continued to improve survivability M&amp;S credibility, address warfighter requirements for survivability data, integrate DIA threat missile models into threat engagement codes, improve the assessment of aircrew and passenger injuries, and address M&amp;S requirements identified by the joint aircraft survivability community.</p>					

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**B. Accomplishments/Planned Program (\$ in Millions)**

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p>JASP will apply resources to address aircraft occupant casualties and rotorcraft combat survivability. In the area of susceptibility reduction, the JASP will address improving directed energy infrared countermeasures, electronic countermeasures technology and techniques, aircrew situational awareness and immediate warfighter needs. In the area of vulnerability reduction, the JASP will continue 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 M&amp;S, the JASP will continue to improve survivability M&amp;S credibility, address warfighter requirements for survivability data, integrate DIA threat missile models into threat engagement codes, improve the assessment of aircrew and passenger injuries, and address M&amp;S requirements identified by the joint aircraft survivability community.</p> <p>The JCAT will continue to support the USMC, Army and Air Force by assessing combat damage incidents, training warfighters 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&amp;E.</p> <p>Test and Evaluation Independent Activities</p> <p>During FY 2010 funding will provide continuing analysis and analytical support for the Director, Operational Test and Evaluation, Title 10, United States Code, roles and responsibilities with regard to operational and live fire test and evaluation as the principal adviser to the Secretary of Defense and the USD(AT&amp;L) and as the principal test and evaluation official within the senior management of the DoD. Funding also supports the Director’s operational and live fire test resource requirements for the statutory strategic plan. This plan reflects the needs of the Department with respect to test and</p>					

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<b>B. Accomplishments/Planned Program (\$ in Millions)</b>					
<p>to provide CM expertise in the area of HFI in support of OCO. Our support will be distributed across all the Services as well as intelligence agencies and research and development activities.</p> <p>The Center will provide expertise to many organizations and will be actively involved in the following panels: the Technical Cooperation Program, Foreign Material Exploitation Working Group, Foreign Material Program Test and Evaluation Subcommittee, Joint Project Milari Working Group, Foreign Material Exploitation Working Group, Joint Expendable Countermeasures (JECM) Integrated Product Team, Joint Technical Coordinating Group for Munitions Effectiveness (JTTCG/ME), Infrared Countermeasures Test Resources and Requirements Study, Infrared Countermeasures Multi Sensing Symposia Working Group, Joint Aircraft Survivability Program and an OSD special interest working group, Joint IRCM T&amp;E working group.</p> <p>Joint Technical Coordinating Group for Munitions Effectiveness (JTTCG/ME)</p> <p>In support of operational commanders, DoD targeteers, weaponeers, and planners, the JTTCG/ME will develop and release JMEM Weaponeering System (JWS) v2.1 in December 2010 and Joint-Anti-air Combat Effectiveness System (J-ACE) Air Superiority (AS) v5.0 in July 2010.</p> <p>JWS v2.1 will provided a major capability increase to include Fast Integrated Structural Tool (FIST), Enhanced Penetration Cratering Effects (PCEffects), Precision Munitions Planning Tool (PMPT), Joint Smart Weapons Model (JSWM), Improved Ship Weaponeering and Estimation Tool, Mine methodology, and Hellfire weaponeering data, etc. FIST is the future JMEM operational-level tool that incorporates the integral modules from Building Analysis Module (BAM) and Hardened Target Module (HTM) to create a merged tool that generates weapon effectiveness and damage assessments against infrastructure targets to include buildings, bunkers, and tunnels. J-ACE v5.0 will provide a major capability increase to more fully consider anti-air missile effectiveness. The faster than real time calculations will address missile fly out, target evasive maneuver, miss distance, effects of countermeasures, fuze performance, missile lethality and target vulnerability. These key “kill chain”</p>					
	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>

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<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A		
<b>D. Acquisition Strategy</b> N/A		
<b>E. Performance Metrics</b> Performance Measure: Percentage of required products, such as test planning documents, munitions effectiveness manuals, tactics-techniques-procedures, threat characteristics, assessments, and reports that are developed and delivered to program managers and customers on time.		
Actual Performance and Goals		
Operational Test Activities and Analyses On-Time Completion Rate		
FY 2009 Actual 91%	FY 2010 Goal 93%	FY 2011 Goal 94%
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. DOT&E plans to achieve its goals for FY 2010 and FY 2011 through increased management emphasis on timely delivery of required products to customer activities.		

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