Missile Defense Agency (MDA) Exhibit R-2 RDT&E Bu			ate e bruary 20	07				
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes		R-1 NOMENCLATURE 0603895C BMD System Space Program						
COST (\$ in Thousands)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Total PE Cost	0	0	27,666	35,093	46,849	56,183	133,617	157,117
0207 MD Space Exp Center	0	0	5,000	10,000	30,000	30,000	30,000	30,000
0516 NFIRE	0	0	11,871	8,980	0	0	0	0
0517 Space Test Bed	0	0	10,000	15,000	15,000	25,000	101,000	124,000
0602 Program-Wide Support	0	0	795	1,113	1,849	1,183	2,617	3,117

Note: The Agency has consolidated funding for non-STSS space activities executed by the Space Center of Excellence in this Program Element:

- Missile Defense Space Experimentation Center (MDSEC) Initial funds made available in the STSS PE (0603693C) Project 0812, to begin laying ground work for standup of this center
- Near Field Infrared Experiment In FY07, funded in the STSS PE (0603693C) and Advanced Technology PE (0603175C); in FY06 in PE 0603175C; and in FY05 in PE 0603884C

A. Mission Description and Budget Item Justification

A.1 System Element Description

The Ballistic Missile Defense System Space Program will conduct a variety of space efforts to collect data and assess the utility of space systems -- and to assess the technical risk and viability of developing additional space layer capabilities.

The Near Field Infrared Experiment (NFIRE) technology effort will collect high and low resolution images of a boosting rocket to improve our understanding of exhaust plume phenomenology and plume-to-rocket body discrimination.

The Space Applications Center of Excellence will stand up and operate the Missile Defense Space Experimentation Center (MDSEC) to provide a place for MDA Space Layer elements to conduct flight experiments, test algorithms, and conduct concept exploration. There will be annual operating expenses for the MDSEC which will provide overhead functions that include security, configuration management, engineering support, and logistics support for all participants within the MDSEC.

		Date
Missile Defense Agency (MDA) Exhibit R-2 RDT&E Budget Item Justi	February 2007	
APPROPRIATION/BUDGET ACTIVITY	R-1 NOMENCLATURE	
RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	0603895C BMD System S	Space Program

MDSEC

The MDSEC will provide a centralized facility from which to explore new space data algorithms, and from which to operate MDA R&D satellites such as the Block 2006 STSS and NFIRE satellites.

One of the major developments within the MDSEC is the MDSEC Interchange System (MIS) which will provide a common architecture for the storage of MDA space data, the retrieval and playback of data, data mining, and algorithm development and testing. Interfaces between the MIS and the various sources of data (STSS, External Sensors Lab, NFIRE, STSS Surrogate Testbed and Defense Support Program) are a key component that will allow the MIS to be a central repository for MDA Space data.

The MDSEC Space Layer activities will include such things as near real-time infrared (IR) tracking experiments, IR sensor cueing, algorithm assessments, demonstrations of space sensor contributions to boost phase typing, system level discrimination and hit assessment, clutter mitigation, and innovative concept exploration.

NFIRE

The Near Field Infrared Experiment (NFIRE) technology effort project completes the program to collect near field phenomenology data for use in plume to hardbody handover algorithms for KEI and other interceptor programs.

We will use this data to validate the models and simulations that are fundamental to developing the guidance and endgame homing algorithms for boost phase interceptors. A secondary objective of the experiment is to collect hyper-temporal short wave infrared and visible data for assessing early launch detection and tracking capability. The experiment will include three plume signature mission types: targets of opportunity, dedicated fly-bys, and ground observations. NFIRE will carry a Laser Communication Terminal, to conduct communication experiments with the German Terra SAR-X satellite. These experiments will test low earth orbit satellite-to-ground and satellite-to-satellite capabilities of the terminal for potential incorporation into the Ballistic Missile Defense System. The laser communication experiments will be conducted on a non-interference basis with the other MDA missions. The NFIRE satellite will be operated from the Missile Defense Space Experimentation Center (MDSEC) by the MDA Space Applications Center of Excellence. Data products will be utilized by multiple programs to improve missile engagement performance.

Space Test Bed

The Space Test Bed is being explored as a potential solution to enhance BMDS capability in the future. Space systems have advantages over terrestrial based systems through increased access to ballistic missile targets, independent of adversary country size and threat trajectory. We believe that a mix of terrestrial and space-basing offers the most effective global defense against ballistic missiles.

		Date
Missile Defense Agency (MDA) Exhibit R-2 RDT&E Budget Item Just	February 2007	
APPROPRIATION/BUDGET ACTIVITY	R-1 NOMENCLATURE	
RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	0603895C BMD System S	Space Program

Near term funding for the space testbed program will be used to refine concepts and prepare to conduct focused experiments demonstrating the viability of the concepts.

A.2 System Element Budget Justification and Contribution to the Ballistic Missile Defense System (BMDS)

Under the management of the Space Applications Center of Excellence, this Ballistic Missile Defense Space System program element will plan, conduct and integrate multiple ground and space-dependent tests, demonstrations, and experiments that provide capability improvements, reduce developmental cycle times and/or improve integrated BMDS performance. Programs/projects include the Space Test Bed, the Near Field Infrared Experiment (NFIRE), and the Missile Defense Space Experimentation Center (MDSEC). In FY06, the NFIRE program was transferred from the Kinetic Energy Interceptor program element (PE 0603886C) to the Advanced Technology program element (PE 0603175C). In FY07, MDA has moved the NFIRE program and all associated funding into this program element.

MDSEC is a collaborative experimentation environment for all BMDS elements that rely on, experiment with, or seek to improve the BMDS capability by utilizing space-based, systems-derived data.

Programs currently interacting within the MDSEC activity are: STSS, NFIRE, External Sensors Laboratory (ESL), Project HERCULES, CONUS Kinetic Energy Interceptor (CKEI), C2BMC and others.

A.3 Major System Element Goals

Near Field Infrared Experiment (NFIRE)

- Launch the Near Field Infrared Experiment satellite
- Conduct multiple data collection missions against ground, air, space and ballistic missile targets
- Conduct low earth orbit satellite-to-satellite and satellite-to-ground laser communication experiments
- Use the data to validate the models and simulations that are fundamental to developing the navigation, guidance and control, and endgame homing algorithms, as well as laser communication proof of concept

Missile Defense Space Experimentation Center (MDSEC)

- Develop and Install MIS
- Conduct experiments to test algorithm validity for MD Space Systems
- Provide robust access to MDA space data for the BMDS community

Missile Defense Age			February 2007	
APPROPRIATION/BUDGET ACTIVITY		R-1 NOMENCLATUR		
RDT&E, DW/04 Advanced Compon	ent Developmer	0603895C BMD Sys	stem Space Program	
A.4 Major Events Schedule and I	<u>Description</u>			
Major Event	Project	Timeframe	Description	
Contract Activity				
Near Field Infrared Experiment				
TSP Delivery	0516	3Q FY 2006		
Ground Segment Readiness Review #1	0516	4Q FY 2006		
SV Integration and Test	0516	4Q FY 2006 - 2Q FY 2007		
Ground Segment Readiness Review #2	0516	1Q FY 2007		
LCT Delivery	0516	1Q FY 2007		
Launch	0516	3Q FY 2007		
On Orbit Operations	0516	3Q FY 2007 - 3Q FY 2009		
Missile Target Flight Test 2A	0516	4Q FY 2007		
Missile Target Flight Test 2B	0516	1Q FY 2008		
Laser Comm Terminal Operations	0516	1Q FY 2008 - 3Q FY 2008		
MDSEC	•			
MDSEC Interchange System (MIS)	0207	1Q FY 2007 - 4Q FY 2013		
Space-based IR Contributions	0207	1Q FY 2008 - 4Q FY 2008		

4 *of* 26

B. Program Change Summary	FY 2006	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2007 PB)	0	0	45,300	150,600
Current President's Budget (FY 2008 PB)	0	0	27,666	35,093
Total Adjustments	0	0	-17,634	-115,507
Congressional Specific Program Adjustments	0	0	0	0
Congressional Undistributed Adjustments	0	0	0	0
Reprogrammings	0	0	0	0
SBIR/STTR Transfer	0	0	0	0
Adjustments to Budget Years	0	0	-17,634	-115,507

FY08 decrease of \$17.634 million and FY09 decrease of \$115.507 million reflects MDA programmatic changes.

Missile Defense Agency (MDA) Exhibit R-2A RDT&E		ate e bruary 20	07					
APPROPRIATION/BUDGET ACTIVITY	R-1 NO	MENCLAT	URE					
RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P) 0603895C BMD System Space Program								
COST (\$ in Thousands)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
0207 MD Space Exp Center	0	0	5,000	10,000	30,000	30,000	30,000	30,000
RDT&E Articles Qty	0	0	0	0	0	0	0	0

A. Mission Description and Budget Item Justification

The Space Applications Center of Excellence will stand up and operate the Missile Defense Space Experimentation Center (MDSEC) to provide a place for MDA Space Layer elements to conduct flight experiments, test algorithms, and conduct concept exploration. There will be annual operating expenses for the MDSEC which will provide overhead functions that include security, configuration management, engineering support, and logistics support for all participants within the MDSEC.

One of the major developments within the MDSEC is the MDSEC Interchange System (MIS) which will provide a common architecture for the storage of MDA space data, the retrieval and playback of data, data mining, and algorithm development and testing. Interfaces between the MIS and the various sources of data (STSS, External Sensors Lab, NFIRE, STSS Surrogate Testbed and Defense Support Program) is a key component that will allow the MIS to be a central repository for MDA Space data.

The MDSEC Space Layer activities will include things such things as near real-time infrared (IR) and IR tracking experiments, IR sensor cueing, algorithm assessments, demonstrations of space sensor contributions to boost phase typing, system level discrimination and hit assessment, clutter mitigation, and innovative concept exploration.

B. Accomplishments/Planned Program

	FY 2006	FY 2007	FY 2008	FY 2009
MDSEC	0	0	5,000	10,000
RDT&E Articles (Quantity)	0	0	0	0

The MDSEC will provide a centralized physical and virtual structure for MDA Space Layer elements to conduct flight experiments, test algorithms and concept exploration. Initial activities were begun with the STSS Ground Segment (See PE 0603893C) in FY06 and FY07 to capture the requirements and extent of the MDSEC mission at the Joint National Integration Center at Schriever AFB CO

FY08 Planned Program

- Engineer and install a MIS that will
 - o Establish access to STSS data

Project: 0207 MD Space Exp Center

MDA Exhibit R-2A (PE 0603895C)

		Date
Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justific	cation	February 2007
APPROPRIATION/BUDGET ACTIVITY	R-1 NOMENCLATURE	
RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	0603895C BMD System S	Space Program

- o Provide for the exchange of archived and real-time data and data products from established and future BMDS programs
- o Establish MIS connectivity to X-Lab, MDA C-Net, BMDS elements and external users
- Integrate new MDSEC stakeholders, physically and virtually
 - o Support demonstration and development of Project Hercules algorithms
 - o Support KEI proof-of-concept experiments
- Expand infrastructure support to MDSEC stakeholders
- Evolve MDSEC security to accommodate changes

FY09 Planned Program

- Continue establishment of MIS
 - o Install and demonstrate initial capability
 - o Enhance capability and connectivity
- Demonstrate space-based IR sensor contributions to BMDS performance
 - o Identify X-Lab/MDSEC experiments to illustrate space sensor contributions
- Expand MDSEC to support the development of a ground testbed
- Conduct IR-IR Tracking Experiment Study
- Support system development of boost phase operational capability

C. Other Program Funding Summary

5 · · · · · · · · · · · · · · · · · · ·									
									Total
	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	Cost
PE 0603175C Ballistic Missile Defense Technology	147,270	193,307	118,569	109,540	116,014	121,008	127,917	131,291	1,064,916
PE 0603881C Ballistic Missile Defense Terminal Defense									
Segment	1,120,879	1,092,076	962,585	1,004,282	924,101	851,213	678,694	501,147	7,134,977
PE 0603882C Ballistic Missile Defense Midcourse Defense									
Segment	2,391,246	3,043,058	2,520,064	2,359,665	2,179,602	1,699,963	1,153,082	1,183,003	16,529,683
PE 0603883C Ballistic Missile Defense Boost Defense									
Segment	455,572	628,958	548,759	432,432	448,375	678,913	829,683	1,026,239	5,048,931
PE 0603884C Ballistic Missile Defense Sensors	284,297	514,129	778,163	984,963	939,417	791,701	723,843	603,585	5,620,098
PE 0603886C Ballistic Missile Defense System Interceptors	200,446	356,004	227,499	393,317	522,388	730,236	836,029	570,206	3,836,125
PE 0603888C Ballistic Missile Defense Test and Targets	610,619	601,782	586,150	628,364	662,984	681,511	696,037	705,210	5,172,657

Project: 0207 MD Space Exp Center

	Date	•••									
Missile Defense Agency (MDA) 1	February	February 2007									
APPROPRIATION/BUDGET ACTIVITY											
RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P) 0603895C BMD System Space Program											
				Total							
	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	Cost		
PE 0603889C Ballistic Missile Defense Products	387,402	0	0	0	0	0	0	0	387,402		
PE 0603890C Ballistic Missile Defense System Core	409,993	429,420	482,016	511,147	558,746	579,571	579,316	588,481	4,138,690		
PE 0603891C Special Programs - MDA	271,021	353,031	323,250	305,409	369,073	526,966	789,017	792,271	3,730,038		
PE 0603892C Ballistic Missile Defense Aegis	893,040	1,122,669	1,059,103	1,129,425	1,221,650	1,067,587	1,054,753	1,089,078	8,637,305		
PE 0603893C Space Tracking & Surveillance System	220,048	322,220	331,525	347,811	412,623	501,197	778,067	981,424	3,894,915		
PE 0603894C Multiple Kill Vehicle	48,370	3,370 144,362 271,151		352,741	461,179	618,263	673,477	842,905	3,412,448		
PE 0603896C BMD C2BMC	0	246,852	258,913	294,627	300,847	282,615	267,275	269,420	1,920,549		
PE 0603897C BMD Hercules	0	49,674	53,658	54,264	54,405	55,142	53,355	54,198	374,696		
PE 0603898C BMD Joint Warfighter Support	0	54,935	48,787	50,428	54,086	56,603	58,890	60,206	383,935		
PE 0603904C BMD Joint National Integration Center (JNIC)	0	110,629	104,012	106,985	111,542	111,947	113,592	115,287	773,994		
PE 0603905C BMD Concurrent Test and Operations	0	23,159	0	0	0	0	0	0	23,159		
PE 0603906C Regarding Trench	0	0	2,000	3,000	5,000	5,000	9,000	9,000	33,000		
PE 0605502C Small Business Innovative Research - MDA	133,105	0	0	0	0	0	0	0	133,105		
PE 0901585C Pentagon Reservation	14,874	15,527	6,058	6,376	4,490	4,725	4,801	4,877	61,728		
PE 0901598C Management Headquarters - MDA	98,609	87,059	85,906	86,453	70,355	69,855	69,855	69,855	637,947		

D. Acquisition Strategy

All functions and operations of the MDSEC are currently financed through a 10-year Joint National Integration Center Research and Development (JRD) Contract. The annual operating expenses are in the process of being consolidated one centralized delivery order on the JRD contract which will include core capabilities (labor and hardware) that are performed in the MDSEC and will support all of the MDSEC participants. One of the key efforts of the MDSEC is the MDSEC Interchange System (MIS). It will allow various entities to access space data and provide for the collaboration of efforts to further the Ballistic Missile Defense mission. The JRD contract was initiated to start the requirements assessment and design process begun in FY06 and continued in FY07 under the STSS Ground Segment element. It will continue this assessment and design process and begin a phased implementation phase over the next 2 - 3 years. As more stakeholders are introduced to the MDSEC, more Space Layer activities are expected. The next few years will be focused on demonstration of space-based IR sensor contributions to the BMDS beginning with near real-time radar IR and IR-IR tracking experiments using STSS data.

Project: 0207 MD Space Exp Center

Cost Categories: & Type	RDT&E, DW/04 Advance			unu i rototj	pes (Heber)	00000	95C BMD Sy	Stem Space	i i ogi um		
Contract Performing Method Activity & PYs FY 2007 Oblg FY 2008 Oblg FY 2009 Oblg Total Cost Categories: & Type Location Cost Cost Date	1. Product Development	Cosi(\$)	<u> </u>	1	T	FV 2007	<u> </u>	EV 2008		EV 2000	
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MDSEC Subtotal Product Development O	Cost Categories:		•			•		•			Cost
Contract Performing Total Award/ Award	_	a Type	Bocarion	Cost	Cost	Bute	Cost	Dute	Cost	Bute	
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Cost Categories: & Type Location Cost Cost Date Date Cost Date					FY 2007		FY 2008		FY 2009		Total
Subtotal Support Costs Remarks III. Test and Evaluation Cost (\$ in Thousands) Contract Performing Total Award/ Award/ Method Activity & PYs FY 2007 Oblg FY 2008 Oblg FY 2009 Oblg T Cost Categories: & Type Location Cost Cost Date Cos	Cost Cotogories		•			•		•			Cost
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Contract Performing Total Award/ Award/ Award/ Award/ Award/ Activity & PYs FY 2007 Oblg FY 2008 Oblg FY 2009 Oblg TY 2008 Oblg TY 2009 Oblg TY 2008 Oblg TY 2009	Subtotal Support Costs										
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Method Activity & PYs FY 2007 Oblg FY 2008 Oblg FY 2009 Oblg T Cost Categories: & Type Location Cost Cost Date Cost	Subtotal Support Costs Remarks	Cost (\$	in Thousands)								
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Subtotal Test and Evaluation	Subtotal Support Costs Remarks	Contract	Performing		TV 2007	Award/	TV 2000	Award/	EV 2000	Award/	
	Subtotal Support Costs Remarks III. Test and Evaluation	Contract Method	Performing Activity &	PYs		Award/ Oblg		Award/ Oblg		Award/ Oblg	Total
Remarks	Subtotal Support Costs Remarks III. Test and Evaluation Cost Categories:	Contract Method	Performing Activity &	PYs		Award/ Oblg		Award/ Oblg		Award/ Oblg	Total Cost
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	Subtotal Support Costs Remarks III. Test and Evaluation Cost Categories: Subtotal Test and Evaluation	Contract Method	Performing Activity &	PYs		Award/ Oblg		Award/ Oblg		Award/ Oblg	

Project: 0207 MD Space Exp Center

MDA Exhibit R-3 (PE 0603895C)

	UNCLASSIFIED											
Missile	Defense Ag	ency (MDA) Exhil	bit R-3 RDT&	st Analysis	nalysis Date February 2007							
APPROPRIATION/BUDGET	R-1 NO	MENCLATUR	₹E									
RDT&E, DW/04 Advanced	d Compone	ent Development	and Prototy	pes (ACD&I	P) 060389	95C BMD Sys	stem Space F	Program				
IV. Management Services Cost (\$ in Thousands)												
				,	FY 2007		FY 2008		FY 2009			
	Contract	Performing	Total	,	Award/		Award/		Award/			
	Method	Activity &	PYs	FY 2007	Oblg	FY 2008	Oblg	FY 2009	Oblg	Total		
Cost Categories:	& Type	Location	Cost	Cost	Date	Cost	Date	Cost	Date	Cost		
MDSEC												
JNIC Research and Development Contractor	CPAF	JNIC/CO	0	0	N/A	5,000	2Q	10,000	2Q	15,000		
Subtotal Management Services			0	0		5,000		10,000		15,000		
Remarks												
Project Total Cost			0	0		5,000		10,000		15,000		
Remarks												

Project: 0207 MD Space Exp Center

MDA Exhibit R-3 (PE 0603895C)

Missile Defens	se A	gen	<u>су</u> (І	MD.	4) E:	xhib	it R-	4 S	ched	dule	Pro	file									Dat Fe l		ary	200	07							
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component													R					ATU O S y		m S	pac	e P	rog	ran	1							
Fiscal Year		20	06			200)7			200	08			20	09			20	10			20)11			20	012			20	13	
	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
MDSEC																																
MDSEC Interchange System (MIS)					식	_	_	4	_			_												-		+		+				
Radar-IR Tracking Experiment									샂	-A																						
Space-based IR Contributions									샞		_	-A																				
IR-IR Tracking Experiment													식	- ∆																		
Expand MDSEC Facility for Ground Testbed													식							\blacksquare												
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Project: 0207 MD Space Exp Center

MDA Exhibit R-4 (PE 0603895C)

					Da	te		
Missile Defense Age	ency (MDA) Ex	hibit R-4A Sch	edule Detail		Fe	bruary 2007		
APPROPRIATION/BUDGET ACTIVITY				R-1 NOMENCLA	TURE			
RDT&E, DW/04 Advanced Component Dev	velopment and	1 Prototypes (/	ACD&P)	0603895C BMD) System Spac	e Program		
Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
MDSEC								
MDSEC Interchange System (MIS)		1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q
Security			1Q-4Q					
Radar-IR Tracking Experiment			1Q-2Q					
Space-based IR Contributions			1Q-4Q					
IR-IR Tracking Experiment				1Q-2Q				
Expand MDSEC Facility for Ground Testbed				1Q-4Q	1Q-4Q			

Project: 0207 MD Space Exp Center

Missile Defense Agency (MDA) Exhibit R-2A RDT&E	Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification									
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes	(ACD&P)		MENCLAT 95C BMD S	_	ce Progran	n				
COST (\$ in Thousands)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013		
0516 NFIRE	0	0	11,871	8,980	0	0	0	0		
RDT&E Articles Qty	0	0	0	0	0	0	0	0		

Note: FY 2007 Funding for the NFIRE Program is split between the Advance Technology Program Element 0603175C and STSS Program Element 0603893C. Because the NFIRE launch will take place in FY 2007, the RDT&E article (1) will be documented in PE 0603893C.

For FY08, this PE will provide funding for On-Orbit data collection and analysis for the Primary NFIRE Satellite as well as for the Laser Communications Terminal

A. Mission Description and Budget Item Justification

The Near Field Infrared Experiment (NFIRE) technology effort will collect high and low resolution images of a boosting rocket to improve our understanding of exhaust plume phenomenology and plume-to-rocket body discrimination. We will use this data to validate the models and simulations that are fundamental to developing the guidance and endgame homing algorithms for boost phase interceptors. A secondary objective of the experiment is to collect hyper-temporal short wave infrared and visible data for assessing early launch detection and tracking capability. The experiment will include three plume signature mission types: targets of opportunity, dedicated fly-bys, and ground observations. Targets of opportunity may include aircraft flights, space launches and missile tests at a viewing distance of 100 to 1000 kilometers. Dedicated fly-bys are high resolution observations of a dedicated target vehicle at a range of less than 10 kilometers. Ground observations may include bright burning events such as forest fires, volcanoes, and static tests of rocket engines. In addition to the plume data collections, NFIRE will carry a Laser Communication Terminal, to conduct communication experiments with the German Terra SAR-X satellite. These experiments will test low earth orbit satellite-to-ground and satellite-to-satellite capabilities of the terminal for potential incorporation into the Ballistic Missile Defense System. The laser communication experiments will be conducted on a non-interference basis with the other MDA missions. The NFIRE satellite will be operated from the Missile Defense Space Experimentation Center (MDSEC) by the MDA Space Applications Center of Excellence. Data products will be utilized by multiple programs to improve missile engagement performance.

Project: 0516 NFIRE

MDA Exhibit R-2A (PE 0603895C)

Line Item 85 -

		Date
Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justifi	cation	February 2007
APPROPRIATION/BUDGET ACTIVITY	R-1 NOMENCLATURE	
RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	0603895C BMD System S	Space Program

B. Accomplishments/Planned Program				
	FY 2006	FY 2007	FY 2008	FY 2009
NFIRE	0	0	11,871	8,980
RDT&E Articles (Quantity)	0	0	0	0

Note: FY06 Accomplishments are written in the Program Element 0603175C. FY07 Planned Program activities are captured in the STSS Program Element 0603893C; Cost Categories (R3) and Schedules (R4) are included in PE 0603893C as well. In FY07, funding is split between STSS PE 0603893C and BMD Technology PE 0603175C

FY08 Planned Program

- Launch Missile Target Flight Test 2B
- Continue On-Orbit Operations at the MDSEC
- Continue data collection and analysis on position/orientation of Missile 2A and Missile 2B relative to their exhaust plume in order to be able to predict future position and velocity of missile body as well as assess the impact of the earth, earth limb, and space backgrounds
- Conduct laser communications experiments to assess the viability of the technology for use by the BMDS and STSS Follow-on

FY09 Planned Program

• Continue On-Orbit Operations at the MDSEC to support data collection and analysis until satellite degradation

C. Other Program Funding Summary

0 0									
									Total
	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	Cost
PE 0603175C Ballistic Missile Defense Technology	147,270	193,307	118,569	109,540	116,014	121,008	127,917	131,291	1,064,916
PE 0603881C Ballistic Missile Defense Terminal Defense Segment	1,120,879	1,092,076	962,585	1,004,282	924,101	851,213	678,694	501,147	7,134,977
PE 0603882C Ballistic Missile Defense Midcourse Defense Segment	2,391,246	3,043,058	2,520,064	2,359,665	2,179,602	1,699,963	1,153,082	1,183,003	16,529,683
PE 0603883C Ballistic Missile Defense Boost Defense Segment	455,572	628,958	548,759	432,432	448,375	678,913	829,683	1,026,239	5,048,931
PE 0603884C Ballistic Missile Defense Sensors	284,297	514,129	778,163	984,963	939,417	791,701	723,843	603,585	5,620,098
PE 0603886C Ballistic Missile Defense System Interceptors	200,446	356,004	227,499	393,317	522,388	730,236	836,029	570,206	3,836,125
PE 0603888C Ballistic Missile Defense Test and Targets	610,619	601,782	586,150	628,364	662,984	681,511	696,037	705,210	5,172,657
			•	•	•		•		•

Project: 0516 NFIRE MDA Exhibit R-2A (PE 0603895C)

Exhibit R-2A	RDT&E Pro	siect Tustific	eation		Date February	2007		
			R-1 NOMENO					
nent and 11	ototypes (11	CDQ1)	0003073 C D	WID System	Space 110g	1 4111		Total
FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	Cost
387,402	0	0	0	0	0	0	0	387,402
409,993	429,420	482,016	511,147	558,746	579,571	579,316	588,481	4,138,690
271,021	353,031	323,250	305,409	369,073	526,966	789,017	792,271	3,730,038
893,040	1,122,669	1,059,103	1,129,425	1,221,650	1,067,587	1,054,753	1,089,078	8,637,305
220,048	322,220	331,525	347,811	412,623	501,197	778,067	981,424	3,894,915
48,370	144,362	271,151	352,741	461,179	618,263	673,477	842,905	3,412,448
0	246,852	258,913	294,627	300,847	282,615	267,275	269,420	1,920,549
0	49,674	53,658	54,264	54,405	55,142	53,355	54,198	374,696
0	54,935	48,787	50,428	54,086	56,603	58,890	60,206	383,935
0	110,629	104,012	106,985	111,542	111,947	113,592	115,287	773,994
0	23,159	0	0	0	0	0	0	23,159
0	0	2,000	3,000	5,000	5,000	9,000	9,000	33,000
133,105	0	0	0	0	0	0	0	133,105
14,874	15,527	6,058	6,376	4,490	4,725	4,801	4,877	61,728
98,609	87,059	85,906	86,453	70,355	69,855	69,855	69,855	637,947
	FY 2006 387,402 409,993 271,021 893,040 220,048 48,370 0 0 0 0 133,105 14,874	ment and Prototypes (A FY 2006 FY 2007 387,402 0 409,993 429,420 271,021 353,031 893,040 1,122,669 220,048 322,220 48,370 144,362 0 246,852 0 49,674 0 54,935 0 110,629 0 23,159 0 0 133,105 0 14,874 15,527	ment and Prototypes (ACD&P) FY 2006 FY 2007 FY 2008 387,402 0 0 409,993 429,420 482,016 271,021 353,031 323,250 893,040 1,122,669 1,059,103 220,048 322,220 331,525 48,370 144,362 271,151 0 246,852 258,913 0 49,674 53,658 0 54,935 48,787 0 110,629 104,012 0 23,159 0 0 0 2,000 133,105 0 0 14,874 15,527 6,058	FY 2006 FY 2007 FY 2008 FY 2009 387,402 0 0 0 409,993 429,420 482,016 511,147 271,021 353,031 323,250 305,409 893,040 1,122,669 1,059,103 1,129,425 220,048 322,220 331,525 347,811 48,370 144,362 271,151 352,741 0 246,852 258,913 294,627 0 49,674 53,658 54,264 0 54,935 48,787 50,428 0 110,629 104,012 106,985 0 0 2,000 3,000 133,105 0 0 0 14,874 15,527 6,058 6,376	R-1 NOMENCLATURE 0603895C BMD System FY 2006 FY 2007 FY 2008 FY 2009 FY 2010 387,402 0 0 0 0 409,993 429,420 482,016 511,147 558,746 271,021 353,031 323,250 305,409 369,073 893,040 1,122,669 1,059,103 1,129,425 1,221,650 220,048 322,220 331,525 347,811 412,623 48,370 144,362 271,151 352,741 461,179 0 246,852 258,913 294,627 300,847 0 49,674 53,658 54,264 54,405 0 54,935 48,787 50,428 54,086 0 110,629 104,012 106,985 111,542 0 0 2,000 3,000 5,000 133,105 0 0 0 0 14,874 15,527 6,058 6,376 4,490	Exhibit R-2A RDT&E Project Justification R-1 NOMENCLATURE 0603895C BMD System Space Programment and Prototypes (ACD&P) FY 2006 FY 2007 FY 2008 FY 2009 FY 2010 FY 2011 387,402 0 </td <td>Exhibit R-2A RDT&E Project Justification R-1 NOMENCLATURE 0603895C BMD System Space Program FY 2006 FY 2007 FY 2008 FY 2009 FY 2010 FY 2011 FY 2012 387,402 0</td> <td> R-1 NOMENCLATURE NOMENCLATURE </td>	Exhibit R-2A RDT&E Project Justification R-1 NOMENCLATURE 0603895C BMD System Space Program FY 2006 FY 2007 FY 2008 FY 2009 FY 2010 FY 2011 FY 2012 387,402 0	R-1 NOMENCLATURE NOMENCLATURE

Project: 0516 NFIRE MDA Exhibit R-2A (PE 0603895C)

Product Develonment	Cost (\$ i	in Thousands)				95C BMD Sy	-			
1. I Toduct Development		III THOUSANGS)			FY 2007		FY 2008		FY 2009	
	Contract	Performing	Total		Award/		Award/		Award/	
	Method	Activity &	PYs	FY 2007	Oblg	FY 2008	Oblg	FY 2009	Oblg	Total
Cost Categories:	& Type	Location	Cost	Cost	Date	Cost	Date	Cost	Date	Cost
Subtotal Product Development										
Remarks	.11								<u>l</u>	
II. Support Costs Cost	(\$ in Tho	ucande)								
11. Support Costs Cost		usurus)			FY 2007		FY 2008		FY 2009	
	Contract	Performing	Total		Award/		Award/		Award/	
	Method	Activity &	PYs	FY 2007	Oblg	FY 2008	Oblg	FY 2009	Oblg	Total
Cost Categories:	& Type	Location	Cost	Cost	Date	Cost	Date	Cost	Date	Cost
Subtotal Support Costs	31									
Remarks	<u>.ll</u>	I.		<u> </u>					L	
Kemarks										
III. Test and Evaluation	Cost (\$	in Thousands)								
III. Test and Evaluation	Cost (\$1	in Thousanus)			FY 2007		FY 2008		FY 2009	
	Contract	Performing	Total		Award/		Award/		Award/	
	Method	Activity &	PYs	FY 2007	Oblg	FY 2008	Oblg	FY 2009	Oblg	Total
Cost Categories:	& Type	Location	Cost	Cost	Date	Cost	Date	Cost	Date	Cost
	31									
NFIRE				0		0		0		0
NFIRE Subtotal Test and Evaluation			0	0				U		U

Project: 0516 NFIRE

Line Item 85 - 15 of 26

				UNCLAS	SIFIED					
Missile	e Defense Ag	ency (MDA) Exhi	ibit R-3 RDT&	zE Project Cos	st Analysis		Date Febru	uary 2007		
APPROPRIATION/BUDGET	ACTIVITY				R-1 NO	MENCLATUI	RE			
RDT&E, DW/04 Advance	d Compone	ent Development	t and Prototy	pes (ACD&I	P) 060389	5C BMD Sys	stem Space I	Program		
IV. Management Servic	es Cost (\$ in Thousand	s)							
					FY 2007		FY 2008		FY 2009	
	Contract	Performing	Total		Award/		Award/		Award/	
	Method	Activity &	PYs	FY 2007	Oblg	FY 2008	Oblg	FY 2009	Oblg	Total
Cost Categories:	& Type	Location	Cost	Cost	Date	Cost	Date	Cost	Date	Cost
NFIRE										
JNIC Research and Development Contractor (JRDC)	CPAF	JNIC/ CO	0	0	N/A	11,871	20	8,980	20	20,851
	CPAF	CO	0	0	N/A		2Q		2Q	
Subtotal Management Services			0	0		11,871		8,980		20,851
Remarks										
D. C. W. LG	1	T		o I		11.051		0.000		20.051
Project Total Cost			0	0		11,871		8,980		20,851
Remarks										

Project: 0516 NFIRE MDA Exhibit R-3 (PE 0603895C)

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Near Field Infrared Experiment	ı	1	Ι Δ	I	ı	1		1 1				1 1	l				I		I	I	ı	ı	ı	-1				I	I	ī	I	1	I
TSP Delivery				A	_	Δ																											
SV Integration and Test					T	Δ																											
Ground Segment Readiness Review #1				^																\vdash		+	+	_									
Ground Segment Readiness Review #2				-	A																-	+	+	_					┢				
LCT Delivery					▲		_												L			\perp	+	_									
Launch							Δ																										
Missile Target Flight Test 2A								Δ														_											
Missile Target Flight Test 2B									Δ												┡	_							┡				
Laser Comm Terminal Operations									∠		ot = 100								L	L		┸	_										
On Orbit Operations							Δ								₽														L				
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Project: 0516 NFIRE MDA Exhibit R-4 (PE 0603895C)

Line Item 85 - 17 of 26

Missile Defense	Agency (MDA) Ex	khibit R-4A Sch	edule Detail		Dat Fel	e bruary 2007		
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component 1	Development and	d Prototypes (R-1 NOMENCL <i>A</i> 0603895C BMI		e Program		
Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Near Field Infrared Experiment								
TSP Delivery	3Q							
SV Integration and Test	4Q	1Q-2Q						
Ground Segment Readiness Review #1	4Q							
Ground Segment Readiness Review #2		1Q						
LCT Delivery		1Q						
Launch		3Q						
Missile Target Flight Test 2A		4Q						
Missile Target Flight Test 2B			1Q					
Laser Comm Terminal Operations			1Q-3Q					
On Orbit Operations		3Q-4Q	1Q-4Q	1Q-3Q				

Project: 0516 NFIRE MDA Exhibit R-4A (PE 0603895C)

Line Item 85 -

Missile Defense Agency (MDA) Exhibit R-2A RDT&E	Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification									
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes	(ACD&P)		MENCLAT 5C BMD S	_	ce Progran	n				
COST (\$ in Thousands)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013		
0517 Space Test Bed	0	0	10,000	15,000	15,000	25,000	101,000	124,000		
RDT&E Articles Qty	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

The Space Test Bed is being explored as a potential solution to enhance BMDS capability in the future. Space systems have advantages over terrestrial based systems through increased access to ballistic missile targets, independent of adversary country size and threat trajectory. We believe that a mix of terrestrial and space-basing offers the most effective global defense against ballistic missiles.

Near term funding for the space testbed program will be used to refine concepts and prepare to conduct focused experiments demonstrating the viability of the concepts.

B. Accomplishments/Planned Program

	FY 2006	FY 2007	FY 2008	FY 2009
Space Test Bed Proof of Concept	0	0	10,000	15,000
RDT&E Articles (Quantity)	0	0	0	0

FY08 Planned Program

- Initiate formal steps for potential integration into the BMDS architecture
- Mature planning for early Proof of Concept component demonstrations
- Draft operation concepts in the context of a multi-layer architecture
- Identify Proof of Concept vendor sources for demo components and subassemblies
- Develop multi-year technology and risk reduction investment plan
- Begin development of Proof of Concept Master Program Phasing Schedule
- Identify Proof of Concept long lead items
- Mature options for acquisition strategy

FY09 Planned Program

- Mature approach toward integration into the BMDS architecture
- Begin Proof of Concept procurement and execution of component demonstrations
- Continue maturation of Space Basing program plan

Project: 0517 Space Test Bed

MDA Exhibit R-2A (PE 0603895C)

		Date
Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justific	cation	February 2007
APPROPRIATION/BUDGET ACTIVITY	R-1 NOMENCLATURE	
RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	0603895C BMD System S	Space Program

- Identify BMDS capability off-ramps and key external program dependencies
- Mature the Operational Concept; continue coordination with C2BMC
- Begin advanced activities to develop acquisition strategy

C. Other Program Funding Summary

or other ringram runting summary									
									Total
	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	Cost
PE 0603175C Ballistic Missile Defense Technology	147,270	193,307	118,569	109,540	116,014	121,008	127,917	131,291	1,064,916
PE 0603881C Ballistic Missile Defense Terminal Defense	1 120 070	1 000 076	062.505	1 004 202	024 101	051.012	(70 (04	501.147	7 124 077
Segment	1,120,879	1,092,076	962,585	1,004,282	924,101	851,213	678,694	501,147	7,134,977
PE 0603882C Ballistic Missile Defense Midcourse Defense Segment	2,391,246	3,043,058	2,520,064	2,359,665	2,179,602	1,699,963	1,153,082	1,183,003	16,529,683
PE 0603883C Ballistic Missile Defense Boost Defense Segment	455,572	628,958	548,759	432,432	448,375	678,913	829,683	1,026,239	5,048,931
PE 0603884C Ballistic Missile Defense Sensors	284,297	514,129	778,163	984,963	939,417	791,701	723,843	603,585	5,620,098
PE 0603886C Ballistic Missile Defense System Interceptors	200,446	356,004	227,499	393,317	522,388	730,236	836,029	570,206	3,836,125
PE 0603888C Ballistic Missile Defense Test and Targets	610,619	601,782	586,150	628,364	662,984	681,511	696,037	705,210	5,172,657
PE 0603889C Ballistic Missile Defense Products	387,402	0	0	0	0	0	0	0	387,402
PE 0603890C Ballistic Missile Defense System Core	409,993	429,420	482,016	511,147	558,746	579,571	579,316	588,481	4,138,690
PE 0603891C Special Programs - MDA	271,021	353,031	323,250	305,409	369,073	526,966	789,017	792,271	3,730,038
PE 0603892C Ballistic Missile Defense Aegis	893,040	1,122,669	1,059,103	1,129,425	1,221,650	1,067,587	1,054,753	1,089,078	8,637,305
PE 0603893C Space Tracking & Surveillance System	220,048	322,220	331,525	347,811	412,623	501,197	778,067	981,424	3,894,915
PE 0603894C Multiple Kill Vehicle	48,370	144,362	271,151	352,741	461,179	618,263	673,477	842,905	3,412,448
PE 0603896C BMD C2BMC	0	246,852	258,913	294,627	300,847	282,615	267,275	269,420	1,920,549
PE 0603897C BMD Hercules	0	49,674	53,658	54,264	54,405	55,142	53,355	54,198	374,696
PE 0603898C BMD Joint Warfighter Support	0	54,935	48,787	50,428	54,086	56,603	58,890	60,206	383,935
PE 0603904C BMD Joint National Integration Center (JNIC)	0	110,629	104,012	106,985	111,542	111,947	113,592	115,287	773,994
PE 0603905C BMD Concurrent Test and Operations	0	23,159	0	0	0	0	0	0	23,159
PE 0603906C Regarding Trench	0	0	2,000	3,000	5,000	5,000	9,000	9,000	33,000
PE 0605502C Small Business Innovative Research - MDA	133,105	0	0	0	0	0	0	0	133,105
PE 0901585C Pentagon Reservation	14,874	15,527	6,058	6,376	4,490	4,725	4,801	4,877	61,728
PE 0901598C Management Headquarters - MDA	98,609	87,059	85,906	86,453	70,355	69,855	69,855	69,855	637,947

Project: 0517 Space Test Bed

MDA Exhibit R-2A (PE 0603895C)

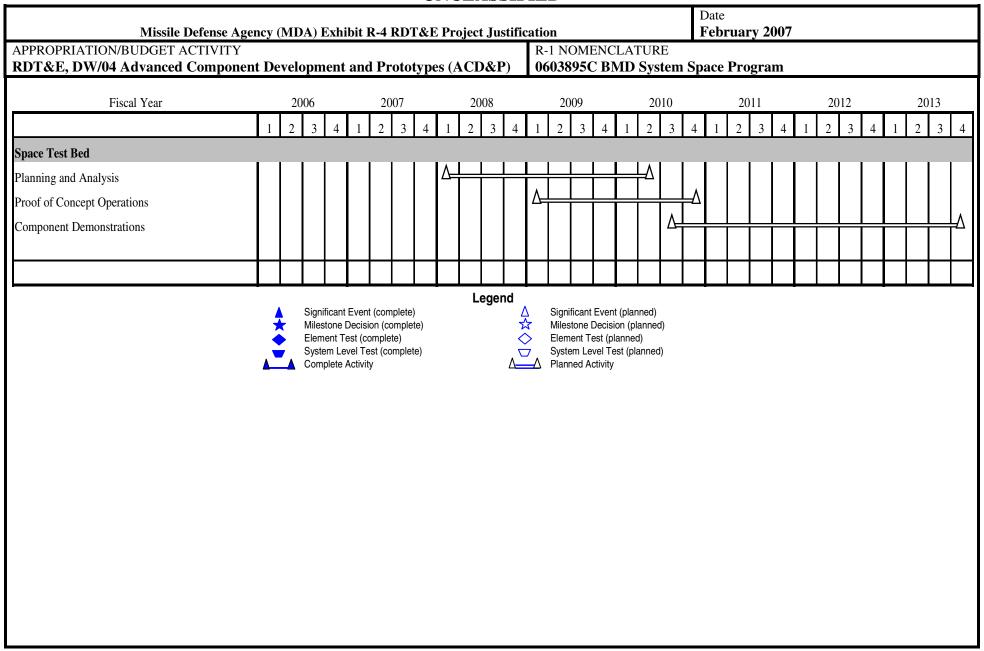
RDT&E, DW/04 Advance I. Product Development				<u> </u>	, 00000	95C BMD Sy	Stelli Spuce	- 1 081 4444		
i. Product Development	Cost (\$1	m inousanus)			FY 2007	I	FY 2008		FY 2009	
	Contract	Performing	Total		Award/		Award/		Award/	
	Method	Activity &	PYs	FY 2007	Oblg	FY 2008	Oblg	FY 2009	Oblg	Total
Cost Categories:	& Type	Location	Cost	Cost	Date	Cost	Date	Cost	Date	Cost
Subtotal Product Development	æ Type	Location	Cost	Cost	Date	Cost	Bate	Cost	Date	Cost
Remarks										
Remarks										
I. Support Costs Cost	(\$ in Tho	usands)								
**		,			FY 2007		FY 2008		FY 2009	
	Contract	Performing	Total		Award/		Award/		Award/	
							011	EX. 2000	01.1	Tr. 4.1
	Method	Activity &	PYs	FY 2007	Oblg	FY 2008	Oblg	FY 2009	Oblg	Total
Cost Categories:		Activity & Location	PYs Cost	FY 2007 Cost	Oblg Date	FY 2008 Cost	Oblg Date	Cost	Oblg Date	Cost
_	Method & Type	•			•		_		_	
Subtotal Support Costs		•			•		_		_	
Subtotal Support Costs		•			•		_		_	
Subtotal Support Costs		•			•		_		_	
Subtotal Support Costs Remarks	& Type	Location	Cost		•		_		_	
Subtotal Support Costs Remarks	& Type	Location	Cost		Date		Date		Date	
Subtotal Support Costs Remarks	& Type Cost (\$	Location in Thousands)	Cost		•		_		_	
Subtotal Support Costs Remarks	& Type	Location	Cost		Date		Date	Cost	Date	
Subtotal Support Costs Remarks	& Type Cost (\$	Location in Thousands)	Cost		Date FY 2007		Date FY 2008		Date FY 2009	
Subtotal Support Costs Remarks III. Test and Evaluation	& Type Cost (\$ 2)	Location in Thousands) Performing	Cost	Cost	Date FY 2007 Award/	Cost	Date FY 2008 Award/	Cost	Date FY 2009 Award/	Cost
Cost Categories: Subtotal Support Costs Remarks III. Test and Evaluation Cost Categories: Subtotal Test and Evaluation	& Type Cost (\$ Contract Method	Location in Thousands) Performing Activity &	Cost Total PYs	Cost FY 2007	Date FY 2007 Award/ Oblg	Cost FY 2008	Date FY 2008 Award/ Oblg	Cost FY 2009	Date FY 2009 Award/ Oblg	Cost

Project: 0517 Space Test Bed

MDA Exhibit R-3 (PE 0603895C)

							Date	• • • • •		
		gency (MDA) Exhi	ibit R-3 RDT8	kE Project Justif				uary 2007		
APPROPRIATION/BUDGET		4 Danielania	4 . J.D., . 4 . 4	(ACD OD)		MENCLATUR				
RDT&E, DW/04 Advanced				pes (ACD&P)	060389	5C BMD Sys	tem Space r	'rogram		
IV. Management Service	es Cost (\$ in Thousands	s)						_	
				i	FY 2007		FY 2008		FY 2009	
	Contract	Performing	Total		Award/		Award/		Award/	
	Method	Activity &	PYs	FY 2007	Oblg	FY 2008	Oblg	FY 2009	Oblg	Total
Cost Categories:	& Type	Location	Cost	Cost	Date	Cost	Date	Cost	Date	Cost
Space Test Bed Proof of Concept				I						
Planning and Analysis	Various	Various	0	0	N/A	10,000	1Q			10,000
Proof of Concept Operations	Various	Various	0	0	N/A	0	N/A	15,000	1Q	15,000
Subtotal Management Services			0	0		10,000		15,000		25,000
Project Total Cost			0	0		10,000		15,000		25,000

Project: 0517 Space Test Bed



Project: 0517 Space Test Bed

Line Item 85 -

APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)				R-1 NOMENCLATURE 0603895C BMD System Space Program					
Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	
Space Test Bed									
Planning and Analysis			1Q-4Q	1Q-2Q					
Proof of Concept Operations				1Q-4Q	1Q-4Q				
Component Demonstrations					3Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	

Project: 0517 Space Test Bed

MDA Exhibit R-4A (PE 0603895C)

Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification Date February 2007								
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes		MENCLAT 95C BMD S	_	ce Progran	1			
COST (\$ in Thousands)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
0602 Program-Wide Support	0	0	795	1,113	1,849	1,183	2,617	3,117
RDT&E Articles Qty	0	0	0	0	0	0	0	0

A. Mission Description and Budget Item Justification

Program-Wide Support provides funding for common non-headquarters support functions across the entire program such as strategic planning, program integration, business management, cost estimating, contracting, and financial management, to include preparation of financial statements, reimbursement of financial services provided by DFAS, internal review and audit, earned-value management, and program assessment. Includes costs for both government civilians performing these functions, as well as outside services and support contractors that augment government staff in these areas. Many of these costs reside within the Missile Defense Agency Executing Agents in the Services: Army Space and Missile Defense Command, Army PEO Space and Missile Defense, Office of Naval Research, and various Air Force laboratory and acquisition activities, although some functions and costs within this program element are performed by MDA employees assigned within the National Capital Region (NCR). Other costs included herein provide facility capabilities for MDA Executing Agent locations, such as physical and technical security, legal services, travel and training, office and equipment leases, utilities and communications, supplies and maintenance, and similar operating expenses. Also includes funding for charges on canceled appropriations in accordance with Public Law 101-510, legal settlements, and foreign currency fluctuation on a limited number of foreign contracts.

B. Accomplishments/Planned Program

	FY 2006	FY 2007	FY 2008	FY 2009
Civilian Salaries and Support	0	0	795	1,113
RDT&E Articles (Quantity)	0	0	0	0

See Section A: Mission Description and Budget Item Justification

Project: 0602 Program-Wide Support

Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justifi	cation	Date February 2007
APPROPRIATION/BUDGET ACTIVITY	R-1 NOMENCLATURE	Testualy 2007
RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	0603895C BMD System S	Space Program

C .	Other	Program	Funding	Summary

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									Total
	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	Cost
PE 0603175C Ballistic Missile Defense Technology	147,270	193,307	118,569	109,540	116,014	121,008	127,917	131,291	1,064,916
PE 0603881C Ballistic Missile Defense Terminal Defense	1 120 970	1 002 076	062.595	1 004 292	024 101	051 012	679.604	501 147	7 124 077
Segment	1,120,879	1,092,076	962,585	1,004,282	924,101	851,213	678,694	501,147	7,134,977
PE 0603882C Ballistic Missile Defense Midcourse Defense Segment	2,391,246	3,043,058	2,520,064	2,359,665	2,179,602	1,699,963	1,153,082	1,183,003	16,529,683
PE 0603883C Ballistic Missile Defense Boost Defense Segment	455,572	628,958	548,759	432,432	448,375	678,913	829,683	1,026,239	5,048,931
PE 0603884C Ballistic Missile Defense Sensors	284,297	514,129	778,163	984,963	939,417	791,701	723,843	603,585	5,620,098
PE 0603886C Ballistic Missile Defense System Interceptors	200,446	356,004	227,499	393,317	522,388	730,236	836,029	570,206	3,836,125
PE 0603888C Ballistic Missile Defense Test and Targets	610,619	601,782	586,150	628,364	662,984	681,511	696,037	705,210	5,172,657
PE 0603889C Ballistic Missile Defense Products	387,402	0	0	0	0	0	0	0	387,402
PE 0603890C Ballistic Missile Defense System Core	409,993	429,420	482,016	511,147	558,746	579,571	579,316	588,481	4,138,690
PE 0603891C Special Programs - MDA	271,021	353,031	323,250	305,409	369,073	526,966	789,017	792,271	3,730,038
PE 0603892C Ballistic Missile Defense Aegis	893,040	1,122,669	1,059,103	1,129,425	1,221,650	1,067,587	1,054,753	1,089,078	8,637,305
PE 0603893C Space Tracking & Surveillance System	220,048	322,220	331,525	347,811	412,623	501,197	778,067	981,424	3,894,915
PE 0603894C Multiple Kill Vehicle	48,370	144,362	271,151	352,741	461,179	618,263	673,477	842,905	3,412,448
PE 0603896C BMD C2BMC	0	246,852	258,913	294,627	300,847	282,615	267,275	269,420	1,920,549
PE 0603897C BMD Hercules	0	49,674	53,658	54,264	54,405	55,142	53,355	54,198	374,696
PE 0603898C BMD Joint Warfighter Support	0	54,935	48,787	50,428	54,086	56,603	58,890	60,206	383,935
PE 0603904C BMD Joint National Integration Center (JNIC)	0	110,629	104,012	106,985	111,542	111,947	113,592	115,287	773,994
PE 0603905C BMD Concurrent Test and Operations	0	23,159	0	0	0	0	0	0	23,159
PE 0603906C Regarding Trench	0	0	2,000	3,000	5,000	5,000	9,000	9,000	33,000
PE 0605502C Small Business Innovative Research - MDA	133,105	0	0	0	0	0	0	0	133,105
PE 0901585C Pentagon Reservation	14,874	15,527	6,058	6,376	4,490	4,725	4,801	4,877	61,728
PE 0901598C Management Headquarters - MDA	98,609	87,059	85,906	86,453	70,355	69,855	69,855	69,855	637,947

Project: 0602 Program-Wide Support