Missile Defense Agency (MDA) Exhibit R-2 RDT&E Budget Item Justification					y 2008			
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)			R-1 NOMENCLATURE 0603892C Ballistic Missile Defense Aegis					
COST (\$ in Thousands)	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	
Total PE Cost	1,125,426	1,126,337	1,157,783	1,234,220	1,078,539	1,066,712	1,102,542	
0709 AEGIS Block 2004 Test Bed	21,600	0	0	0	0	0	0	
0809 AEGIS BMD Block 2006	393,471	0	0	0	0	0	0	
0909 AEGIS BMD Block 2008	573,874	0	0	0	0	0	0	
0009 AEGIS BMD Block 2010	38,243	0	0	0	0	0	0	
R109 AEGIS BMD Block 2012	8,220	0	0	0	0	0	0	
BX09 AEGIS BMD Block 2.0	0	295,736	202,151	151,255	14,991	12,903	12,903	
EX09 AEGIS BMD Block 5.0	0	597,990	644,206	651,171	596,260	498,345	441,785	
XX09 AEGIS BMD Sustainment	0	43,800	42,501	45,772	31,166	30,571	29,280	
0918 Sea-Based Terminal Block 2008	28,000	0	0	0	0	0	0	
BX18 Sea-Based Terminal BMD Block 2.0	0	71,414	19,858	3,098	1,191	0	0	
WX18 Far Term Sea Based Terminal Capability Development	0	13,000	38,909	49,645	44,665	163,770	176,669	
0402 Japanese Cooperative Program	47,900	0	0	0	0	0	0	
WX09 Japanese Cooperative Capability Development	0	89,383	179,742	290,224	359,409	330,121	409,019	
0602 Program-Wide Support	14,118	0	0	0	0	0	0	
ZX40 Program-Wide Support	0	15,014	30,416	43,055	30,857	31,002	32,886	
Amount Included in PE 0904903D				-191,169	-79,823	-29,285	-29,753	
Total PE Cost	1,125,426	1,126,337	1,157,783	1,043,051	998,716	1,037,427	1,072,789	

Note: The content previously planned in project 0709 for FY 08-13 has been moved to project BX09, in accordance with the Missile Defense Agency revised Block structure.

The content previously planned in project 0809 for FY 08-13 has been moved to projects BX09, EX09 and XX09, in accordance with the Missile Defense Agency revised Block structure.

The content previously planned in project 0909 for FY 08-13 has been moved to projects BX09, EX09 and XX09, in accordance with the Missile Defense Agency revised Block structure.

The content previously planned in project 0918 for FY 08-13 has been moved to project BX18, in accordance with the Missile Defense Agency revised Block structure.

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APPROPRIATION/BUDGET ACTIVITY	R-1 NOMENCLATURE	
RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	0603892C Ballistic Missil	e Defense Aegis

The content previously planned in project 0009 for FY 08-13 has been moved to projects EX09 and XX09, in accordance with the Missile Defense Agency revised Block structure.

The content previously planned in project R109 for FY 08-13 has been moved to projects EX09, WX09 and XX09, in accordance with the Missile Defense Agency revised Block structure.

The content previously planned in project R218 for FY 08-13 has been moved to project WX18, in accordance with the Missile Defense Agency revised Block structure.

The content previously planned in project 0402 for FY 08-13 has been moved to project WX09, in accordance with the Missile Defense Agency revised Block structure.

A. Mission Description and Budget Item Justification

A.1 System Element Description

The Aegis Ballistic Missile Defense (Aegis BMD) mission is to deliver an enduring, operationally effective and supportable Ballistic Missile Defense Capability in Aegis cruisers and destroyers to defend the nation, deployed forces, friends and allies, and to incrementally increase this capability by delivering evolutionary spiral improvements as part of BMDS block upgrades. The Aegis BMD element of the BMDS builds upon the existing Aegis Weapons System (AWS) and Standard Missile (SM) infrastructures deployed in Aegis cruisers and destroyers. Aegis BMD provides a forward-deployable, mobile capability to detect and track Ballistic Missiles of all ranges, and the ability to destroy Short-Range Ballistic Missile (SRBM), Medium-Range Ballistic Missile (MRBM), Intermediate-Range Ballistic Missile (IRBM), and selected long-range class threats in the midcourse phase of flight. Spiral upgrades to both the Aegis BMD Weapon System and the SM-3 configurations will enable Aegis BMD to provide effective, supportable defensive capability against more difficult threats, including Long Range Ballistic Missiles (LRBMs).

In support of Block 1.0 objectives to defend the U.S. from limited long-range threats, Aegis BMD provides a Long Range Surveillance and Track (LRS&T) capability to the BMDS against Ballistic Missile threats of all ranges, supporting GMD engagements.

In support of Block 2.0 objectives to defend allies and deployed forces from short- to medium-range threats in one region or theater, Aegis BMD provides initial engagement capability against SRBM to MRBM-class threats. Aegis BMD is fielding the Block 2.0 capability in two spirals: The first spiral provides an initial engagement capability against SRBMs and MRBMs on Aegis BMD cruisers with the BMD 3.0 Weapon System and SM-3 Block I missile that can be used for emergency activation; Spiral two provides an operationally certified LRS&T and engagement capability on

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Aegis BMD cruisers and destroyers configured with the BMD 3.6 Weapon Syste organic and external sensors.	em which is capable of firin	ng SM-3 Block I and IA missiles using
In response to Real World Events, Aegis BMD is developing and fielding an int finite set of Short Range Ballistic Missiles, also as part of BMDS Block 2.0. BM provided by a separate OPNAV sponsored effort and will build on BMD 3.6 to pupdated BMD 3.6.1 will continue efforts to refine Aegis Launch on AN/TPY-2 3.6 and BMD 4.0.1.	ID 3.6.1 will incorporate a provide a capability (BMD	fuze modified SM-2 Block IV missile 3.6.1) against additional threats. The
In support of Block 5.0 objectives to expand defense of allies and deployed force theaters, Aegis BMD is providing several capabilities: BMD 4.0.1 improves sys capability against some IRBM and long-range threats. This will be achieved by focus on the new RF discrimination and tracking capability, and an upgraded SM include the Aegis BMD Signal Processor (BSP), and integrate an updated variar performance and discrimination capability. The SM-3 Block IB configuration in Throttleable Divert and Attitude Control System (TDACS), which provides perf The initial capability (BMD 4.0) will be delivered with the SM-3 Block IA miss the SM-3 Block IA or IB missile.	tem effectiveness against at means of modifications to t A-3 guided missile. The Ae at of the SM-3 (SM-3 Block cludes a performance-enha formance and manufacturin	n expanding threat set to include a fielded the Weapon System (BMD 4.0/4.0.1) that egis BMD 4.0/4.0.1 Weapon System will & IB) to improve overall system ancing two-color IR seeker, and a g improvements at a lower per-unit cost.
Additionally in support of Block 5.0, Aegis BMD will integrate the BMD mission preserve the sea-based BMD capability as Navy ship modernization plans are ex (BMD 5.0) will transition from older, MIL-standard computers to new Commer- allow ships' operators to conduct combat missions with a single set of tactical com-	ecuted. The new configura cial Off The Shelf (COTS) omputer programs running of	tion of the Aegis BMD Weapon System computing plants. This integration will on the same computer system. This change

allow ships' operators to conduct combat missions with a single set of tactical computer programs running on the same computer system. This change will enhance display features and eliminate the need for a separate computing system specific to the BMD mission. This will enable Aegis BMD to maintain compatibility with Surface Navy ships and align with the Navy's modernization plan, while also expanding the number of ships available to serve as potential candidates for the BMD mission. Future fielded Aegis BMD system improvements will be built in this new architecture.

Future Capabilities:

Aegis BMD and the Japan Defense Agency (JDA) have undertaken an SM-3 Cooperative Development (SCD) program, which consists of a spiral

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upgrade to the SM-3 Block IB missile - a 21-inch diameter SM-3 missile (SM-3 Block IIA). Missile development will be covered under the SCD project prior to the SM-3 Block IIA incorporation into the BMD 5.1 upgrade to the Aegis Ballistic Missile Defense system. BMD 5.1 will integrate and test the SM-3 Block IIA missile with the Aegis BMD Weapon System in Open Architecture, which will expand the battlespace to include IRBM and selected longer-range threats. Weapon System modifications will also be made to accommodate an Engage-on-Remote capability and include a more robust set capability.

Additionally, Aegis BMD will provide for a more robust, long-term integrated Sea Based Terminal (SBT) capability. It is envisioned that BMD 5.X will incorporate a new missile type (to be determined), which will build on the near-term Sea Based Terminal capability developed as a part of Aegis BMD 3.6.1 to provide a more capable and robust sea based terminal missile defense capability.

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

Aegis BMD provides a mobile, forward-deployable LRS&T capability to the BMDS against ballistic missile threats of all ranges. In Block 2.0, Aegis BMD also provided an engagement capability against short to medium range threats (BMD 3.6 and the SM-3 Block IA missile). In Block 5.0, a new fielded configuration will expand both LRS&T and engagement capability to include more complex threats including limited IRBM threats (BMD 4.0.1 and the SM-3 Block IB missile). Block 5.0 will further broaden program application for U.S. and international Aegis ship populations by implementing Open Architecture (BMD 5.0). Aegis BMD will also introduce a near-term Sea-Based Terminal capability (BMD 3.6.1) to engage limited short range threats in the terminal phase of flight. Future capability developments such as the 21-inch diameter currently under development in the SM-3 Cooperative Development (SCD) program with Japan will be integrated with the Aegis BMD Weapon System in Open Architecture in BMD 5.1. This will further expand engagement capability against long-range threats, to include some ICBM-class threats. Another future capability development will introduce a more robust Sea Based Terminal capability.

Aegis BMD will also contribute to the BMDS through the participation in BMDS Concurrent Test, Training and Operations (CTTO) activities that will safely separate test, evaluation, and training venues from real-world activities; and allow injection of high-fidelity simulations to run realistic scenarios on operational equipment and networks. CTTO will enable end-to-end testing of the BMDS and enable BMDS training that allows operators to exercise any or all BMDS elements, as needed.

Aegis BMD will deliver the following:

- Fifteen (15) Aegis Destroyers equipped with the Aegis BMD Weapon System to conduct the LRS&T and engagement missions
- Three (3) Aegis Cruisers equipped with the Aegis BMD Weapon System to conduct the LRS&T and engagement missions SM-3
- Missile Deliveries To Be Used for Testing and/or Deployment:

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Missile Defense Agency (MDA) Exhibit R-2 RDT&E Budget Item Just		February 2008
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RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	0603892C Ballistic Missi	le Detense Aegis
• Eleven (11) SM-3 Block I missiles		
• One (1) "Pathfinder" SM-3 Block IA Flight Test Round (FTR)		
• One (1) "Pathfinder" SM-3 Block IB Flight Test Round (FTR)		
• Eighty two (82) SM-3 Block IA missiles		
 Fifty two (52) SM-3 Block IB missiles 		
A.3 Major System Element Goals		
• Block 2.0:		
 BMD 3.6 - Deliver an LRS&T capability against ballistic missile threats MRBM-class threats. 	of all ranges. Deliver an e	engagement capability against SRBM to
 SM-3 Block IA missile. 		
 BMD 3.6.1: Introduce a Near-Term Sea Based Terminal capability agair 	ot SDRMa (with ODNAV	modified SM 2 Pleak IV missile)
O DIVID 5.0.1. Infoduce a Near-Term Sea Dased Terminal capability again		-mounned SWI-2 Diock IV missile).
• Block 5.0:		
 BMD 4.0.1 - Improve the Weapon System capability to identify and class 	sify Ballistic Missile threa	at objects from debris and other
components: Aegis BSP. Improve BMDS C2BMC performance: engage	•	5
missile downlink system for improved kill assessment. Increase battlesp		
integration with Joint Defense Planner.		× / 5
• SM-3 Block IB - Improve missile capability to identify and target the th	eat object through the All	Reflective Optics (ARO), Advanced Signal
Processor (ASP), and two-color missile seeker. Improve missile kinetic	warhead (KW) kinematic	performance: Throttleable Divert and
Attitude Controls System (TDACS).		
 BMD 5.0 - Broaden program application for U.S. and international Aegi 		
BMDS C2BMC performance: migrate to Joint Tactical Radio System an	d Common Link Interface	e Processor, and Forcenet/GIG compliance.
• Future Capability Developments:		
• SCD - Initiate U.S./Japan SM-3 Cooperative Development (SCD) of the		
• BMD 5.1 - Increase battlespace: SM-3 Block IIA integration into the Ae	gis BMD weapon System	i, Engage on Remote, improved feature-
 aided track correlation, and improved BMDS sensor data fusion. BMD 5.X - Introduce a more robust Sea Based Terminal capability. 		
• BMD 5.X - Introduce a more robust Sea Based Terminal capability.		
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APPROPRIATION/BUDGET ACTIVITY		(ID (R-1 NOMENCLATURE	
RDT&E, DW/04 Advanced Component	nt Developi	nent and Proto	types (ACD&P)	0603892C Ballistic Mis	sile Defense Aegis
A.4 Major Events Schedule and De	escription				
Major Event	Project	Timeframe	Description		
Flight Tests	· ·				
FTM-11	0809	1Q FY 2007	multiple enga	agement and intercept of one low	0 3.6 engagement capability with a near simultaneous w exo-atmospheric Group A (SRBM) target using an SM-3 t using an SM-2 Block IIIA missile.
FTM-11 4th Objective	0809	3Q FY 2007	simultaneous	multiple engagement and interc	verify BMD 3.6 engagement capability with a near cept of one low exo-atmospheric Group A (SRBM) target [-74 aerial target using an SM-2 Block IIIA missile.
FTM-12	0809	3Q FY 2007		A-12 flight test to verify BMD 3 in SM-3 Block IA missile.	.6 engagement capability with an intercept of a Group B
FTM-13	BX09	1Q FY 2008	Detection, tra	ack and engagement of two simu	Iltaneous SRBMs.
FTM-14	BX09	3Q FY 2008	Launch on TA	ADIL (LOT) engagement og gro	oup F Intermediate Range Ballistic Missile target.
FTM-15	BX09	2Q FY 2009	Conduct a La	unch on TADIL (Aegis to Aegi	s) flight test against a Group F target.
FTM-14	BX18	3Q FY 2008			BT) computer program with a Navy-developed SM-2 Block (ilitary Acquisition (FMA) target).
FTM-16	EX09	4Q FY 2010	1st flight test	of SM-3 Block IB missile again	nst a group B Medium range Ballistic Missile target.
FTM-17	EX09	3Q FY 2011	• BMD 4.0.1 e	ngagement with SM-3 Block IB	against a group c target.
FTM-18	EX09	3Q FY 2012	• BMD 4.0.1 e	ngagement against a group C ta	rget with an SM-3 Block IB missile.
FTM-19	EX09	3Q FY 2013	• BMD 5.0 eng	gagement against a group C targ	et with an SM-3 Block IB missile.
Critical Design Review					
Development Milestones		-			
BMD 3.6.1 Engineering Assessment (EA)	BX18	2Q FY 2008		ineering Assessment for the BM erminal capability.	ID 3.6.1 computer program update, to include a Near Term
BMD 3.6.1 Certification	BX18	1Q FY 2009	Certification	of BMD 3.6.1 computer program	m.
BMD 5.0 System Design Review	EX09	1Q FY 2008	Conduct Syst	tem Design Review for the BMI	O 5.0 computer program with Open Architecture.
BMD 4.0.1 Critical Design Review (CDR)	EX09	4Q FY 2008	Conduct a Cr	itical Design Review of the BM	D 4.0.1 computer program.
BMD 4.0.1 Engineering Assessment	EX09	1Q FY 2009	Perform an E	A of BMD 4.0.1 program to sup	oport At-Sea Testing
BMD 5.0 Preliminary Design Review	EX09	1Q FY 2009	Conduct a PE	DR of BMD 5.0 with Open Arch	itecture.
BMD 5.0 Critical Design Review	EX09	1Q FY 2010		OR of BMD 5.0 with Open Arch	
BMD 4.0.1 Certification	EX09	2Q FY 2011	Certification	of BMD 4.0.1 engagement capa	bility with the SM-3 Block IB missile.
BMC 5.0 Demo	EX09	4Q FY 2011	Conduct a De	emonstration of BMD 5.0 with 0	Dpen Architecture.
BMD 5.0 Cert	EX09	2Q FY 2012	Certification	of the BMD 5.0 computer progr	am with Open Architecture.
BMD 5.1 / 5.X System Requirements Review	WX09	1Q FY 2009	Conduct an S	SRR for BMD 5.1 (SM-3 Block	IIA) and BMD 5.X (Far Term SBT).
BMD 5.1 / 5.X System Design Review	WX09	1Q FY 2010	Conduct an S	DR for BMD 5.1 (SM-3 Block	IIA) and BMD 5.X (Far Term SBT).

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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component				R-1 NOMENCLATURE 0603892C Ballistic Missil	· · · · · · · · · · · · · · · · · · ·
BMD 4.0.1 ENG REL SDD	WX09	2Q FY 2010	Condust Syste	m Design review of BMD 4.0.1 I	ENG REL.
BMD 5.1 / 5.X Preliminary Design Review-1	WX09	1Q FY 2011	Conduct a PD	R for BMD 5.1 (SM-3 Block IIA)) and BMD 5.X (Far term SBT).
BMD 4.0.1 ENG REL Engineering Assessment	WX09	1Q FY 2012	Conduct an En Block IIA mis		MD 4.0.1 ENG REL to support flight testing of the SM-3
BMD 5.1 / 5.X Preliminary Design Review-2	WX09	1Q FY 2012	Conduct a 2nd	PDR for BMD 5.1 (SM-3 Block	t IIA) and BMD 5.X (Far Term SBT).
BMD 5.1 / 5.X Critical Design Review	WX09	3Q FY 2013	Conduct Critic	cal Design Review for BMD 5.1 ((SM-3 Block IIA) and BMD 5.X (Far Term SBT).
BMD 5.1 / 5.X System Requirements Review	WX18	1Q FY 2009	Conduct a Sys Term SBT).	tem Requirements Review (SRR)) for BMD 5.1 (SM03 Block IIA) and BMD 5.X (Far
BMD 5.1 / 5.X System Design Review	WX18	1Q FY 2010	Conduct a Sys SBT).	tem Design Review (SDR) for B	MD 5.1 (SM-3 Block IIA) and BMD 5.X (Far Term
BMD 5.1 / 5.X Preliminary Design Review-1	WX18	1Q FY 2011	Conduct a Pre SBT).	liminary Design Review (PDR) f	for BMD 5.1 (SM-3 Block IIA) and BMD 5.X (Far Term
BMD 5.1 / 5.X Preliminary Design Review-2	WX18	1Q FY 2012	Conduct a sec	ond PDR of BMD 5.1 (SM-3 Blo	ock IIA) and BMD 5.X (Far Term SBT).
BMD 5.1 / 5.X Critical Design Review	WX18	3Q FY 2013	Conduct a Cri	tical Design Review of BMD 5.1	(SM-3 Block IIA) and BMD 5.X (Far Term SBT).
SM-3 Block IIA Development Milestones	•	•	•	¥	
SM-3 Block IIA System Requirements Review (SRR)	WX09	1Q FY 2008	Conduct SM-3	Block IIA SRR.	
SM-3 Block IIA SRR-2	WX09	3Q FY 2008	Conduct a sec	ond SRR for the SM-3 Block IIA	missile configuration.
SM-3 Block IIA System Design Review (SDR)	WX09	1Q FY 2009	Conduct an SI	OR for the SM-3 Block IIA missi	le configuration.
SM-3 Block II Preliminary Design Review	WX09	3Q FY 2010	Conduct a PD	R for the SM-3 Block IIA missile	S.
SM-3 Block IIA Critical Design Review	WX09	4Q FY 2011	Conduct a CD	R for the SM-3 Block IIA missile	e configuration.
Other					
Milestones	****				
Requirements Analysis	WX18	· ·	8 - 2Q FY 2009		
Missile Down Select	WX18	3Q FY 2009	9 - 2Q FY 2010		

APPROPRIATION/BUDGET ACTIVITY				ENCLATURE	
RDT&E, DW/04 Advanced Component Deve	lopment and Prototy	pes (ACD&P	P) 0603892	Ballistic Missile Defense Aegis	
3. Program Change Summary	FY 2007	FY 2008	FY 2009		
revious President's Budget (FY 2008 PB)	1,122,669	1,059,103	1,129,425		
urrent President's Budget (FY 2009 PB)	1,125,426	1,126,337	1,127,783		
tal Adjustments	2,757	67,234	28,358		
ongressional Specific Program Adjustments	0	75,000	0		
ngressional Undistributed Adjustments	0	-7,766	0		
programmings	20,175	0	0		
IR/STTR Transfer	-17,418	0	0		
justments to Budget Years	0	0	28,358		
idistributed reduction.				\$75 million and a portion of the MDA Con	gressional
Y08 increase of \$67.234 million includes and istributed reduction. Y09 increase of \$28.358 million reflects M					gressional
ndistributed reduction.					gressional
ndistributed reduction.					gressional
ndistributed reduction.					gressional
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)			NCLATURE Ballistic Mis	ssile Defense	Aegis		
COST (\$ in Thousands)	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
0709 AEGIS Block 2004 Test Bed	21,600	0	0	0	0	0	0
RDT&E Articles Qty	0	0	0	0	0	0	0

Note: The content previously planned in project 0709 for FY 08-13 has been moved to project BX09, in accordance with the Missile Defense Agency revised Block structure.

A. Mission Description and Budget Item Justification

Aegis BMD Block 2004 supports the BMDS mission of intercepting ballistic missiles in all regions, in all phases, and of all ranges, as follows:

- In all regions: Provide sea-based surveillance, tracking, and engagement capabilities in international waters.
- In all phases of ballistic missile flight: Long Range Surveillance and Track (LRS&T) capability against missile threats in all flight stages; engagement capability against missile threats in the midcourse flight stage
- Against all ranges:
 - Against long-range ballistic missiles by providing surveillance and tracking support as part of the Block 2004 Limited Defensive Capability (LDC).
 - o Against short and medium range ballistic missiles by providing engagement support as part of Block 2004.

Aegis BMD supports LDC by providing LRS&T data to other elements of the BMDS. Aegis BMD will further improve both national and international security with its ability to launch Standard Missile 3 (SM-3) missiles based upon autonomous data and upon data received via the Tactical Digital Information Link Joint (TADIL-J) network. The Aegis BMD Block 2004 program:

- Defeats unitary and simple separating threats (Short Range Ballistic Missiles (SRBMs) and Medium Range Ballistic Missiles (MRBMs)) with Aegis BMD configured cruisers and destroyers using SM-3 Block I or IA guided missiles.
- Provides Long Range Ballistic Missile (LRBM) surveillance and track data through the BMDS to the GMD element to cue and initiate fire control Weapons Task Plans.
- Provides Aegis BMD surveillance and track data to the BMDS to support Combatant Commander situational awareness.
- Expands the engagement battle space by using remote (Aegis AN/SPY-1) sensor data delivered via the TADIL-J network.
- Supplies Aegis BMD operational data to the BMDS C2BMC Element to support Combatant Commander situational awareness.
- Provides an operational, engagement-capable system.

Aegis BMD Block 2004 consists of three incremental capabilities:

• LRS&T (BMD 3.0E computer program) support as part of LDC;

Project: 0709 AEGIS Block 2004 Test Bed

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APPROPRIATION/BUDGET ACTIVITY		R-1 NOMENCLATU			
RDT&E, DW/04 Advanced Component Development and Prototypes	(ACD&P)				
• A preliminary engagement capability (BMD 3.0 with SM-3 Bloc	ck I) for test	bed operations and	for emergency use, if re	equired; and	
• An operationally certified BMD capability that combines the en and IA). The final Block 2004 is fully compliant with the Eleme			RS&T capability (BMD	3.6 with SM-3 Block I	
In collaboration with the MDA Systems Engineer, Aegis BMD is co	ontributing to	the BMDS in deve	lonment of engagemen	sequence groups (FSGs)	
Aegis BMD supports an autonomous engagement against SRBMs a	•		1 00	1 0 1 1	
SM-3 Engage on AN/SPY-1, SM-3 Launch on Remote (AN/SPY-1)					
SWI-5 Eligage of AIV/SF 1-1, SWI-5 Laufert of Remote (AIV/SF 1-1)), ODI Eligaș	e oli Alv/Sr 1-1, al	Iu ODI Launch on Any,	Dr 1-1.	
B. Accomplishments/Planned Program					
D. Accompnishments/1 fanneu 1 rogram	FY	2007	FY 2008	FY 2009	
Weapon System Engineering		7,900	0	112007	
RDT&E Articles (Quantity)		0	0		
In Block 2004, the Aegis BMD Weapon System Engineering group	davalanad E	MD 2 OE to provid	a I DS &T conchility to	the DMDS: DMD 2.0 to	
FY07 Accomplishments:Performed post-flight test analyses for FTM-10 and FTM-11.					
	1 formath als:	ationa			
• Performed pre-mission analysis and work-up support for FTM-1	I fourth obj	ective.			
	FY	2007	FY 2008	FY 2009	
SM-3 Missile		13,700	0		
RDT&E Articles (Quantity)		0	0		
Aegis BMD Block 2004 provides the SM-3 Block I missile that can	be used for	mergency activatio	on: completed the design	n efforts of the SM-3	
Block IA, and completes component and section level testing of the					
rate manufacturing of SM-3 components at various manufacturing f		n i, una compieta	initial non recurring ch	Sincering propulation for	
Tate manufacturing of Sivi-5 components at various manufacturing f	actitues.				
FY07 Accomplishments:					
 Continued to monitor performance of SM-3 Block IA. 					
1					
Monitored obsolete material replacement effort.					
Project: 0709 AEGIS Block 2004 Test Bed					
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APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Develop			R-1 N	NOMENCLATU 892C Ballisti	JRE				
• Development activities for the next spiral upgrade were identified in Block 2006.									
C. Other Program Funding Summary									
	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	Total Cost	
PE 0207998C BRAC	0	103,219	159,938	61,931	8,724	0	0	333,812	
PE 0603175C Ballistic Missile Defense Technology	183,849	108,423	118,718	115,234	120,152	127,012	130,358	903,746	
PE 0603881C Ballistic Missile Defense Terminal Defense Segment	1,082,454	1,045,276	1,019,073	795,659	719,847	548,283	439,752	5,650,344	
PE 0603882C Ballistic Missile Defense Midcourse Defense Segment	2,985,140	2,243,213	2,209,262	2,276,848	1,385,258	946,437	1,103,532	13,149,690	
PE 0603883C Ballistic Missile Defense Boost Defense Segment	622,218	510,241	421,229	423,927	652,642	799,792	991,839	4,421,888	
PE 0603884C Ballistic Missile Defense Sensors	514,989	586,121	1,221,143	1,184,280	1,099,649	1,077,632	823,583	6,507,397	
PE 0603886C Ballistic Missile Defense System Interceptors	341,358	340,107	386,817	500,966	708,803	815,433	553,136	3,646,620	
PE 0603888C Ballistic Missile Defense Test and Targets	584,615	621,861	673,691	672,976	690,938	708,991	719,209	4,672,281	
PE 0603890C Ballistic Missile Defense System Core	425,889	413,934	432,262	482,947	605,219	561,947	571,498	3,493,696	
PE 0603891C Special Programs - MDA	347,377	196,892	288,315	304,234	538,050	818,136	786,349	3,279,353	
PE 0603893C Space Tracking & Surveillance System	311,402	231,528	242,441	266,509	560,130	735,727	938,191	3,285,928	
PE 0603894C Multiple Kill Vehicle	133,615	229,943	354,455	488,294	649,632	708,582	879,385	3,443,906	
PE 0603895C BMD System Space Program	0	16,552	29,771	41,638	56,199	133,915	157,548	435,623	
PE 0603896C BMD C2BMC	249,179	447,616	289,277	287,194	270,762	256,767	259,159	2,059,954	
PE 0603897C BMD Hercules	46,268	52,462	55,955	55,289	56,400	51,902	52,784	371,060	
PE 0603898C BMD Joint Warfighter Support	49,833	49,394	69,982	73,997	77,205	80,168	81,948	482,527	
PE 0603904C Missile Defense Integration & Operations Center	104,389	78,557	96,404	100,437	100,366	101,512	102,840	684,505	
PE 0603905C BMD Concurrent Test and Operations	21,870	0	0	0	0	0	0	21,870	
PE 0603906C Regarding Trench	0	1,986	2,978	4,964	4,963	8,933	8,933	32,757	
PE 0603907C Sea Based X-Band Radar (SBX)	0	165,243	0	0	0	0	0	165,243	
PE 0605502C Small Business Innovative Research - MDA	142,510	0	0	0	0	0	0	142,510	
PE 0901585C Pentagon Reservation	15,527	6,019	19,734	5,040	5,284	5,370	5,456	62,430	
PE 0901598C Management Headquarters - MDA	93,350	80,392	86,453	70,355	69,855	69,855	69,855	540,115	

Project: 0709 AEGIS Block 2004 Test Bed

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		Date	
Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justif	ïcation	February 2008	
APPROPRIATION/BUDGET ACTIVITY	R-1 NOMENCLATURE		
RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	0603892C Ballistic Missil	e Defense Aegis	

D. Acquisition Strategy

The Aegis BMD element acquisition approach supports evolutionary development, continuously building upon demonstrated capabilities to advance overall BMDS capability. After considering all the technical and management aspects of the program and to meet the requirements presented by an evolving ballistic missile threat, the Aegis BMD program awarded sole source contracts to Raytheon and Lockheed Martin to continue development of the SM-3 missile and the Aegis BMD Weapon System, respectively.

Miasila I	Dofonco Acono	·· (MDA) Ekiki4 D 2	DDT & E Droio	t Cost Ar	olvaia		Date Februar	w 2008		
APPROPRIATION/BUDGET A RDT&E, DW/04 Advanced	CTIVITY	y (MDA) Exhibit R-3 Development and H			Analysis February 2008 R-1 NOMENCLATURE 0603892C Ballistic Missile Defense Aegis					
I. Product Development	Cost (\$ in 7	Thousands)								
Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost		FY 2008 Award/ Oblg Date	FY 2009 Cost	FY 2009 Award/ Oblg Date	Total Cost	
Weapon System Engineering	cc 15pc	Lotuion	0000	0050		240		2 440		
AWS	SS/CPIF	Lock Martin/NJ	394,005		0	N/A	0	N/A	394,005	
AWS	FFRDC	MIT/LL/MA	5,725		0	N/A	0	N/A	5,725	
AWS	SS/CPFF	JHU/APL/MD	8,424		0	N/A	0	N/A	8,424	
AWS	MIPR	NSWC/DD/VA	38,686		0	N/A	0	N/A	38,686	
AWS	MIPR	MITRE/VA	1,400		0	N/A	0	N/A	1,400	
AWS	MIPR	NSWC/PHD/CA	13,824		0	N/A	0	N/A	13,824	
AWS		MDA	16,763		0	N/A	0	N/A	16,763	
AWS	Various	VARIOUS	21,291		0	N/A	0	N/A	21,291	
AWS	MIPR	NAVSEA/VA	2,000		0	N/A	0	N/A	2,000	
SM-3 Missile										
MISSILE	SS/CPIF	RAYTHEON/AZ/	745,169		0	N/A	0	N/A	745,169	
MISSILE	SS/CPIF	JHU/APL/MD/	26,893		0	N/A	0	N/A	26,893	
MISSILE	FFRDC	MIT/LL/MA	1,805		0	N/A	0	N/A	1,805	
MISSILE	MIPR	NSWC/DD/VA	20,626		0	N/A	0	N/A	20,626	
MISSILE	MIPR	NSWC/PHD/CA/	12,871		0	N/A	0	N/A	12,871	
MISSILE	MIPR	WSMR/NM/NM	2,407		0	N/A	0	N/A	2,407	
MISSILE	MIPR	NSWC/CD/CA/ MD	6,053		0	N/A	0	N/A	6,053	
MISSILE	MIPR	NSWC/IH/MD	5,179		0	N/A	0	N/A	5,179	
MISSILE	MIPR	NAWC/CL/CA	2,644		0	N/A	0	N/A	2,644	
MISSILE		MDA/VA	25,908		0	N/A	0	N/A	25,908	
MISSILE	Various	VARIOUS/ VA/CA/NJ	9,915		0	N/A	0	N/A	9,915	
MISSILE	MIPR	NAVSEA	931		0	N/A	0	N/A	931	
MISSILE	MIPR	NSWC Corona	627		0	N/A	0	N/A	627	
Subtotal Product Development	T		1,363,146		0		0		1363146	

Project: 0709 AEGIS Block 2004 Test Bed

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					, .		Date Eabrua	2009	
Missile L APPROPRIATION/BUDGET A		y (MDA) Exhibit R-3	RD1&E Projec	t Cost Ana		OMENCLATUR	Februa	ry 2008	
RDT&E, DW/04 Advanced		Development and F	Prototypes (AC	D&P)		892C Ballistic I		e Aegis	
Remarks								<u> </u>	
II. Support Costs Cost (\$ in Thousa	nds)							
						FY 2008		FY 2009	
	Contract	Performing	Total			Award/		Award/	
	Method	Activity &	PYs	FY 2008	8	Oblg	FY 2009	Oblg	Total
Cost Categories:	& Type	Location	Cost	Cost		Date	Cost	Date	Cost
Weapon System Engineering									
	SS/CPFF	JHU/APL/MD	8,326		0	N/A	0	N/A	8,326
		Lockheed Martin/							
	SS/CPAF	NJ	10,500		0	N/A	0	N/A	10,500
	MIPR	NSWC/DD/VA	15,346		0	N/A	0	N/A	15,346
	MIPR	NSWC/PHD/CA	6,807		0	N/A	0	N/A	6,807
	MIPR	SPAWAR/CA	4,734		0	N/A	0	N/A	4,734
	1	MDA	2,489		0	N/A	0	N/A	2,489
	MIPR	NAVSEA/DC	3,933		0	N/A	0	N/A	3,933
	+	SupShip							
	MIPR	Pascagoula/MS	4,635		0	N/A	0	N/A	4,635
	MIPR	SupShip Bath/ME	1,965		0	N/A	0	N/A	1,965
		VARIOUS/SSES							
		Philadelphia/							
	MIPR	VARIOUS	457		0	N/A	0	N/A	457
Subtotal Support Costs			59,192		0		0		59192

Remarks

APPROPRIATION/BUDGET		y (MDA) Exhibit R-3				MENCLATUR	Februa	v	
RDT&E, DW/04 Advanced		Development and P	rototypes (AC)				L Missile Defense	e Aegis	
III. Test and Evaluation	*	*		/				8	
						FY 2008		FY 2009	
	Contract	Performing	Total			Award/		Award/	
	Method	Activity &	PYs	FY 2008		Oblg	FY 2009	Oblg	Total
Cost Categories:	& Type	Location	Cost	Cost		Date	Cost	Date	Cost
Subtotal Test and Evaluation									
Remarks	1	<u> </u>	I						
V. Management Service	es Cost (\$ ir	n Thousands)							
						FY 2008		FY 2009	
	Contract	Performing	Total			Award/		Award/	
	Method	Activity &	PYs	FY 2008		Oblg	FY 2009	Oblg	Total
Cost Categories:	& Type	Location	Cost	Cost		Date	Cost	Date	Cost
Weapon System Engineering									
		NAVSEA/DC	26,435		0	N/A	0	N/A	26,435
	SS/CPFF	JHU/API/MD	2,834		0	N/A	0	N/A	2,834
	MIPR	NSWC/DD/VA	2,398		0	N/A	0	N/A	2,398
	C/CPFF	Anteon/VA	46,749		0	N/A	0	N/A	46,749
		D 1' /774	4,175		0	N/A	0	N/A	4,175
	SS/CPFF	Paradigm/VA	4,175						
	SS/CPFF	Lockheed Martin/	4,175						
	SS/CPAF	Lockheed Martin/ NJ	1,700		0	N/A	0	N/A	1,700
		Lockheed Martin/	,		0	N/A N/A	0	N/A N/A	1,700 2,000
	SS/CPAF	Lockheed Martin/ NJ Raytheon/AZ MDA	1,700						,
	SS/CPAF	Lockheed Martin/ NJ Raytheon/AZ	1,700 2,000		0	N/A	0	N/A	2,000
	SS/CPAF SS/CPAF	Lockheed Martin/ NJ Raytheon/AZ MDA	1,700 2,000 14,922		0 0	N/A N/A	0	N/A N/A	2,000 14,922
Subtotal Management Services	SS/CPAF SS/CPAF	Lockheed Martin/ NJ Raytheon/AZ MDA Various/Various	1,700 2,000 14,922 8,517		0 0 0	N/A N/A N/A	0 0 0	N/A N/A N/A	2,000 14,922 8,517
	SS/CPAF SS/CPAF	Lockheed Martin/ NJ Raytheon/AZ MDA Various/Various	1,700 2,000 14,922 8,517 1,763		0 0 0 0	N/A N/A N/A	0 0 0 0	N/A N/A N/A	2,000 14,922 8,517 1,763
Subtotal Management Services	SS/CPAF SS/CPAF	Lockheed Martin/ NJ Raytheon/AZ MDA Various/Various	1,700 2,000 14,922 8,517 1,763		0 0 0 0	N/A N/A N/A	0 0 0 0	N/A N/A N/A	2,000 14,922 8,517 1,763
	SS/CPAF SS/CPAF	Lockheed Martin/ NJ Raytheon/AZ MDA Various/Various	1,700 2,000 14,922 8,517 1,763		0 0 0 0	N/A N/A N/A	0 0 0 0	N/A N/A N/A	2,000 14,922 8,517 1,763
	SS/CPAF SS/CPAF	Lockheed Martin/ NJ Raytheon/AZ MDA Various/Various	1,700 2,000 14,922 8,517 1,763		0 0 0 0	N/A N/A N/A	0 0 0 0	N/A N/A N/A	2,000 14,922 8,517 1,763
	SS/CPAF SS/CPAF	Lockheed Martin/ NJ Raytheon/AZ MDA Various/Various	1,700 2,000 14,922 8,517 1,763		0 0 0 0	N/A N/A N/A	0 0 0 0	N/A N/A N/A	2,000 14,922 8,517 1,763

Project: 0709 AEGIS Block 2004 Test Bed

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				Date				
Missile Defense Agency (MDA) Exhibit R-2A RDT&E	Project Justi	fication		Februar	February 2008			
APPROPRIATION/BUDGET ACTIVITY	R-1 NOME	R-1 NOMENCLATURE						
RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P) 0603892C Ballistic Missile Defense Aegis								
COST (\$ in Thousands)	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	
0809 AEGIS BMD Block 2006	393,471	0	0	0	0	0	0	
RDT&E Articles Qty	27	0	0	0	0	0	0	
Note: The content previously planned in project 0809 for FY 08-13	has been m	oved to proj	ects BX09, E	EX09 and X	X09, in acco	ordance with	the	
Missile Defense Agency revised Block structure.		1 0						

RDT&E Articles: FY07 - Twelve (12) SM-3 missiles, five (5) ARAVs, two (2) targets, installation of BMD 3.0E on two (2) DDGs, installation of BMD 3.6 on five (5) DDGs, installation of BMD 3.6 on one (1) CG.

A. Mission Description and Budget Item Justification

Aegis BMD Block 2006 supports the BMDS mission of intercepting ballistic missiles in all regions, in all phases, and of all ranges, as follows:

- In all regions: provide sea-based surveillance, tracking, and engagement capabilities.
- In all phases of ballistic missile flight: Long Range Surveillance and Track (LRS&T) capability against missile threats of all ranges; engagement capability against Short Range Ballistic Missile (SRBM) to Medium Range Ballistic Missile (MRBM)-class missile threats
- Develop engagement capability against Intermediate range Ballistic Missile (IRBM)-class targets.
- Against all ranges:
 - Enhanced LRS&T capability against Ballistic Missile threats of all ranges through Aegis BMD Signal Processor (BSP) improvements.

Aegis BMD supported LDC by providing Long Range Surveillance and Track (LRS&T) data to other elements of the BMDS. Aegis BMD improved both national and international security with its ability to launch Standard Missile 3 (SM-3) missiles based upon data received via the Tactical Digital Information Link Joint (TADIL-J) network from other Aegis ships in Block 2004. Through development and testing of the Aegis BMD Signal Processor (BSP) in Block 2006, Aegis BMD will provide significant improvements in discrimination capability and performance against more diverse and longer range threats.

The Aegis BMD Block 2006 Weapon System will continue the evolutionary spiral development of the previous baseline by performing the initial integration of the BSP into the Aegis BMD Weapon System. This will improve discrimination and tracking capability against more robust threats for BMDS engagements. Weapon System LRS&T upgrades using BSP will be delivered and will go through an Engineering Evaluation at the Combat System Engineering Development Site (CSEDS) in Block 2006.

Project: 0809 AEGIS BMD Block 2006

Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justifi	Date February 2008				
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603892C Ballistic Missile Defense Aegis				
Weapon System Development will continue to evolve into the BMD 4.0 and 4.0	.1 configurations; that are to be delivered during Block 2008.				
Block 2006 missile efforts focus on testing of the SM-3 Block IA missile with the BMD 3.6 Weapon System and the continued deployment of SM-3 Block IA missiles. Ongoing missile development is listed and described under Block 2008, project 0909.					
Aegis BMD Block 2006 will:					
• Defeat unitary and more complex SRBM and MRBM threats with Aegis BM	ID configured cruisers, destroyers and Standard Missile-3 (SM-3)				
Block I and IA guided missiles.					

- Develop a limited IRBM capability.
- Complete development and engineering assessment of BMD 4.0E testbed capability that provides improved ballistic missile threat tracking, discrimination, and object classification via the BSP Engineering Development Model (EDM).
- Continue installations of the BMD 3.0E surveillance and tracking capability and the BMD 3.6 engagement capability on additional Aegis destroyers, and deliver 22 SM-3 Block IA missiles.

In collaboration with the MDA Systems Engineer, Aegis BMD is contributing to the BMDS in development of engagement sequence groups (ESGs). Aegis BMD supports an autonomous engagement against SRBMs and MRBMs without external cueing. Aegis BMD also supports an engagement against SRBMs and MRBMs using data from other BMDS elements and external sensors.

Aegis BMD Block 2006 will support SM-3 Engage on/Launch on AN/SPY-1, SM-3 Launch on FBX-T, GBI Engage on AN/SPY-1 Mod. 1, and GBI Launch on AN/SPY-1 Mod 1.

CIT							
Missile Defense Agency (MDA) Exhibit R-2A RDT&E P	Project Justif	ïcation	Date February 2008				
APPROPRIATION/BUDGET ACTIVITY	v	R-1 NOMENCLATU	RE				
RDT&E, DW/04 Advanced Component Development and Prototypes ((ACD&P)	ACD&P) 0603892C Ballistic Missile Defense Aegis					
B. Accomplishments/Planned Program							
	F	¥ 2007	FY 2008	FY 2009			
Weapons System Engineering		108,165	0				
RDT&E Articles (Quantity) In Block 2006, the Aegis BMD Weapon System Engineering group v		8	0				
 FY07 Accomplishments: RDT&E Articles: BMD 3.0E Aegis LRS&T Destroyers (2), BMD 3. Installed BMD 3.0E capability on two (2) Aegis destroyers. (Ship installation dates for remaining destroyer is based on ship availab Installed BMD 3.6 on one (1) Aegis Cruiser. Installed BMD 3.6 (engagement capability) on five (5) Aegis des Continued improvements to ballistic missile tracking, characteriz assessment as a part of the Weapon System development, to inclu o Real-time feature extraction capability and classification algo 	psets for fir bility). stroyers. sation, discu ude: prithm deve	al BMD 3.0E destro imination, feature et lopment.	oyer will be available at this	s time. Projected			
 At-sea testing of the BSP Advanced Development Model (me Installed BSP EDM at CSEDS. Completed development and testing of the computer program upg Continued studies to improve Lethal Object Designation in a clut Continued At-Sea Testing of BMD 3.6. 	grade culm	inating with an Engi					

			Date	
Missile Defense Agency (MDA) Exhibit R	R-2A RDT&E Project Justif	ication	February 2008	
APPROPRIATION/BUDGET ACTIVITY		R-1 NOMENCLAT	URE	
RDT&E, DW/04 Advanced Component Development and	l Prototypes (ACD&P)	0603892C Ballisti	ic Missile Defense Aegis	
	FY	7 2007	FY 2008	FY 2009
System Test & Evaluation		76,360	0	0
RDT&E Articles (Quantity)		0	0	0
This effort provides funding for Aegis BMD test and ev	aluation Block 2006 flig	tht test missions, as	s well as other system-wid	le BMDS tests to support

This effort provides funding for Aegis BMD test and evaluation Block 2006 flight test missions, as well as other system-wide BMDS tests to support the development of the BMDS.

FY07 Accomplishments:

- Conduct campaign consisting of a Ballistic Missile Tracking Exercise and FTM-11 Multiple Simultaneous Engagements:
 - Completed pre-flight analysis to verify mission scenarios and to predict flight performance.
 - Prepared and completed missile delivery package for the Mission Control Panel Reviews.
 - Conducted an ARAV-B simulated engagement to verify BMD 3.6 capability.
 - o FTM-11 Event 4 was a no-test, resulting in a re-schedule.
- Successfully conducted FTM-11 Event 4 flight test to verify BMD 3.6 engagement capability with a near simultaneous multiple engagement and intercept of one low exo-atmospheric Group A (SRBM) target using an SM-3 Block IA missile, and a BQM-74 aerial target using an SM-2 Block IIIA missile.
- Conducted campaign consisting of a Ballistic Missile Tracking Exercise and FTM-12:
 - Completed pre-flight analysis to verify mission scenarios and to predict flight performance.
 - o Prepared and completed missile delivery package for the Mission Control Panel Reviews.
 - Conducted a BMD 3.6 simulated engagement and intercept of two (2) near simultaneous ARAV-A SRBM targets with two (2) simulated SM-3 Block IA missiles.
 - Conducted FTM-12 flight test to verify BMD 3.6 engagement capability with an intercept of a Group B (MRBM) target with an Integrated Reactive Lethality Payload (IRLP) using an SM-3 Block IA missile.
- Continued to test interoperability with other BMDS elements.
- Participated in BMDS test to include FTX-02, FTX-03, GT-195, GT-198, FTG-4, FTG-5. FTT-7, and FTT-8 missions.
- Began test planning for FTM-13: prepare target, develop models and simulations, and ready the range for a test.
- Began test planning for FTM-14; prepare target, develop models and simulations, and ready the range for test.
- Conducted critical experiments using the MK-99 Doppler Data Collection System or similar equipment as a risk mitigation for Block 2008 implementation.

Project: 0809 AEGIS BMD Block 2006

Missile Defense Agency (MDA) Exhibit R-2A RDT&E P	roject Justif	cation	Date February 2008		
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (A		R-1 NOMENCLATU			
(D T CE), D W/04 Auvanceu Component Development and T Tototypes (A		2007	FY 2008 FY 2009		
M-3 Missile	11	133,596	0	112007	
RDT&E Articles (Quantity)		12	0		
During Block 2006 the SM-3 Block IA missiles will be tested, monitor	ored for im		livered for deployment.		
 Delivered twelve (12) SM-3 Block IA missiles Continued material engineering to monitor parts obsolescence. Participated in FTM-11 and FTM-12 Completed pre-flight analysis to verify scenarios and perform 	ance assess	ment			
 Prepared and complete missile delivery package for Mission 0 Performed post-flight analysis to validate high-fidelity simula Conducted post-flight analysis to support Mission Data Revie Performed analysis of SM-3 Block IA Hardware/Software bas Expended SM-3 Block IA 2nd Pathfinder in ground test support 	Control Par tions. ws (MDRs sed on fligh	el Reviews.). tt results.	and SDACs pulse insertio	on ground test	
 Performed post-flight analysis to validate high-fidelity simula Conducted post-flight analysis to support Mission Data Revie 	Control Par ations. wws (MDRs sed on flight ort for TSR	el Reviews.). It results. M nozzle redesign	-	-	
 Performed post-flight analysis to validate high-fidelity simula Conducted post-flight analysis to support Mission Data Revie Performed analysis of SM-3 Block IA Hardware/Software bas Expended SM-3 Block IA 2nd Pathfinder in ground test support 	Control Par ations. wws (MDRs sed on flight ort for TSR	el Reviews.). it results. M nozzle redesign	and SDACs pulse insertio	on ground test. FY 2009	
 Performed post-flight analysis to validate high-fidelity simula Conducted post-flight analysis to support Mission Data Revie Performed analysis of SM-3 Block IA Hardware/Software based 	Control Par ations. ws (MDRs sed on flight ort for TSR	el Reviews.). It results. M nozzle redesign 2007 5,000 0	FY 2008 0 0	FY 2009	

			Date				
Missile Defense Agency (MDA) Exhibit R-2A RDT&E Proje			February 2008				
APPROPRIATION/BUDGET ACTIVITY		R-1 NOMENCLATUR					
RDT&E, DW/04 Advanced Component Development and Prototypes (ACI	D&P)	0603892C Ballistic N	llistic Missile Defense Aegis				
	FY	FY 2008	FY 2009				
Operations & Support/ Fleet Introduction	112	20,000	0	112009			
RDT&E Articles (Quantity)		0	0				
 This effort provides funding for operator and maintenance training, enginifielded assets. FY07 Accomplishments: Provided In-service Engineering support to Aegis BMD: Weapon Sy Provided operational and maintenance training for Aegis BMD ship of Provided logistics support (including technical manuals, spares, and I BMD: Weapon System, SM-3, and Vertical Launching System. Provided leadership and engineering/technical support to conduct Ae 	/stem, SM crews. Reliabilit	I-3, and Vertical La y, Maintainability, a	unching System. and Availability analysi	-			
Responded to Fleet issues related to Aegis BMD installations, BMD	•						
	FY 2		FY 2008	FY 2009			
Aegis BMD Fire Control (BMC3) RDT&E Articles (Quantity)		10,553	0				
This effort provides funding for BMC3 improvements, including establis interoperability with other BMDS elements. FY07 Planned Program:	shment of	Ŭ	0	nts, supported increased			
 Completed CDLMS upgrades to incorporate: Enhanced Launch on TADIL-J design and development to increa Completed implementation of Aegis BMD planning exchange with J 		ttle space.					

- Completed definition, planning, and initial implementation of Aegis BMD Link certification requirements.
- Continued analyses supporting the migration of Aegis BMD Fire Control (BMC3) architecture into future BMDS networks.

Missile Defense Agency (MDA)	Fyhihit D 7A D	DT&F Projog	t Instificati	n	Date Feb	ruary 2008			
APPROPRIATION/BUDGET ACTIVITY	EXIIIDIU K-ZA K	DI&E Flojec		NOMENCLAT		l ual y 2000			
RDT&E, DW/04 Advanced Component Developr	nent and Prot	otypes (ACD			ic Missile Def	ense Aegis			
			u 1) 00		20 11155110 201				
			FY 200	1	FY 200)8	FY 2	2009	
Block 2006 Targets			39,797 0			0		0	
RDT&E Articles (Quantity)				7		0			
This effort provides the Missile Defense Agency	y with ballisti	c missile targ	get hardwa	re, target rang	e support, log	gistics suppor	rt, target integ	gration, and	
associated launch services to support Aegis BM									
Ballistic Missile Defense System.	0	8		j		II II	F		
FY 2007 Planned Program: RDT&E Articles: 2	2 Targets, 5 A	RAVS							
• Initiate design, manufacture and delivery of	0		Re-entrv	Vehicles (MB	RV-2) and Pa	avload insert	in support of	FTM-14	
• Initiate design, manufacture and delivery of	· · ·								
 MRT presentation in support of FTM-12 			support of						
 Two ARAV presentations and post flight an 	alucia in aun	out of ETM	10 TV						
1 1 0	• • • •								
• Two ARAV presentations and post flight an	alysis in supp	bort of FIM-	13						
C. Other Program Funding Summary								Total	
	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	Cost	
PE 0207998C BRAC	0	103,219	159,93		8,724	0	0	333,812	
PE 0603175C Ballistic Missile Defense Technology	183,849	108,423	118,71		120,152	127,012	130,358	903,746	
PE 0603881C Ballistic Missile Defense Terminal Defense	,	,	,	,	,	,	,	,	
Segment	1,082,454	1,045,276	1,019,07	3 795,659	719,847	548,283	439,752	5,650,344	
PE 0603882C Ballistic Missile Defense Midcourse Defense									
Segment	2,985,140	2,243,213	2,209,262	2,276,848	1,385,258	946,437	1,103,532	13,149,690	
PE 0603883C Ballistic Missile Defense Boost Defense Segment	622,218	510,241	421,22	423,927	652,642	799,792	991.839	4,421,888	
PE 0603884C Ballistic Missile Defense Sensors	514,989	586,121	1,221,142	· · ·	1,099,649	1,077,632	823,583	6,507,397	
PE 0603886C Ballistic Missile Defense System Interceptors	341,358	340,107	386,81		708,803	815,433	553,136	3,646,620	
PE 0603888C Ballistic Missile Defense Test and Targets	584,615	621,861	673,69		690,938	708,991	719,209	4,672,281	
PE 0603890C Ballistic Missile Defense System Core	425,889	413,934	432,262		605,219	561,947	571,498	3,493,696	
PE 0603891C Special Programs - MDA	347,377	196,892	288,31		538,050	818,136	786,349	3,279,353	
PE 0603893C Space Tracking & Surveillance System	311,402	231,528	242,44		560,130	735,727	938,191	3,285,928	
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Project: 0809 AEGIS BMD Block 2006

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Missile Defense Agency (MDA)	Exhibit R-2A F	RDT&E Projec	t Justification	1	Date Feb	ruary 2008							
APPROPRIATION/BUDGET ACTIVITY			R-1	NOMENCLAT	URE								
RDT&E, DW/04 Advanced Component Develop	RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P) 0603892C Ballistic Missile Defense Aegis												
								Total					
	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	Cost					
PE 0603894C Multiple Kill Vehicle	133,615	229,943	354,455	488,294	649,632	708,582	879,385	3,443,906					
PE 0603895C BMD System Space Program	0	16,552	29,771	41,638	56,199	133,915	157,548	435,623					
PE 0603896C BMD C2BMC	249,179	447,616	289,277	287,194	270,762	256,767	259,159	2,059,954					
PE 0603897C BMD Hercules	46,268	52,462	55,955	55,289	56,400	51,902	52,784	371,060					
PE 0603898C BMD Joint Warfighter Support	49,833	49,394	69,982	73,997	77,205	80,168	81,948	482,527					
PE 0603904C Missile Defense Integration & Operations Center	104,389	78,557	96,404	100,437	100,366	101,512	102,840	684,505					
PE 0603905C BMD Concurrent Test and Operations	21,870	0	0	0	0	0	0	21,870					
PE 0603906C Regarding Trench	0	1,986	2,978	4,964	4,963	8,933	8,933	32,757					
PE 0603907C Sea Based X-Band Radar (SBX)	0	165,243	0	0	0	0	0	165,243					
PE 0605502C Small Business Innovative Research - MDA	142,510	0	0	0	0	0	0	142,510					
PE 0901585C Pentagon Reservation	15,527	6,019	19,734	5,040	5,284	5,370	5,456	62,430					
PE 0901598C Management Headquarters - MDA	93,350	80,392	86,453	70,355	69,855	69,855	69,855	540,115					

D. Acquisition Strategy

The Aegis BMD element acquisition approach supports evolutionary development, continuously building upon demonstrated capabilities to advance overall BMDS capability. After considering all the technical and management aspects of the program and to meet the requirements presented by an evolving ballistic missile threat, the Aegis BMD program has awarded sole source contracts to Raytheon and Lockheed Martin to continue development of the SM-3 missile and the Aegis BMD Weapon System, respectively.

Missila	Defense Acone	(MDA) EL:L:4 D 2	DDT & E Ducient	Cost A.			Date Februar	mr 2008	
MISSILE J APPROPRIATION/BUDGET A RDT&E, DW/04 Advanced	ACTIVITY	y (MDA) Exhibit R-3			R-1 N	OMENCLATUR			
I. Product Development			rototypes (ACL	Jær)	00030	92C Bamsuc r	Missile Defense	: Aegis	
I. Product Development		I nousanus j				FY 2008		FY 2009	
	Contract	Performing	Total			Award/		Award/	
	Method	Activity &	PYs	FY 200	08	Oblg	FY 2009	Oblg	Total
Cost Categories:	& Type	Location	Cost	Cost		Date	Cost	Date	Cost
Weapons System Engineering		+							
* • • •	+	Lockheed Martin/							
	SS/CPAF	NJ	45,865		0	N/A	0	N/A	45,865
	CPFF	JHU/APL/MD	712		0	N/A	0	N/A	712
	MIPR	NSWC/DD/VA	878		0	N/A	0	N/A	878
	MIPR	NSWC/PHD/CA	405		0	N/A	0	N/A	405
	MIPR	SPAWAR/CA	455		0	N/A	0	N/A	455
	FPI	VA Sites/VA	0		0	N/A	0	N/A	
		Lockheed Martin/							
SBAR	SS/CPAF	NJ	5,150		0	N/A	0	N/A	5,150
		Lockheed Martin/			<u> </u>				
Deployment	SS/CPAF	NJ	37,358		0	N/A	0	N/A	37,358
Deployment	MIPR	NAVSEA/VA	6,330		0	N/A	0	N/A	6,330
Deployment	MIPR	NSWC/DD/VA	6,388		0	N/A	0	N/A	6,388
Deployment	MIPR	NSWC/PHD/CA	10,331		0	N/A	0	N/A	10,331
Deployment	MIPR	SPAWAR/CA	2,800		0	N/A	0	N/A	2,800
		SUPSHIP/BATH/							
Deployment	MIPR	ME	3,178		0	N/A	0	N/A	3,178
		SUPSHIP/PASC/							
Deployment	FPI	MS	4,700		0	N/A	0	N/A	4,700
Deployment	Various	Various	4,073		0	N/A	0	N/A	4,073
SBAR	Various	Various	500		0	N/A	0	N/A	500
SM-3 Missile									
Missile	SS/CPIF	Raytheon/AZ	265,799		0	N/A	0	N/A	265,799
Missile	SS/CPIF	JHU/APL/MD	7,091		0	N/A	0	N/A	7,091
Missile	FFRDC	MIT/LL/MA	521		0	N/A	0	N/A	521
Missile	MIPR	NSWC/DD/VA	6,432		0	N/A	0	N/A	6,432

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						Date		
		y (MDA) Exhibit R-3	RDT&E Projec			Februar	ry 2008	
APPROPRIATION/BUDGET					IOMENCLATUR			
RDT&E, DW/04 Advance	d Component	Development and P	rototypes (AC	D&P) 0603	892C Ballistic N	Aissile Defense	e Aegis	
					FY 2008		FY 2009	
	Contract	Performing	Total		Award/		Award/	
	Method	Activity &	PYs	FY 2008	Oblg	FY 2009	Oblg	Total
Cost Categories:	& Type	Location	Cost	Cost	Date	Cost	Date	Cost
Missile	MIPR	NSWC/PHD/CA	2,717	0	N/A	0	N/A	2,717
Missile	MIPR	NAWC/CL/CA	621	0	N/A	0	N/A	621
Missile	MIPR	NSWC/IH/MD	1,021	0	N/A	0	N/A	1,021
		Various/						
Missile	Various	MD, CA, VA	1,866	0	N/A	0	N/A	1,866
	MIPR	NSWC Corona/CA	549	0	N/A	0	N/A	549
Block 2006 Targets								
				0	NT/A	0	N/A	57,821
	MIPR	MDA/VA	57,821	0	N/A	0	IN/A	57,821
Subtotal Product Development Remarks	MIPR	MDA/VA	57,821 473,561	0	N/A	0		473561
Subtotal Product Development				-		÷		,
Subtotal Product Development Remarks	(\$ in Thousa	unds)	473,561	-	FY 2008	÷	FY 2009	,
Subtotal Product Development Remarks	(\$ in Thousa Contract	ands) Performing	473,561 Total	0	FY 2008 Award/	0	FY 2009 Award/	473561
Subtotal Product Development Remarks II. Support Costs Cost	(\$ in Thousa Contract Method	Performing Activity &	473,561 Total PYs	0 FY 2008	FY 2008 Award/ Oblg	6 0 0 FY 2009	FY 2009 Award/ Oblg	473561 Total
Subtotal Product Development Remarks II. Support Costs Cost Cost Categories:	(\$ in Thousa Contract	ands) Performing	473,561 Total	0	FY 2008 Award/	0	FY 2009 Award/	473561
Subtotal Product Development Remarks II. Support Costs Cost	(\$ in Thousa Contract Method & Type	Performing Activity & Location	473,561 Total PYs Cost	0 FY 2008 Cost	FY 2008 Award/ Oblg Date	0 FY 2009 Cost	FY 2009 Award/ Oblg Date	473561 Total Cost
Subtotal Product Development Remarks II. Support Costs Cost Cost Categories:	(\$ in Thousa Contract Method	Performing Activity & Location MIT/LL/MA	473,561 Total PYs	0 FY 2008	FY 2008 Award/ Oblg	6 0 0 FY 2009	FY 2009 Award/ Oblg	473561 Total
Subtotal Product Development Remarks II. Support Costs Cost Cost Categories:	(\$ in Thousa Contract Method & Type	Performing Activity & Location	473,561 Total PYs Cost	0 FY 2008 Cost	FY 2008 Award/ Oblg Date	0 FY 2009 Cost	FY 2009 Award/ Oblg Date	473561 Total Cost
Subtotal Product Development Remarks II. Support Costs Cost Cost Categories:	(\$ in Thousa Contract Method & Type SS/CPAF	Performing Activity & Location MIT/LL/MA NSWC/Coronarona	473,561 Total PYs Cost 5,265	0 FY 2008 Cost 0	FY 2008 Award/ Oblg Date N/A	6 0 FY 2009 Cost 0	FY 2009 Award/ Oblg Date N/A	473561 Total Cost 5,265
Subtotal Product Development Remarks II. Support Costs Cost Cost Categories:	Contract Method & Type SS/CPAF SS/MIPR	Performing Activity & Location MIT/LL/MA NSWC/Coronarona /CA	473,561 Total PYs Cost 5,265 313	0 FY 2008 Cost 0 0	FY 2008 Award/ Oblg Date N/A N/A	FY 2009 Cost 0 0	FY 2009 Award/ Oblg Date N/A N/A	473561 Total Cost 5,265 313
Subtotal Product Development Remarks II. Support Costs Cost Cost Categories:	(\$ in Thousa Contract Method & Type SS/CPAF SS/MIPR SS/CPFF	Performing Activity & Location MIT/LL/MA NSWC/Coronarona /CA SEG/VA	473,561 Total PYs Cost 5,265 313 4,020	0 FY 2008 Cost 0 0 0	FY 2008 Award/ Oblg Date N/A N/A N/A	FY 2009 Cost 0 0 0 0	FY 2009 Award/ Oblg Date N/A N/A N/A	473561 Total Cost 5,265 313 4,020
Subtotal Product Development Remarks II. Support Costs Cost Cost Categories:	(\$ in Thousa Contract Method & Type SS/CPAF SS/MIPR SS/CPFF Various	Performing Activity & Location MIT/LL/MA NSWC/Coronarona /CA SEG/VA VARIOUS/US	473,561 Total PYs Cost 5,265 313 4,020 525	0 FY 2008 Cost 0 0 0 0 0	FY 2008 Award/ Oblg Date N/A N/A N/A N/A	FY 2009 Cost 0 0 0 0 0 0	FY 2009 Award/ Oblg Date N/A N/A N/A N/A	473561 Total Cost 5,265 313 4,020 525
Subtotal Product Development Remarks II. Support Costs Cost Cost Categories: Weapons System Engineering	(\$ in Thousa Contract Method & Type SS/CPAF SS/MIPR SS/CPFF Various	Performing Activity & Location MIT/LL/MA NSWC/Coronarona /CA SEG/VA VARIOUS/US	473,561 Total PYs Cost 5,265 313 4,020 525	0 FY 2008 Cost 0 0 0 0 0	FY 2008 Award/ Oblg Date N/A N/A N/A N/A	FY 2009 Cost 0 0 0 0 0 0	FY 2009 Award/ Oblg Date N/A N/A N/A N/A	473561 Total Cost 5,265 313 4,020 525

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MDA Exhibit R-3 (PE 0603892C)

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Missile D	fonce Agone	v (MDA) Evhihit D 2	DDT & E Draigat	Cost Ar	alvaia		Date Februar	w 2008	
APPROPRIATION/BUDGET AC RDT&E, DW/04 Advanced (CTIVITY	y (MDA) Exhibit R-3			R-1 N	OMENCLATUR		<i>.</i>	
ADT &E, D W/04 Auvanceu C	Joinponent.	Development and I	Tototypes (ACL	Jai)	00030		viissile Delense		
	Contract	Performing	Total	EX 20	20	FY 2008 Award/	EV 2000	FY 2009 Award/	TA
Cost Categories:	Method & Type	Activity & Location	PYs Cost	FY 200 Cost		Oblg Date	FY 2009 Cost	Oblg Date	Total Cost
	MIPR	NSWC/CD/MD	909		0	N/A	0	N/A	909
	MIPR	NAVSEA/VA	1,484		0	N/A	0	N/A	1,484
	Various	Various	1,123		0	N/A	0	N/A	1,123
	MIPR	MDA/VA	29,447		0	N/A	0	N/A	29,447
SE&I and BMDS Integration									
	MIPR	JHU/APL/MD	595		0	N/A	0	N/A	595
	MIPR	NSWC Corona/CA	705		0	N/A	0	N/A	705
	MIPR	NSWC DD/VA	5,241		0	N/A	0	N/A	5,241
	MIPR	NSWC PHD/CA	1,240		0	N/A	0	N/A	1,240
	Various	Various	714		0	N/A	0	N/A	714
Operations & Support/ Fleet Introduction									
Weapon System	MIPR	JHU/APL/MD	450		0	N/A	0	N/A	450
Weapon System	MIPR	CSCS (ATRC)/VA	1,975		0	N/A	0	N/A	1,975
Weapon System	MIPR	NSWC Corona/CA	1,060		0	N/A	0	N/A	1,060
Weapon System	MIPR	NSWC/DD/VA	795		0	N/A	0	N/A	795
Weapon System	MIPR	NSWC/PHD/CA	3,881		0	N/A	0	N/A	3,881
Weapon System	Various	Various	839		0	N/A	0	N/A	839
Weapon System	CPAF	Lockheed Martin/ NJ	11,000		0	N/A	0	N/A	11,000
Aegis BMD Fire Control (BMC3)									
	MIPR	JHU/APL/MD	3,665		0	N/A	0	N/A	3,665
	FPI	MIT/LL/MA	1,526		0	N/A	0	N/A	1,526
		MITRE	996		0	N/A	0	N/A	996
	MIPR	NSWC PHD/CA	1,512		0	N/A	0	N/A	1,512
	MIPR	SPAWAR/CA	10,456		0	N/A	0	N/A	10,456
	Various	Various	998		0	N/A	0	N/A	998
Subtotal Support Costs			116,029		0		0	Í	116029

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Missile	Defense Agency	y (MDA) Exhibit R-3	RDT&E Projec	t Cost An	alvsis		Date Februa	rv 2008	
APPROPRIATION/BUDGET RDT&E, DW/04 Advanced	ACTIVITY				R-1 N	OMENCLATUR 892C Ballistic I	RE	•	
Remarks									
III. Test and Evaluation	Cost (\$ in 7	Thousands)							
						FY 2008		FY 2009	
	Contract	Performing	Total			Award/		Award/	
	Method	Activity &	PYs FY 2008 Oblg				FY 2009	Oblg	Total
Cost Categories:	& Type	Location	Cost	Cost		Date	Cost	Date	Cost
System Test & Evaluation	MIPR	DMDE/III	20.070		0	NT/A	0		20.000
Test & Eval		PMRF/HI	20,060		0	N/A	0	N/A	20,060
Test & Eval	MIPR	SMDC/AL	5,600		0	N/A	0	N/A	5,600
Test & Eval	MIPR	NSWC/DD/VA	16,800		0	N/A	0	N/A	16,800
Test & Eval	SS/CPFF	JHU/APL/MD	25,900		0	N/A	0	N/A	25,900
Test & Eval		NAWC/WPNS	7,600		0	N/A	0	N/A	7,600
Test & Eval	MIPR	NSWC/PHD/CA	9,900		0	N/A	0	N/A	9,900
Test & Eval	MIPR	MIT/LL/MD	2,200		0	N/A	0	N/A	2,200
Test & Eval	MIPR	AIRPAC/HI	2,500		0	N/A	0	N/A	2,500
Test & Eval	MIPR	SPAWAR/CA	5,300		0	N/A	0	N/A	5,300
Test & Eval	Various	Various	7,200		0	N/A	0	N/A	7,200
Test & Eval	MIPR	WSMR/CA	1,500		0	N/A	0	N/A	1,500
	MIPR	NSWC/Corona/CA	5,700		0	N/A	0	N/A	5,700
		Raytheon/AZ	5,300		0	N/A	0	N/A	5,300
		Lockheed Martin/			T				
		NJ	31,200		0	N/A	0	N/A	31,200
		MDA/VA	9,000		0	N/A	0	N/A	9,000
Subtotal Test and Evaluation			155,760		0		0		155760

Remarks

Project: 0809 AEGIS BMD Block 2006

RDT&E, DW/04 Advanced	Component I	Development and P	rototypes (AC	D&P) 0603	3892C Ballistic I	Missile Defense	e Aegis	
IV. Management Services	Cost (\$ in	Thousands)						
0					FY 2008		FY 2009	
	Contract	Performing	Total		Award/		Award/	
	Method	Activity &	PYs	FY 2008	Oblg	FY 2009	Oblg	Total
Cost Categories:	& Type	Location	Cost	Cost	Date	Cost	Date	Cost
Weapons System Engineering								
	MIPR	NAVSEA	27,734	0		0	N/A	27,734
	C/CPFF	Anteon/VA	63,066	0	N/A	0	N/A	63,066
	C/CPFF	Paradigm/VA	3,388	0	N/A	0	N/A	3,388
	SS/CPFF	JHU/APL/MD	3,849	0	N/A	0	N/A	3,849
	SS/CPAF	Raytheon/AZ	2,542	0	N/A	0	N/A	2,542
		Lockheed Martin/						
	SS/CPAF	NJ	2,500	0	N/A	0	N/A	2,500
	MIPR	NSWC/DD/VA	4,136	0	N/A	0	N/A	4,136
	Various	Various	4,543	0	N/A	0	N/A	4,543
	CPFF	Gryphon/MD	2,000	0	N/A	0	N/A	2,000
Subtotal Management Services Remarks			113,758	0		0		113758
Project Total Cost	1		859,108	0	<u> </u>	0		859,108
rioject rotal Cost		· · ·	ł					
Remarks								

Missile Defense A	genc	y (M	IDA)) Ex	hibit	R-4	Sch	edul	e Pr	ofile								Da Fe		ary	200	8						
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component De	evelo	opmo	ent a	and	Pro	toty	pes	(AC	D&	P)		-1 N 6038						le De	efen	se A	egis	5						
Fiscal Year		20	07			20	08			20)09			20	010			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
Manufacturing Processes and Advanced Mater	rials																											
BSP Engineering Development Model (CSEDS)																												
Development Milestones																												
BMD 4.0.1 Preliminary Design Review 1																												
BMD 4.0 Critical Design Review																												
BMD 4.0.1 System Design Review																												
Flight Tests	-				-				-								-				-							
FTM-11																												
FTM-11 4th Objective																												
FTM-12																												
										Ĺ	ege																	
					t Eve Deci								7		ifican stone							-						
			Elem	nent T	est (comp	lete)							Elen	nent T	est (p	olanne	ed)				1						
					evel T e Activ		compl	ete)				_ ⊂			em Le ined A			olanne	ed)			1						
	—		Con	ipiete	ACIN	/ity						Δ_		Plan	ined A	CTIVIT	y											

	ncy (MDA) Exh	ibit R-4A Schedule			February 20	Võ	
APPROPRIATION/BUDGET ACTIVITY				MENCLATURE	1 D C A	•	
RDT&E, DW/04 Advanced Component Dev	elopment and	Prototypes (ACD)	&P) 060389.	2C Bainstic Mis	ssile Defense Aeg	JS	
cchedule Profile	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Manufacturing Processes and Advanced Materials							
BSP Engineering Development Model (CSEDS)	3Q						
evelopment Milestones							
BMD 4.0.1 Preliminary Design Review 1	1Q						
BMD 4.0 Critical Design Review	3Q						
BMD 4.0.1 System Design Review	3Q						
light Tests							
FTM-11	1Q						
FTM-11A	2Q						
FTM-11 4th Objective	3Q						
FTM-12	3Q						

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Missile Defense Agency (MDA) Exhibit R-	2A RDT&E Project Justif	fication		Date Februar	ry 2008		
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and		NCLATURE Ballistic Mis	ssile Defense	e Aegis			
COST (\$ in Thousands)	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
0909 AEGIS BMD Block 2008	573,874	0	0	0	0	0	0
RDT&E Articles Qty	0	0	0	0	0	0	0
Note: The content previously planned in project 0000 fo	r EV 08 13 has been m	avad to prov	inets BY00	EV00 and V	$\mathbf{V}00$ in acc	ordance with	h tha

Note: The content previously planned in project 0909 for FY 08-13 has been moved to projects BX09, EX09 and XX09, in accordance with the Missile Defense Agency revised Block structure.

A. Mission Description and Budget Item Justification

Aegis BMD Block 2008 supports the BMDS mission of intercepting ballistic missiles in all regions, in all phases, and of all ranges, as follows:

- In all regions: provide enhanced, sea-based Long Range Surveillance and Track (LRS&T) and engagement capabilities.
- In all phases of ballistic missile flight: LRS&T capability against missile threats in all flight stages; engagement capability against missile threats in the midcourse flight stage
- Against all ranges:
 - o LRS&T capability against Ballistic Missiles threats of all ranges.
 - Enhanced engagement capability (BMD 4.0.1) will provide: battlespace expanded to include Intermediate-Range Ballistic Missile (IRBM)class threats

Aegis BMD supported LDC by providing Long Range Surveillance and Track (LRS&T) data to other elements of the BMDS. Aegis BMD will further improve both national and international security with its ability to launch Standard Missile 3 (SM-3) missiles based upon data received via the Tactical Digital Information Link (TADIL) network. Through development and fielding of the Aegis BMD Signal Processor and upgrades to the SM-3 Block IA missile (SM-3 Block IB) in Block 2008, Aegis BMD will improve discrimination capability and performance against more diverse and longer range threats.

Aegis BMD Block 2008 will build on BSP development in Block 2006 to expand Aegis BMD effectiveness against the threat base. It will provide a full upgrade to the Aegis BMD Weapon System (BMD 4.0/4.0.1) and an upgraded SM-3 missile, SM-3 Block IB.

Block 2008 includes improvements to the kinetic warhead's seeker and Divert and Attitude Control System (DACS). Seeker improvements will include the introduction of seeker All-Reflective-Optics (ARO) to improve optics performance, and a Kinetic Warhead Advanced Signal Processor (ASP) to mitigate diminished manufacturing source issues in SM-3 Block IA missiles. Additionally, the increased processing capability of the ASP will support new discrimination algorithms. The optics and processing improvements will enhance the Aegis BMD contribution to the BMDS

Project: 0909 AEGIS BMD Block 2008

UNCLASSIF		_
		Date
Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justifi APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603892C Ballistic Missil	February 2008 le Defense Aegis
missions by providing greater sensitivity and seeker discrimination capability. O seeker and development of the Throttleable Divert and Attitude Control System SM-3 Block IB configuration in the Block 2008 timeframe.	1	e
 Aegis BMD Block 2008 will deliver in two spirals: Spiral one (BMD 4.0) will deliver an initial testbed system capability with th enhancements to the LRS&T mission by adding mission capability for flight Spiral two (BMD 4.0.1) will continue through the System Engineering Develocertified system capable of firing the SM-3 Block IA or IB missile. 	missions.	
 Other Block 2008 capability enhancements include: Improvements in BMDS Command and Control, Battle Management, and Control enhancements and the resulting discrimination capabilities are able to be control. Improved engagement coordination capability with THAAD and PATRIOT Analysis for planned upgrades to the SM-3 missile to expand battlespace and 	nmunicated, correlated, an to conserve upper tier mis	nd acted upon. ssiles.
In collaboration with the MDA Systems Engineer, Aegis BMD is contributing to Aegis BMD supports an autonomous engagement against Short Range Ballistic without requiring external cueing. It supports an engagement against SRBMs and sensors. Aegis BMD will also provide target track data to support Ground Based Missiles (LRBMs) and Intermediate Range Ballistic Missiles (IRBMs) via input (STP) and Weapons Task Plan (WTP).	Missiles (SRBMs) and Me d MRBMs using data from I Interceptor Launch and E	edium Range Ballistic Missiles (MRBMs) n other BMDS elements and external Engagement against Long Range Ballistic

	CLABBI		-	
		• ,•	Date	
Missile Defense Agency (MDA) Exhibit R-2A RDT&E I	Project Justil		February 2008	
APPROPRIATION/BUDGET ACTIVITY		R-1 NOMENCLAT		
RDT&E, DW/04 Advanced Component Development and Prototypes ((ACD&P)	0603892C Ballisti	c Missile Defense Aegis	
B. Accomplishments/Planned Program				
	F	¥ 2007	FY 2008	FY 2009
Weapon System		241,498	0	
RDT&E Articles (Quantity)		0	0	
In Block 2008, the Aegis BMD Weapon System Engineering group			ort testbed flight mission	operations; and BMD
4.0.1 to provide an operationally-certified system with either the SM	I-3 Block IA	A or IB.		
 Updated the Block 2008 Element Capability Specification (ECS) Conducted the BMD 4.0.1 System Design Review (SDR), based Conducted the Preliminary Design Review (PDR) to review and Completed work to improve Lethal Object Designation in a clutter 	on the upda gain approv	ated ECS, to presenval for the contractor	t Block 2008 requiremer	
 Conducted critical experiments using Aegis BMD Signal Process 	sor ADM e	quipment.		
• Conducted studies on RF/IR sensor fusion for a Block 2008 impl	lementation	•		
-				
	F	¥ 2007	FY 2008	FY 2009
SM-3 Missile		329,936	0	
RDT&E Articles (Quantity)		0	0	
Block 2008 missile improvements include improvements to the kinet	tic warhead	's seeker and Diver	t and Attitude Control Sy	stem (DACS). Seeker
improvements will include the introduction of seeker All-Reflective-	-Optics (AR	O) to improve opti	cs performance, and a Ki	inetic Warhead Advance
Signal Processor (ASP). Other missile improvements include the two	o-color seek	er and developmen	t of the Throttleable Div	ert and Attitude Control
System (TDACS). Also during this timeframe, Aegis BMD will com	plete deliv	ery of SM-3 Block	IA missiles for deployme	ent, and begin delivery of
SM-3 Block IB missiles for testing and deployment.			- •	- •
FY07 Accomplishments:				
• Continued SM-3 Block IB All Reflective Optics (ARO) engineer	ring for imr	roved missile discr	imination capabilities	

- Continued SM-3 Block IB All Reflective Optics (ARO) engineering for improved missile discrimination capabilities.
- Continued SM-3 Block IB Advanced Signal Processor (ASP) design efforts for improved missile discrimination.
- Continued testing of SM-3 Block IB two-color seeker upgrade.
- Continued SM-3 Block IB TDACS development.

Project: 0909 AEGIS BMD Block 2008

Missile Defense Agency (MDA) I	Exhibit R-2A R	DT&E Project	Justificatio	n		Date February 2008				
APPROPRIATION/BUDGET ACTIVITY			R-1	NOMENCL	ATURE					
RDT&E, DW/04 Advanced Component Developm		VI \	&P) 060	3892C Ball	stic Missile D	efense Aegis				
• Produced initial SM-3 Block IB ASP proof-	U									
Completed SM-3 Block IB IR discrimination		0		-						
• Upgraded SM-3 Block IA Inert Operational	Missile to SN	A-3 Block IB	configurat	ion to valic	ate interface i	ntegrity withi	n the missile a	and across		
weapon system interfaces.					C 1 · · · ·					
• Continued fabrication of SM-3 Block IA mis	ssiles for deli	very beginnii	ng in FY08	, and begin	fabrication of	FY09 deliver	ries.			
FY 2007 FY 2008 FY 2009										
Aegis BMD Fire Control (BMC3)				2,440		0				
RDT&E Articles (Quantity)				0		0				
This effort provides funding for BMC3 improve	ments, incluc	ling establish	ment of alt	ernate BM	O data paths a	nd enhanceme	ents, supportin	ng increased		
interoperability with other BMDS elements.										
FY07 Accomplishments:										
Continued incorporation of CDLMS upgrade	•									
• Interoperability improvements to suppor	t Long Range	e Surveillance	e and Track							
• Enhanced Launch on TADIL support										
• Engagement Coordination	ntation of th	a Dafanca Inf	Composition I	n fue at my at w	o Common O	nonotina Envi	nonmant (DII	COE		
 Continued definition, planning, and implement compliant Aegis BMD multi-ship mission planning 		e Defense Inf	ormation 1	nirastructu	e Common O	perating Envi	ronment (DII)	LUE)		
 Continued development of enhanced discrimed 		ithma to imp		rt for Long	Dongo Survo	llance and Tr	ook and Enga	romont		
missions.	ination algor	iums to mp	love suppo	It for Long	Kalige Sulvel		ack and Engag	gement		
C. Other Program Funding Summary										
								Total		
	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	Cost		
PE 0207998C BRAC	0	103,219	159,938				0	333,812		
PE 0603175C Ballistic Missile Defense Technology	183,849	108,423	118,718	115,2	120,152	127,012	130,358	903,746		
PE 0603881C Ballistic Missile Defense Terminal Defense Segment	1,082,454	1,045,276	1,019,073	795,6	719,847	548,283	439,752	5,650,344		
PE 0603882C Ballistic Missile Defense Midcourse Defense Segment								13,149,690		

Project: 0909 AEGIS BMD Block 2008

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34 of 134 UNCLASSIFIED MDA Exhibit R-2A (PE 0603892C)

Missile Defense Agency (MDA)	Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification													
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Developm		<u>~</u>	R-	1 NOMENCLAT 03892C Ballisti		ense Aegis								
	FY 2007 FY 2008 FY 2009 FY 2010 FY 2011 FY													
PE 0603883C Ballistic Missile Defense Boost Defense Segment	622,218	510,241	421,22	9 423,927	652,642	799,792	991,839	4,421,888						
PE 0603884C Ballistic Missile Defense Sensors	514,989	586,121	1,221,14	3 1,184,280	1,099,649	1,077,632	823,583	6,507,397						
PE 0603886C Ballistic Missile Defense System Interceptors	341,358	340,107	386,81	7 500,966	708,803	815,433	553,136	3,646,620						
PE 0603888C Ballistic Missile Defense Test and Targets	584,615	621,861	673,69	1 672,976	690,938	708,991	719,209	4,672,281						
PE 0603890C Ballistic Missile Defense System Core	425,889	413,934	432,26	2 482,947	605,219	561,947	571,498	3,493,696						
PE 0603891C Special Programs - MDA	347,377	196,892	288,31	5 304,234	538,050	818,136	786,349	3,279,353						
PE 0603893C Space Tracking & Surveillance System	311,402	231,528	242,44	1 266,509	560,130	735,727	938,191	3,285,928						
PE 0603894C Multiple Kill Vehicle	133,615	229,943	354,45	5 488,294	649,632	708,582	879,385	3,443,906						
PE 0603895C BMD System Space Program	0	16,552	29,77	1 41,638	56,199	133,915	157,548	435,623						
PE 0603896C BMD C2BMC	249,179	447,616	289,27	7 287,194	270,762	256,767	259,159	2,059,954						
PE 0603897C BMD Hercules	46,268	52,462	55,95	5 55,289	56,400	51,902	52,784	371,060						
PE 0603898C BMD Joint Warfighter Support	49,833	49,394	69,98	2 73,997	77,205	80,168	81,948	482,527						
PE 0603904C Missile Defense Integration & Operations Center	104,389	78,557	96,40	4 100,437	100,366	101,512	102,840	684,505						
PE 0603905C BMD Concurrent Test and Operations	21,870	0		0 0	0	0	0	21,870						
PE 0603906C Regarding Trench	0	1,986	2,97	8 4,964	4,963	8,933	8,933	32,757						
PE 0603907C Sea Based X-Band Radar (SBX)	0	165,243		0 0	0	0	0	165,243						
PE 0605502C Small Business Innovative Research - MDA	142,510	0		0 0	0	0	0	142,510						
PE 0901585C Pentagon Reservation	15,527	6,019	19,73	4 5,040	5,284	5,370	5,456	62,430						
PE 0901598C Management Headquarters - MDA	93,350	80,392	86,45	3 70,355	69,855	69,855	69,855	540,115						

D. Acquisition Strategy

The Aegis BMD element acquisition approach supports evolutionary development, continuously building upon demonstrated capabilities to advance overall BMDS capability. After considering all the technical and management aspects of the program and to meet the requirements presented by an evolving ballistic missile threat, the Aegis BMD program has awarded sole source contracts to Raytheon and Lockheed Martin to continue development of the SM-3 missile and the Aegis BMD Weapon System, respectively.

							Date	A AAA	
		y (MDA) Exhibit R-3	RDT&E Project	t Cost Aı			Februar	ry 2008	
APPROPRIATION/BUDGET A						OMENCLATUR			
RDT&E, DW/04 Advanced	-	•	rototypes (ACI	D&P)	06038	892C Ballistic I	Alissile Defense	e Aegis	
I. Product Development	Cost (\$ in]	Thousands)						·	
						FY 2008		FY 2009	
	Contract	Performing	Total			Award/		Award/	
	Method	Activity &	PYs	FY 20		Oblg	FY 2009	Oblg	Total
Cost Categories:	& Type	Location	Cost	Cost		Date	Cost	Date	Cost
Weapon System									
		Lockheed Martin/							
	SS/CPAF	NJ	262,655		0	N/A	0	N/A	262,655
	MIPR	NSWC/DD/VA	6,680		0	N/A	0	N/A	6,680
	MIPR	NSWC/PHD/CA	5,851		0	N/A	0	N/A	5,851
	MIPR	JHU/APL/MD	9,072		0	N/A	0	N/A	9,072
	MIPR	SPAWAR/CA	6,945		0	N/A	0	N/A	6,945
	MIPR	Va Sites/VA	5,555		0	N/A	0	N/A	5,555
SM-3 Missile									
		Raytheon/AZ	455,189		0	N/A	0	N/A	455,189
	MIPR	NSWC DD/VA	7,061		0	N/A	0	N/A	7,061
	MIPR	JHU/APL/MD	8,164		0	N/A	0	N/A	8,164
	MIPR	NSWC/CR/MD	2,184		0	N/A	0	N/A	2,184
	MIPR	NSWC/CL/CA	2,350		0	N/A	0	N/A	2,350
	MIPR	NSWC/IH/MD	3,576		0	N/A	0	N/A	3,576
	MIPR	NSWC Corona/CA	3,564		0	N/A	0	N/A	3,564
	MIPR	MIT/LL/MA	4,204		0	N/A	0	N/A	4,204
	MIPR	NSWC/PHD/CA	3,534		0	N/A	0	N/A	3,534
	Various	Various	5,336		0	N/A	0	N/A	5,336
Aegis BMD Fire Control (BMC3)									
	CPFF	JHU/APL/MD	457		0	N/A	0	N/A	457
	FPI	MIT/MA	490		0	N/A	0	N/A	490
		MITRE	330		0	N/A	0	N/A	330
	MIPR	NSWC PHD/CA	483		0	N/A	0	N/A	483
	MIPR	SPAWAR/CA	329		0	N/A	0	N/A	329
	Various	Various	351		0	N/A	0	N/A	351
Subtotal Product Development			794,360		0		0		794360

Project: 0909 AEGIS BMD Block 2008

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Missi	le Defense Agenc	y (MDA) Exhibit R-3	RDT&E Proiec	rt Cost Ana	lvsis		Date Februar	·v 2008	
APPROPRIATION/BUDGE RDT&E, DW/04 Advance	T ACTIVITY	× · · ·	×]	R-1 N	OMENCLATUR 892C Ballistic		v	
Remarks									
II. Support Costs Cos	t (\$ in Thous a	nds)							
**						FY 2008		FY 2009	
	Contract	Performing	Total			Award/		Award/	
	Method	Activity &	PYs	FY 2008		Oblg	FY 2009	Oblg	Total
Cost Categories:	& Type	Location	Cost	Cost		Date	Cost	Date	Cost
Weapon System									
	MIPR	ATRC/VA	650		0	N/A	0	N/A	650
	CPFF	SEG/MD	3,575		0	N/A	0	N/A	3,575
	FFRDC	MIT/LL/MA	5,005		0	N/A	0	N/A	5,005
	FFRDC	MITRE/VA	325		0	N/A	0	N/A	325
	MIPR	NSWC/Corona/CA	163		0	N/A	0	N/A	163
		Various	1,880		0	N/A	0	N/A	1,880
	MIPR	MDA/VA	15,300		0	N/A	0	N/A	15,300
SM-3 Missile									
	MIPR	NSWC DD/VA	1,500		0	N/A	0	N/A	1,500
	MIPR	JHU/APL/MD	2,000		0	N/A	0	N/A	2,000
	FPI	MIT/LL/MA	100		0	N/A	0	N/A	100
	MIPR	NSWC/CD/MD	471		0	N/A	0	N/A	471
	MIPR	NAVSEA/VA	838		0	N/A	0	N/A	838
	Various	Various	129		0	N/A	0	N/A	129
	MIPR	MDA/VA	15,482		0	N/A	0	N/A	15,482
Subtotal Support Costs			47,418		0		0		47418

Remarks

Project: 0909 AEGIS BMD Block 2008

APPROPRIATION/BUDGE					1 NOMENCLATU			
RDT&E, DW/04 Advance	ed Component D	evelopment and	Prototypes (ACI	D&P) 06	03892C Ballistic	Missile Defens	e Aegis	
III. Test and Evaluation	n Cost (\$ in T	housands)						
					FY 2008		FY 2009	
	Contract	Performing	Total		Award/		Award/	
	Method	Activity &	PYs	FY 2008	Oblg	FY 2009	Oblg	Total
Cost Categories:	& Type	Location	Cost	Cost	Date	Cost	Date	Cost
Subtotal Test and Evaluation								
Remarks								
IV. Management Servio	ces Cost (\$ in	Thousands)						
		inousanus j			FY 2008		FY 2009	
	Contract	Performing	Total		Award/		Award/	
	Method	Activity &	PYs	FY 2008	Oblg	FY 2009	Oblg	Total
Cost Categories:	& Type	Location	Cost	Cost	Date	Cost	Date	Cost
Subtotal Management Services								
Remarks			<u> </u>					
Kemai K5								
			841,778	()	0		841,778
Devicest Total Cost			041,770)	0		841,778
	<u> </u>							
Project Total Cost Remarks								

Missile Defens	e Ageno	ey (M	[DA]) Exl	hibit	R-4	Sch	edul	le Pr	ofile								Da Fe	ite bru	ary	200	8						
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component	t Develo	opmo	ent :	and	Pro	toty	pes	(AC	D&	P)					LAT Illisti			le D	efen	se A	egis	5						
Fiscal Year		20	07			20)08			20)09			20	010			20	011			2	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
Development Milestones	_				_				_				_				_				_				_			
BMD 4.0/4.0.1 Development	▲				⊿																							
BMD 4.0.1 Preliminary Design Review 1																												
BMD 4.0.1 In-Process Review			▲																									
			Sign	ifican	t Evei	nt (co	mplo	to)		L	egei		٨	Sign	nifican	+ Evo	nt (nl	20000	4)									
			Mile	stone	e Deci	sion	(com					7		Mile	estone	e Dec	ision	(plan										
					est (c evel T			lete)							nent T tem Le				ed)									
	▲	_▲			Activ							Δ_	<u> </u>		nned A			-										
Project: 0909 AEGIS BMD Block 2008																						I	MDA	Exhi	bit R-	-4 (Pl	E 060	03892C)

Missile Defense	Agency (MDA) Exhi	bit R-4A Schedule	Detail		Date February 20	08	
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component 1			R-1 NO	MENCLATURE 2C Ballistic Mis	ssile Defense Aeg		
Schedule Profile	FY 2007	FY 2008	FY 2009	FY 2010	EV 2011	FY 2012	FY 2013
	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Development Milestones BMD 4.0/4.0.1 Development	10.40	10.40	10.40	10			
	1Q-4Q	1Q-4Q	1Q-4Q	1Q			
BMD 4.0.1 Preliminary Design Review 1	1Q						
BMD 4.0.1 In-Process Review	3Q						

				Date			
Missile Defense Agency (MDA) Exhibit R-2	2A RDT&E Project Justi	fication		Februar	y 2008		
APPROPRIATION/BUDGET ACTIVITY		R-1 NOME	ENCLATURE				
RDT&E, DW/04 Advanced Component Development and I	Prototypes (ACD&P)	0603892C	Ballistic Mi	ssile Defense	e Aegis		
COST (\$ in Thousands)	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
0009 AEGIS BMD Block 2010	38,243	0	0	0	0	0	0
RDT&E Articles Qty	0	0	0	0	0	0	0
Note: The content previously planned in project 0009 for	r FY 08-13 has been m	oved to pro	iects EX09 a	nd XX09. in	accordance	with the M	issile

Note: The content previously planned in project 0009 for FY 08-13 has been moved to projects EX09 and XX09, in accordance with the Missile Defense Agency revised Block structure.

A. Mission Description and Budget Item Justification

Aegis BMD Block 2010 supports the BMDS mission of intercepting ballistic missiles in all regions, in all phases, and of all ranges, as follows:

- In all regions: provide sea-based surveillance, tracking, and engagement capabilities.
- In all phases of ballistic missile flight: Long Range Surveillance and Track (LRS&T) capability against missile threats in all flight stages; engagement capability against missile threats in the midcourse flight stage
- Against all ranges:
 - o LRS&T capability against Ballistic Missile threats of all ranges
 - o Engagement capability against SRBM to IRBM-class threats

Aegis BMD supported LDC by providing Long Range Surveillance and Track (LRS&T) data to other elements of the BMDS. Aegis BMD will further improve both national and international security with its ability to launch Standard Missile 3 (SM-3) missiles based upon autonomous data and upon data received via the Tactical Digital Information Link (TADIL) network. Through development and fielding of the Aegis BMD Signal Processor and upgrades to the SM-3 Block IA missile in Block 2006/2008, Aegis BMD will significantly improve discrimination capability and performance against more diverse and longer range threats.

The Aegis BMD Block 2010 program will integrate Aegis BMD Block 2008 and the BMD mission with the Navy-developed Open Architecture system. This effort will transition Aegis BMD from older, MIL-standard computers to newer Commercial Off The Shelf (COTS) computing plants. This change is necessary for Aegis BMD to remain compatible with Navy assets as Navy ship modernization plans are executed. This change will improve human-systems interface through display enhancements and eliminate the need for a separate computing system specific to the BMD mission. This will also enable more ships to serve as candidates for the BMD mission as the threat projection changes. Open architecture will be included in future fielded BMD system improvements.

Project: 0009 AEGIS BMD Block 2010

		Date
Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justifi	cation	February 2008
APPROPRIATION/BUDGET ACTIVITY	R-1 NOMENCLATURE	
RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	0603892C Ballistic Missil	e Defense Aegis

In collaboration with the MDA Systems Engineer, Aegis BMD is contributing to the BMDS in development of engagement sequence groups (ESGs). Aegis BMD Block 2010 will support an autonomous engagement against Short Range Ballistic Missiles (SRBMs), Medium Range Ballistic Missiles (MRBMs) and Intermediate-Range Ballistic Missiles (IRBMs) without external cueing. It will support an engagement against SRBM to IRBM- class targets using data from other BMDS elements and external sensors.

Aegis BMD will also provide target track data to support Ground Based Interceptor Launch and Engagement against Long Range Ballistic Missiles (LRBMs) and Intermediate Range Ballistic Missiles (IRBMs) via input for the Ground-based Midcourse Defense (GMD) Sensor Task Plan (STP) and Weapons Task Plan (WTP).

B. Accomplishments/Planned Program

	FY 2007	FY 2008	FY 2009
Weapon System Engineering	14,243	0	0
RDT&E Articles (Quantity)	0	0	0

For Block 2010, Aegis BMD began performance and threat analysis in FY07.

FY07 Accomplishments:

- Performed preliminary analysis in support of Engineering Capability Specification (ECS) development.
 - o Evaluated U.S. Navy Open Architecture computer program code.
 - Reviewed U.S. Navy cruiser modernization and destroyer modernization hardware suites for future incorporation of Aegis BMD Block 2010 computer programs.
 - Began drafting Block 2010 ECS.
- Successfully conducted Block 2010 System Readiness Review (SRR) Mar 07.
- Began preparations for Block 2010 System Design Review (SDR) Dec 08.

	FY 2007	FY 2008	FY 2009
SM-3 Missile	24,000	0	0
RDT&E Articles (Quantity)	0	0	0

Aegis BMD Block 2010 will continue the procurement of SM-3 Block IB missiles.

Project: 0009 AEGIS BMD Block 2010

Missile Defense Agency (MDA) I	Exhibit R-2A R	DT&E Projec	t Justifica	tion		Date Feb	e ruary 2008		
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Developm			R	R-1 NOM	/IENCLATU 2 C Ballisti		¥		
FY07 Accomplishments:									
 Procured Long Lead Material for SM-3 Blog 	ck IB missile	with delive	rv in FY1	0					
• Trocured Long Loud material for Shi e 213.	KID missies		y 111 I I I	.0.					
C. Other Program Funding Summary									
									Total
, i	FY 2007	FY 2008	FY 2009) F	FY 2010	FY 2011	FY 2012	FY 2013	Cost
PE 0207998C BRAC	0	103,219	159,9	38	61,931	8,724	0	0	333,812
PE 0603175C Ballistic Missile Defense Technology	183,849	108,423	118,7	18	115,234	120,152	127,012	130,358	903,746
PE 0603881C Ballistic Missile Defense Terminal Defense									
Segment	1,082,454	1,045,276	1,019,0	173	795,659	719,847	548,283	439,752	5,650,344
PE 0603882C Ballistic Missile Defense Midcourse Defense	2,985,140	2,243,213	2,209,2		2,276,848	1,385,258	946,437	1,103,532	13,149,690
Segment PE 0603883C Ballistic Missile Defense Boost Defense	2,983,140	2,243,213	2,209,2	.62	2,270,040	1,303,230	940,437	1,105,552	13,149,090
Segment	622,218	510,241	421,2	229	423,927	652,642	799,792	991,839	4,421,888
PE 0603884C Ballistic Missile Defense Sensors	514,989	586,121	1,221,1		1,184,280	1,099,649	1,077,632	823,583	6,507,397
PE 0603886C Ballistic Missile Defense System Interceptors	341,358	340,107	386,8		500,966	708,803	815,433	553,136	3,646,620
PE 0603888C Ballistic Missile Defense Test and Targets	584,615	621,861	673,6		672,976	690,938	708,991	719,209	4,672,281
PE 0603890C Ballistic Missile Defense System Core	425,889	413,934	432,2		482,947	605,219	561,947	571,498	3,493,696
PE 0603891C Special Programs - MDA	347,377	196,892	288,3	315	304,234	538,050	818,136	786,349	3,279,353
PE 0603893C Space Tracking & Surveillance System	311,402	231,528	242,4	41	266,509	560,130	735,727	938,191	3,285,928
PE 0603894C Multiple Kill Vehicle	133,615	229,943	354,4	55	488,294	649,632	708,582	879,385	3,443,906
PE 0603895C BMD System Space Program	0	16,552	29,7	71	41,638	56,199	133,915	157,548	435,623
PE 0603896C BMD C2BMC	249,179	447,616	289,2	.77	287,194	270,762	256,767	259,159	2,059,954
PE 0603897C BMD Hercules	46,268	52,462	55,9	55	55,289	56,400	51,902	52,784	371,060
PE 0603898C BMD Joint Warfighter Support	49,833	49,394	69,9	82	73,997	77,205	80,168	81,948	482,527
PE 0603904C Missile Defense Integration & Operations									
Center	104,389	78,557	96,4		100,437	100,366	101,512	102,840	684,505
PE 0603905C BMD Concurrent Test and Operations	21,870	0		0	0	0	0	0	21,870
PE 0603906C Regarding Trench	0	1,986	2,9		4,964	4,963	8,933	8,933	32,757
PE 0603907C Sea Based X-Band Radar (SBX)	0	165,243		0	0	0	0	0	165,243
PE 0605502C Small Business Innovative Research - MDA	142,510	0		0	0	0	0	0	142,510
PE 0901585C Pentagon Reservation	15,527	6,019	19,7	'34	5,040	5,284	5,370	5,456	62,430

Project: 0009 AEGIS BMD Block 2010

43 of 134 UNCLASSIFIED MDA Exhibit R-2A (PE 0603892C)

Missile Defense Agency (MDA)	Exhibit R-2A I	RDT&E Projec	ct Justifi	cation		Dat Fel	e oruary 2008		
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Developm	nent and Pro	totypes (ACD	D& P)		NOMENCLAT 892C Ballisti	-	fense Aegis		
	FY 2007	FY 2008	FY 20	09	FY 2010	FY 2011	FY 2012	FY 2013	Total Cost
PE 0901598C Management Headquarters - MDA	93,350	80,392	8	6,453	70,355	69,855	69,855	69,855	540,115

D. Acquisition Strategy

The Aegis BMD element acquisition approach supports evolutionary development, continuously building upon demonstrated capabilities to advance overall BMDS capability. After considering all the technical and management aspects of the program and to meet the requirements presented by an evolving ballistic missile threat, the Aegis BMD program has awarded sole source contracts to Raytheon and Lockheed Martin to continue development of the SM-3 missile and the Aegis BMD Weapon System, respectively.

RDT&E, DW/04 Advanced	Component	Development and P	rototypes (AC!	D&P) 06	03892C Ballistic	Missile Defense	e Aegis	
I. Product Development	Cost (\$ in '	Fhousands)						
^	Contract	Performing	Total		FY 2008 Award/		FY 2009 Award/	
	Method	Activity &	PYs	FY 2008	Oblg	FY 2009	Oblg	Total
Cost Categories:	& Type	Location	Cost	Cost	Date	Cost	Date	Cost
Weapon System Engineering								
	+	Lockheed Martin/			+			
	CPAF	NJ	12,070	0) N/A	0	N/A	12,070
	MIPR	NSWC DD/VA	800	0) N/A	0	N/A	800
	CPFF	JHU/APL/MD	750) N/A	0	N/A	750
	CPFF	MIT/MA	400) N/A	0	N/A	400
	CPAF	VA Sites/VA	100	() N/A	0	N/A	100
	Various	Various	123	0) N/A	0	N/A	123
SM-3 Missile					1			
	CPAF	Raytheon/AZ	24,000	0) N/A	0	N/A	24,000
Subtotal Product Development			38,243	С)	0		38243
II. Support Costs Cost (<u>\$ in Thousa</u>	nds)			FY 2008		FY 2009	
	Contract	Performing	Total		Award/		Award/	
	Method	Activity &	PYs	FY 2008	Oblg	FY 2009	Oblg	Total
	& Type	Location	Cost	Cost	Date	Cost	Date	Cost
Cost Categories:								_
Cost Categories: SM-3 Missile		+		C) N/A	0	N/A	2,161
_	MIPR	MDA/VA	2,161 2,161	-)	0		2161

PPROPRIATION/BUDGE					1 NOMENCLATU			
RDT&E, DW/04 Advance	ed Component D	evelopment and	Prototypes (ACl	D&P) 00	603892C Ballistic	Missile Defens	e Aegis	
III. Test and Evaluation	n Cost (\$ in T	housands)						
					FY 2008		FY 2009	
	Contract	Performing	Total		Award/		Award/	
	Method	Activity &	PYs	FY 2008	Oblg	FY 2009	Oblg	Total
Cost Categories:	& Type	Location	Cost	Cost	Date	Cost	Date	Cost
Subtotal Test and Evaluation								
Remarks								
IV. Management Servio	nog Cost (\$ in	Thousands)						
rv. Management Servic		Thousanus)			FY 2008		FY 2009	
	Contract	Performing	Total		Award/		Award/	
	Method	Activity &	PYs	FY 2008	Oblg	FY 2009	Oblg	Total
Cost Categories:	& Type	Location	Cost	Cost	Date	Cost	Date	Cost
Subtotal Management Services	cc Type	Location	Cost	Cost	Duto	0050	Duto	2051
Remarks								
Remarks								
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			40,404		0	0		40,404
Project Total Cost								
Project Total Cost Remarks								

Missile Defense A	genc	ey (N	1DA) Ex	hibit	: R-4	Sch	edul	e Pr	ofile								Da Fe	ite bru	ary	200	8						
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component De	evelo	opm	ent	and	Pro	toty	pes	(AC	'D&	P)					LAT I llist i			le D	efen	se A	egis	5						
Fiscal Year		20)07			20	08			20)09			20	010			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
Acquisition Milestones	i — —	T	1	T		T	T	-		T	-				-	-		-	T	T		-	-	-				
Block 10 System Readiness Review (SRR)																							-					
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	▲		Con	nplete	Activ	vity						Δ_	_	Plar	nned A	ctivit	y											
Project: 0009 AEGIS BMD Block 2010																								р (¹	1.14 P	4 (DT)3892C

Missile Defense /	Agency (MDA) Exhi	bit R-4A Schedule D	tail		Date February 20	08	
PPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component I		R-1 NO	MENCLATURE 2C Ballistic Mi s	ssile Defense Aeg			
chedule Profile	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
cquisition Milestones							
Block 10 System Readiness Review (SRR)	2Q						

APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototype	s (ACD&P)		NCLATURE Ballistic Mi s	ssile Defense	Aegis		
COST (\$ in Thousands)	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
	8.220	0	0	0	0	0	(
R109 AEGIS BMD Block 2012	0,220	-					

A. Mission Description and Budget Item Justification

Aegis BMD Block 2012 supports the BMDS mission of intercepting ballistic missiles in all regions, in all phases, and of all ranges, as follows:

- In all regions: provide sea-based surveillance, tracking, and engagement capabilities. Japan, and possibly other countries, will deploy Aegis BMD.
- In all phases of ballistic missile flight: boost, midcourse, and terminal.
- Against all ranges:
 - Against long-range ballistic missiles by providing surveillance and tracking support as part of the Block 04 Limited Defensive Capability (LDC).
 - Against short and medium range ballistic missiles by providing engagement support as part of Block 2004.
 - Against limited intermediate range ballistic missiles by providing engagement support as part of Block 2008.
 - Against long-range ballistic missiles, to include some Intercontinental Ballistic Missile (ICBM) threats, using the upgrade SM-3 Block IIA missile.

Aegis BMD supported LDC by providing Long Range Surveillance and Track (LRS&T) data to other elements of the BMDS. Aegis BMD will further improve both national and international security with its ability to launch Standard Missile 3 (SM-3) missiles based upon autonomous data and upon data received via the Tactical Digital Information Link (TADIL) network. Through development and fielding of the Aegis BMD Signal Processor and upgrades to the SM-3 Block IA missile in Block 2006/2008, Aegis BMD will significantly improve discrimination capability and performance against more diverse and longer range threats.

The Aegis BMD Block 2012 program will integrate Aegis BMD Weapon System improvements, including Engage on Remote, and the SM-3 Block IIA missile. Other Aegis BMD Block 2012 improvements include:

Project: R109 AEGIS BMD Block 2012

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R-1	NOMENCLATU	RE		
	· · · · · · · · · · · · · · · · · · ·	6		0
Veapon Systemy tributing to the E ainst SRBMs, M MRBMs, IRBMs pport Ground Ba	with Open Arc BMDS in devel RBMs, IRBMs and LRBMs ased Intercepto	hitecture. opment of engageme s, LRBMs and some using data from other r Launch and Engage	ent sequence groups (ES ICBMs without requiring BMDS elements and ement against IRBMs at	Gs). Ig
FY 2007		FY 2008	FY 2009	
	8,220		0	0
	0		0	0
veloped under patecture.	roject 0402) w	ith the Aegis BMD V	Veapon System, leverag	
	roject Justification R-1 0602 ter countermeasu es (IRBMs), Lon e captured under Veapon System v tributing to the B uinst SRBMs, M MRBMs, IRBMs pport Ground Ba ensor Task Plan FY 2007	roject Justification R-1 NOMENCLATU 0603892C Ballistic ter countermeasures (Short Rar es (IRBMs), Long Range Ballis e captured under project 0402, Veapon System with Open Arc tributing to the BMDS in devel uinst SRBMs, MRBMs, IRBMs MRBMs, IRBMs and LRBMs to pport Ground Based Intercepto ensor Task Plan (STP) and We FY 2007 0 veloped under project 0402) wite	Date February 200 ACD&P) R-1 NOMENCLATURE 0603892C Ballistic Missile Defense Aegi ter countermeasures (Short Range Ballistic Missiles es (IRBMs), Long Range Ballistic Missiles (LRBM e captured under project 0402, Japanese Cooperativ Veapon System with Open Architecture. tributing to the BMDS in development of engagement inst SRBMs, MRBMs, IRBMs, LRBMs and some MRBMs, IRBMs and LRBMs using data from other pport Ground Based Interceptor Launch and Engage ensor Task Plan (STP) and Weapons Task Plan (W FY 2007 FY 2008 8,220 0 o 0 veloped under project 0402) with the Aegis BMD W	roject Justification February 2008 ACD&P) R-1 NOMENCLATURE 0603892C Ballistic Missile Defense Aegis ter countermeasures (Short Range Ballistic Missiles (SRBMs), Medium Ra es (IRBMs), Long Range Ballistic Missiles (LRBMs), including limited Int e captured under project 0402, Japanese Cooperative Program. This project Veapon System with Open Architecture. tributing to the BMDS in development of engagement sequence groups (ES uinst SRBMs, MRBMs, IRBMs, LRBMs and some ICBMs without requirint MRBMs, IRBMs and LRBMs using data from other BMDS elements and pport Ground Based Interceptor Launch and Engagement against IRBMs ar ensor Task Plan (STP) and Weapons Task Plan (WTP). FY 2007 FY 2008 FY 2009 8,220 0 0

Missile Defense Agency (MDA)	E	DT & E Droiog	t Justification		Date Febr	uary 2008		
Missile Defense Agency (MDA) APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Develops			R-1 N	NOMENCLATU 892C Ballistic	JRE			
C. Other Program Funding Summary								
	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	Total Cost
PE 0207998C BRAC	0	103,219	159,938	61,931	8,724	0	0	333,812
PE 0603175C Ballistic Missile Defense Technology	183,849	108,423	118,718	115,234	120,152	127,012	130,358	903,746
PE 0603881C Ballistic Missile Defense Terminal Defense Segment	1,082,454	1,045,276	1,019,073	795,659	719,847	548,283	439,752	5,650,344
PE 0603882C Ballistic Missile Defense Midcourse Defense Segment	2,985,140	2,243,213	2,209,262	2,276,848	1,385,258	946,437	1,103,532	13,149,690
PE 0603883C Ballistic Missile Defense Boost Defense Segment	622,218	510,241	421,229	423,927	652,642	799,792	991,839	4,421,888
PE 0603884C Ballistic Missile Defense Sensors	514,989	586,121	1,221,143	1,184,280	1,099,649	1,077,632	823,583	6,507,397
PE 0603886C Ballistic Missile Defense System Interceptors	341,358	340,107	386,817	500,966	708,803	815,433	553,136	3,646,620
PE 0603888C Ballistic Missile Defense Test and Targets	584,615	621,861	673,691	672,976	690,938	708,991	719,209	4,672,281
PE 0603890C Ballistic Missile Defense System Core	425,889	413,934	432,262	482,947	605,219	561,947	571,498	3,493,696
PE 0603891C Special Programs - MDA	347,377	196,892	288,315	304,234	538,050	818,136	786,349	3,279,353
PE 0603893C Space Tracking & Surveillance System	311,402	231,528	242,441	266,509	560,130	735,727	938,191	3,285,928
PE 0603894C Multiple Kill Vehicle	133,615	229,943	354,455	488,294	649,632	708,582	879,385	3,443,906
PE 0603895C BMD System Space Program	0	16,552	29,771	41,638	56,199	133,915	157,548	435,623
PE 0603896C BMD C2BMC	249,179	447,616	289,277	287,194	270,762	256,767	259,159	2,059,954
PE 0603897C BMD Hercules	46,268	52,462	55,955	55,289	56,400	51,902	52,784	371,060
PE 0603898C BMD Joint Warfighter Support	49,833	49,394	69,982	73,997	77,205	80,168	81,948	482,527
PE 0603904C Missile Defense Integration & Operations Center	104,389	78,557	96,404	100,437	100,366	101,512	102,840	684,505
PE 0603905C BMD Concurrent Test and Operations	21,870	0	0	0	0	0	0	21,870
PE 0603906C Regarding Trench	0	1,986	2,978	4,964	4,963	8,933	8,933	32,757
PE 0603907C Sea Based X-Band Radar (SBX)	0	165,243	0	0	0	0	0	165,243
PE 0605502C Small Business Innovative Research - MDA	142,510	0	0	0	0	0	0	142,510
PE 0901585C Pentagon Reservation	15,527	6,019	19,734	5,040	5,284	5,370	5,456	62,430
PE 0901598C Management Headquarters - MDA	93,350	80,392	86,453	70,355	69,855	69,855	69,855	540,115

Project: R109 AEGIS BMD Block 2012

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Date	
ation February 2008	Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justi
R-1 NOMENCLATURE	APPROPRIATION/BUDGET ACTIVITY
0603892C Ballistic Missile Defense Aegis	RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)

D. Acquisition Strategy

The Aegis BMD element acquisition approach supports evolutionary development, continuously building upon demonstrated capabilities to advance overall BMDS capability. Considering all the technical and management aspects of the program and the requirements presented by an evolving ballistic missile threat, the Aegis BMD program's preferred strategy would be to award sole source contracts to Raytheon and Lockheed Martin to continue development of the SM-3 missile and the Aegis BMD Weapon System, respectively.

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I. Product Development	Cost (\$ in]	Fhousands)						
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	Contract	Performing	Total	EX 2000	Award/	EV 2000	Award/	m (1
	Method	Activity &	PYs	FY 2008	Oblg	FY 2009	Oblg	Total
Cost Categories:	& Type	Location	Cost	Cost	Date	Cost	Date	Cost
Weapon System Engineering								
	CPAF	Lockheed Martin/ NJ	6 000	0	NI/A	0	NI/A	6 000
	CPAF	NJ JHU/APL/MD	6,000 500	0	N/A N/A	0	N/A N/A	6,000 500
	MIPR	NSWCDD/VA	500	0	N/A N/A	0	N/A N/A	500
						~		
	MIPR	SPAWAR/CA	500	0	N/A	0	N/A	500
	MIPR	VA Sites/VA	400	0	N/A	0	N/A	400
	Various	Various	784	0	N/A	0	N/A	784
			0.604	0		0		0.60.1
Subtotal Product Development Remarks			8,684	0		0		8684
Remarks II. Support Costs Cost	Contract Method	Performing Activity &	Total PYs	FY 2008	FY 2008 Award/ Oblg	FY 2009	FY 2009 Award/ Oblg	Total
Remarks II. Support Costs Cost Cost Categories:	Contract	Performing	Total		Award/		Award/	
Remarks II. Support Costs Cost	Contract Method	Performing Activity &	Total PYs	FY 2008	Award/ Oblg	FY 2009	Award/ Oblg	Total

II. Test and Evaluation Cost (\$ in Thousands) Contract Performing Total Award/ Award/ Award/ Ost Categories: & Type Location Cost Cost Date Cost Date Cost Wototal Test and Evaluation Example Cost Cost Cost Date Cost Date Cost Wototal Test and Evaluation Example FY 2008 FY 2008 FY 2009 Oblg Total Remarks Contract Performing Total Award/ Award/ Award/ V. Management Services Cost (\$ in Thousands) FY 2008 FY 2009 Award/ Award/ Contract Performing Total Award/ Award/ Award/ Award/ V. Management Services Cost (\$ in Thousands) Total FY 2008 Oblg FY 2009 Oblg Total ost Categories: & Type Location Cost Cost Date Cost Date Cost ubtotal Management Services Image: Second Secon	PPROPRIATION/BUDGET A REPROPRIATION/BUDGET A REPROPRIATION/BUDGET A REPROPRIATION/BUDGET A REPROPRIATION/BUDGET		evelopment and l	Prototypes (AC		R-1 NOMENCLATU 603892C Ballistic		se Aegis	
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Project Total Cost 0 8,684 0 0 8,684	-								
	Remarks								
				0.604		0	0		0.604
Remarks	÷			8,684		0	0		8,684
	Remarks								

Missile Defense Agency (MDA) Exhibit R-2	A RDT&E Project Justif	fication		Date Februar	y 2008		
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and H	Prototypes (ACD&P)		NCLATURE Ballistic Mis	sile Defense	Aegis		
COST (\$ in Thousands)	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
BX09 AEGIS BMD Block 2.0	0	295,736	202,151	151,255	14,991	12,903	12,90
RDT&E Articles Qty	0	35	15	17	0	0	
Aegis BMD supports the BMDS Block 2.0 with the BMD Block IA missile, and with BMD 3.6.1, an upgrade to BM project BX18.							
 Aegis BMD 3.6 and 3.6.1 support the BMDS mission of i In all regions: Provide sea-based surveillance, tracking In all phases of ballistic missile flight: Long Range Surveillance and Track (LRS&T) cap 		abilities in i	international	waters.		iges, as follo	ws:
 Engagement capability against missile threats in th Engagement capability against missile threats in th 	ne midcourse flight sta	ige (BMD 3.	.6);	es (BMD 3.)	6);		
• Engagement capability against missile threats in th	ne midcourse flight sta ne terminal phase of fli surveillance and track	ige (BMD 3. ight (BMD 3 ing support	6); 3.6.1). as part of th	e Limited D	efensive Ca		C) (Bloc

• Defeat unitary and simple separating threats (Short Range Ballistic Missiles (SRBMs) and Medium Range Ballistic Missiles (MRBMs)) with Aegis BMD configured cruisers and destroyers using SM-3 Block I or IA guided missiles.

	Date
cation	February 2008
R-1 NOMENCLATURE	
0603892C Ballistic Missil	e Defense Aegis
i	

- Provide Long Range Ballistic Missile (LRBM) surveillance and track data through the BMDS to the GMD element to cue and initiate fire control Weapons Task Plans.
- Provide Aegis BMD surveillance and track data to the BMDS to support Combatant Commander situational awareness.
- Expand the engagement battle space by using remote (Aegis AN/SPY-1) sensor data delivered via the TADIL-J network.
- Supply Aegis BMD operational data to the BMDS C2BMC Element to support Combatant Commander situational awareness.
- Provide an operational, engagement-capable system.

The BMD 3.6 computer program will be fielded on a total of eighteen (18) U.S. Navy Aegis Cruisers and Destroyers, along with SM-3 Block IA missiles.

With BMD 3.6.1, Aegis BMD will provide a follow-on capability to BMD 3.6 in response to recent Real World Events. Near-Term Sea Based Terminal (BMD 3.6.1) will provide for an integrated SBT capability against a finite set of Short Range Ballistic Missiles. BMD 3.6.1 will incorporate a fuze modified SM-2 Block IV missile provided by a separate OPNAV sponsored effort and will build on BMD 3.6 to provide a terminal phase capability. The BMD 3.6.1 will continue efforts to refine Aegis Launch on AN/TPY-2 and will bridge the gap between the operational deployment of BMD 3.6 and BMD 4.0.1.

Aegis BMD will field a near-term Sea-Based Terminal capability beginning in FY 2009. In addition to the near-term SBT capability, Aegis BMD will perform various upgrades to BMD 3.6 in BMD 3.6.1; updates will include early integration efforts for Aegis BMD launch on AN/TPY-2 capability.

In collaboration with the MDA Systems Engineer, Aegis BMD is contributing to the BMDS in development of engagement sequence groups (ESGs). Aegis BMD supports an autonomous engagement against SRBMs and MRBMs without requiring external cueing. BMD 3.6 and BMD 3.6.1 support SM-3 Engage on AN/SPY-1, SM-3 Launch on Remote (AN/SPY-1), GBI Engage on AN/SPY-1, and GBI Launch on AN/SPY-1.

			Date	
Missile Defense Agency (MDA) Exhibit R-2A RDT&E P	roiect Justifi	cation	February 2008	
APPROPRIATION/BUDGET ACTIVITY	l oject sustili	R-1 NOMENCLAT	, i i i i i i i i i i i i i i i i i i i	
RDT&E , DW/04 Advanced Component Development and Prototypes (A	ACD&P)		ic Missile Defense Aegis	
B. Accomplishments/Planned Program			0	
	FY	2007	FY 2008	FY 2009
BMD 3.6 Weapon System Development		0	13,077	
RDT&E Articles (Quantity)		0	0	
The Weapon System Engineering team will continue to support flight	t testing of I	BMD 3.6, and add	dress engineering issues v	with the computer
program.	-			-
FY08 Accomplishments/Planned Program:				
• Participated in FTM-13.				
• Participate in on-going testing: FTM-14, TOO tests.				
• Continue to monitor for obsolescence issues.				
	FY	2007	FY 2008	FY 2009
SM-3 Missile Development		0	3,523	
RDT&E Articles (Quantity)		0	0	
SM-3 Block IB.FY08 Accomplishments/Planned Program:Participated in FTM-13.				
 Continue material engineering to monitor parts obsolescence. 				
• Continue material engineering to monitor parts obsolescence.				
	FY	2007	FY 2008	FY 2009
Aegis BMD Testing	FY	2007 0	FY 2008 74,700	FY 2009 68,94
Aegis BMD Testing RDT&E Articles (Quantity)	FY			
		0	74,700 0	68,94
RDT&E Articles (Quantity) This effort provides funding for Aegis BMD test and evaluation miss		0	74,700 0	68,94
RDT&E Articles (Quantity) This effort provides funding for Aegis BMD test and evaluation miss. the BMDS. FY08 Accomplishments/Planned Program:		0	74,700 0	68,94
RDT&E Articles (Quantity) This effort provides funding for Aegis BMD test and evaluation miss the BMDS.	ions, as wel	0 0 1 as other system-	74,700 0 -wide BMDS tests to sup	68,94

Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justifica	ation	Date February 2008
APPROPRIATION/BUDGET ACTIVITY	R-1 NOMENCLATURE 0603892C Ballistic Missile	
 Prepared and completed missile delivery package for the Mission Control Conducted a simultaneous launch of two (2) ARAV-A targets for BMD 3. Performed post-flight analysis to validate high fidelity models and simulat Conducted post-flight analysis to support Weapon System Performance Re Conduct FTM-14 (full write up in project BX18, Near Term Sea-Based Termi Participate as a sensor element in BMDS tests to include FTG-4, FTG-5, FTT- Participate in GT-197 target of opportunity Conduct critical experiments using the MK-99 Doppler Data Collection System implementation. Begin test planning for FTM-15: prepare target, develop models and simulation 	6 engagement with two (tions. eviews (WSPRs). inal). -9, and FTT-10 missions. m or similar equipment a	s a risk mitigation for Block 2008
 FY09 Planned Program: Conduct FTM-15 Campaign: Complete pre-flight analysis to verify mission scenarios and to predict flig Prepare and complete missile delivery package for the Mission Control Pa Conduct a BMD 3.6 Launch on TADIL engagement and intercept of a Gro Perform post-flight analysis to validate high fidelity models and simulation Conduct post-flight analysis to support WSPRs. (MDRs).Participate as a s Conduct 4.0.1 At-Sea Demonstration Complete pre-flight analysis to verify mission scenarios and to predict flig Prepare and complete missile delivery package for the Mission Control Pa Conduct 4.0.1 At-Sea Demonstration Complete pre-flight analysis to verify mission scenarios and to predict flig Prepare and complete missile delivery package for the Mission Control Pa Conduct a BMD 4.0.1 (CG) simulated engagements of ARAV-B and ARA Perform post-flight analysis to validate high fidelity models and simulation Conduct post-flight analysis to support WSPRs. 	wht performance. Soup F IRBM target with a ns. Sensor element in BMDS wht performance. Source targets. AV-C targets. ns.	a SM-3 Block IA missile. missions.

Missile Defense Agency (MDA) Exhibit R-2A RDT&E P	Project Justif	ication	Date February 2008	
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (R-1 NOMENCLATU 0603892C Ballistic		
	FY	7 2007	FY 2008	FY 2009
Targets		0	66,799	39,10
RDT&E Articles (Quantity)		0	6	
 Defense System. FY 2008 Planned Program: RDT&E Articles: 2 Targets, 4 ARAVs Continue design, manufacture and delivery of one (1) MBRV-2 a Continue design, manufacture and delivery of a LV-2 launch veh Presentation of LV-2/MBRV-2 Target in support of FTM-14. Two ARAV-B and -C presentations and post flight analysis in su Design, manufacture and delivery of a SRBMs, MBRV-3s and pa Design, manufacture and delivery of a MRT, MBRV-2 and paylo 	icle in supp pport of FT ayloads in s payload in	oort of FTM-14. M-14 TX. Support of FTM-15 support of FTM-16	(SBT - project EX18) and	FTM-16 SBT.
 FY 2009 Planned Program: RDT&E Articles: 3 Targets, 2 ARAVs Presentation of a SRBM/MBRV-3 target in support of FTM-15 S Presentation of a ARAV-A/NOSE in support of FTM-15 (project Presentation of a GROUP C/MBRV-1 target in support of FTM-1 Presentation of a ARAV-B/NOSE in support of FTM-16 TX. Presentation of a MRT/MBRV-2 in support of FTM-16. Presentation of a SRBM/MBRV-3 in support of FTM-16 SBT. Design, manufacturing and delivery of a Group C, MBRV-1, and Design, manufacture and delivery of a MRT, MBRV-2 and paylo 	EX18) 16 TX.		7.	

	CLASSI		_					
Missile Defense Agency (MDA) Exhibit R-2A RDT&E	Project Justif	ication	Date February 2008					
APPROPRIATION/BUDGET ACTIVITY		R-1 NOMENCLAT	TURE					
RDT&E, DW/04 Advanced Component Development and Prototypes	(ACD&P)	0603892C Ballist	stic Missile Defense Aegis					
	F	7 2007	FY 2008	FY 2009				
SE&I and BMDS Integration		0	6,337	3,475				
RDT&E Articles (Quantity)		0	0	0				
 4.0.1 and participate in definition of appropriate Engagement Seque FY08 Planned Program: Support system integration efforts with other BMDS elements to Support the MDA System Engineering's Update of the Test Bed FY09 Planned Program: Support system integration efforts with other BMDS elements to 	o reflect the System Spe	overall BMDS. ecification (TBSS) overall BMDS.	to reflect BMD 4.0.1 and BI	MDS requirements.				
• Support the MDA System Engineering's Update of the Test Bed	•	2007	FY 2008	FY 2009				
BMC3		0	15,700	12,906				
RDT&E Articles (Quantity)		0	0	0				
 This effort provides funding for BMC3 improvements, including est interoperability with other BMDS elements. FY08 Planned Program: Continue incorporation of CDLMS upgrades, including: Interoperability improvements to support Long Range Surve Enhanced Launch on TADIL support Engagement Coordination Continue definition, planning, and implementation of DIICOE c Continue development of enhanced discrimination algorithms ar FY09 Planned Program: 	illance and ompliant Ad	Track egis BMD Multi-S		s, supporting increased				
FY09 Planned Program: Complete CDLMS upgrades to incorporate:								

Project: BX09 AEGIS BMD Block 2.0

Miccilo Dofonco Agonov (MDA) Evhikit D 24 DDT & D	Project Justif	action	Date February 2008	
Missile Defense Agency (MDA) Exhibit R-2A RDT&E P. APPROPRIATION/BUDGET ACTIVITY	roject Justin	R-1 NOMENCLA		
RDT&E, DW/04 Advanced Component Development and Prototypes (<i>A</i>	ACD&P)		ic Missile Defense Aegis	
• Interoperability improvements	(102001)	00000/2020		
	torcontors			
 Enhanced Engagement Coordination to conserve upper-tier in Complete implementation of DIICOE compliant Aegis BMD Mul 	-	nion Dlannar		
 Complete initial implementation of Directly complete linear Aegis BMD with Complete initial implementation of enhanced discrimination algorithm 	-		Long Range Surveillance at	nd Track and
Engagement missions.		iprove support to	Long Kange Survemance an	ilu TTack allu
Lingagement missions.				
	FY	2007	FY 2008	FY 2009
BMD Weapon System Fielding		0	23,200	4,988
RDT&E Articles (Quantity)		0	9	0
This effort provides funding for the continued fielding of BMD 3.6 sh	hipsets.			
FY09 Planned Program:Complete checkout and evaluation of BMD 3.6 ship installs.Continue to monitor BMD 3.6 performance.				
	FY	2007	FY 2008	FY 2009
SM-3 Block IA Fielding		0	92,400	72,669
RDT&E Articles (Quantity)		0	20	10
This effort provides funding for the procurement of additional SM-3	Block IA n	issiles.		
FY08 Planned Program: RDT&E Articles: Twenty (20) SM-3 Block	IA Missile	S		
• Deliver twenty (20) SM-3 Block IA missiles.				
• Continue procurement of twenty seven (27) SM-3 Block IA missi	iles.			
FY09 Planned Program: RDT&E Articles: Ten (10) SM-3 Block IA	Missiles			
• Deliver ten (10) SM-3 Block IA missiles.				
• Continue procurement of remaining seventeen (17) SM-3 Block I	A missiles.			
Project: BX09 AEGIS BMD Block 2.0			MD	A Exhibit R-2A (PE 0603892C)
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Missile Defense Agency (MDA)	E	DT & E Droiog	t Justification		Date Febr	uary 2008		
Missile Defense Agency (MDA) APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Develops			R-1 N	NOMENCLATU 892C Ballistic	JRE			
C. Other Program Funding Summary								
	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	Total Cost
PE 0207998C BRAC	0	103,219	159,938	61,931	8,724	0	0	333,812
PE 0603175C Ballistic Missile Defense Technology	183,849	108,423	118,718	115,234	120,152	127,012	130,358	903,746
PE 0603881C Ballistic Missile Defense Terminal Defense Segment	1,082,454	1,045,276	1,019,073	795,659	719,847	548,283	439,752	5,650,344
PE 0603882C Ballistic Missile Defense Midcourse Defense Segment	2,985,140	2,243,213	2,209,262	2,276,848	1,385,258	946,437	1,103,532	13,149,690
PE 0603883C Ballistic Missile Defense Boost Defense Segment	622,218	510,241	421,229	423,927	652,642	799,792	991,839	4,421,888
PE 0603884C Ballistic Missile Defense Sensors	514,989	586,121	1,221,143	1,184,280	1,099,649	1,077,632	823,583	6,507,397
PE 0603886C Ballistic Missile Defense System Interceptors	341,358	340,107	386,817	500,966	708,803	815,433	553,136	3,646,620
PE 0603888C Ballistic Missile Defense Test and Targets	584,615	621,861	673,691	672,976	690,938	708,991	719,209	4,672,281
PE 0603890C Ballistic Missile Defense System Core	425,889	413,934	432,262	482,947	605,219	561,947	571,498	3,493,696
PE 0603891C Special Programs - MDA	347,377	196,892	288,315	304,234	538,050	818,136	786,349	3,279,353
PE 0603893C Space Tracking & Surveillance System	311,402	231,528	242,441	266,509	560,130	735,727	938,191	3,285,928
PE 0603894C Multiple Kill Vehicle	133,615	229,943	354,455	488,294	649,632	708,582	879,385	3,443,906
PE 0603895C BMD System Space Program	0	16,552	29,771	41,638	56,199	133,915	157,548	435,623
PE 0603896C BMD C2BMC	249,179	447,616	289,277	287,194	270,762	256,767	259,159	2,059,954
PE 0603897C BMD Hercules	46,268	52,462	55,955	55,289	56,400	51,902	52,784	371,060
PE 0603898C BMD Joint Warfighter Support	49,833	49,394	69,982	73,997	77,205	80,168	81,948	482,527
PE 0603904C Missile Defense Integration & Operations Center	104,389	78,557	96,404	100,437	100,366	101,512	102,840	684,505
PE 0603905C BMD Concurrent Test and Operations	21,870	0	0	0	0	0	0	21,870
PE 0603906C Regarding Trench	0	1,986	2,978	4,964	4,963	8,933	8,933	32,757
PE 0603907C Sea Based X-Band Radar (SBX)	0	165,243	0	0	0	0	0	165,243
PE 0605502C Small Business Innovative Research - MDA	142,510	0	0	0	0	0	0	142,510
PE 0901585C Pentagon Reservation	15,527	6,019	19,734	5,040	5,284	5,370	5,456	62,430
PE 0901598C Management Headquarters - MDA	93,350	80,392	86,453	70,355	69,855	69,855	69,855	540,115

Project: BX09 AEGIS BMD Block 2.0

62 of 134 UNCLASSIFIED MDA Exhibit R-2A (PE 0603892C)

		Date
Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justific	cation	February 2008
APPROPRIATION/BUDGET ACTIVITY	R-1 NOMENCLATURE	
RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	0603892C Ballistic Missil	e Defense Aegis

D. Acquisition Strategy

The Aegis BMD element acquisition approach supports evolutionary development, continuously building upon demonstrated capabilities to advance overall BMDS capability. After considering all the technical and management aspects of the program and to meet the requirements presented by an evolving ballistic missile threat, the Aegis BMD program awarded sole source contracts to Raytheon and Lockheed Martin to continue development of the SM-3 missile and the Aegis BMD Weapon System, respectively.

Missile 1	Defense Agenc	y (MDA) Exhibit R-3	RDT&E Projec	rt Cost Ana	lvsis		Date Februar	rv 2008	
APPROPRIATION/BUDGET A		y (MDA) Exhibit K-5	RD I CE I Tojec			OMENCLATUR		y 2000	
RDT&E, DW/04 Advanced		Development and P	rototypes (AC					e Aegis	
		r		/				8	
I. Product Development	Cost (\$ in]	Thousands)							
						FY 2008		FY 2009	
	Contract	Performing	Total			Award/		Award/	
	Method	Activity &	PYs	FY 2008	;	Oblg	FY 2009	Oblg	Total
Cost Categories:	& Type	Location	Cost	Cost		Date	Cost	Date	Cost
BMD 3.6 Weapon System Development									
		Lockheed Martin/							
	SS/CPAF	NJ	0	5,0	025	1Q	0	N/A	5,025
	MIPR	NSWC/DD/VA	0	7,2	227	1Q	0	N/A	7,227
	FPI	VA Sites/VA	0	:	825	1Q	0	N/A	825
SM-3 Missile Development		1 1				Ī	l l		
		Raytheon/AZ	0	1,0	000	1Q	0	N/A	1,000
	MIPR	NSWC/DD/VA	0	1,0	000	1Q	0	N/A	1,000
	MIPR	JHU/APL/MD	0	1,0	000	1Q	0	N/A	1,000
	MIPR	Various	0		523	1/3Q	0	N/A	523
SE&I and BMDS Integration									
	CPFF	JHU/APL/MD	0	2	422	1Q	235	1Q	657
	MIPR	NSWC/Corona/CA	0		510	1Q	279	1Q	789
	MIPR	NSWC/DD/VA	0	3,	775	1Q	2,045	1Q	5,820
	MIPR	NSWC/PHD/CA	0		840	1Q	488	1Q	1,328
	Various	Various	0	,	790	1/2Q	428	1/2Q	1,218
BMC3									
	CPFF	JHU/APL/MD	0	2,	650	1Q	2,646	1Q	5,296
	FPI	MIT/MA	0	1,	845	1Q	845	1Q	2,690
		MITRE	0	,	772	1Q	672	1Q	1,444
	MIPR	NSWC/PHD/CA	0		934	1Q	834	1Q	1,768
	MIPR	SPAWAR/CA	0	7,	742	1Q	7,152	1Q	14,894
	Various	Various	0	1,	757	1/2Q	757	1/2Q	2,514
BMD Weapon System Fielding									

APPROPRIATION/BUDGET A RDT&E, DW/04 Advanced	ACTIVITY	y (MDA) Exhibit R-3 Development and P			R-1 N	OMENCLATUR 892C Ballistic I		•	
ite i del, e vivot i i d'anced			Tototypes (me	(Dul)	00050				
	Contract	Performing	Total			FY 2008 Award/		FY 2009 Award/	
	Method	Activity &	PYs	FY 2008	2	Oblg	FY 2009	Oblg	Total
Cost Categories:	& Type	Location	Cost	Cost	5	Date	Cost	Date	Cost
Cost Categories.	a rype	Lockheed Martin/	COSI	COM		Date	COSI	Date	CUSI
	SS/CPAF	NJ	0	11	.193	1/2Q	2,445	1Q	13.638
	MIPR	NAVSEA/VA	0		,139	1/2Q 1/2Q	420	10	2,559
	MIPR	NAVSEA/VA NSWC/DD/VA	0		,159	1/2Q	420	· ·	2,539
			-		,	-		1Q	
	MIPR	NSWC PHD/CA	0		,149	1/2Q	687	1Q	3,836
	MIPR	SPAWAR/CA	0		937	1/2Q	186	1Q	1,123
	MIPR	SUPSHIP/BATH/ ME	0		922	1/2Q	211	1Q	1.133
	FPI	SUPSHIP/MS	0		,368	1/2Q 1/2Q	312	1Q 1Q	1,680
	Various	SUPSHIF/MS	0		,308	1/2Q	303	1/3Q	1,643
CM 2 DL -L IA E'-LI'	various		0	1	,540	1/2Q	505	1/3Q	1,045
SM-3 Block IA Fielding			0		0.60	10	55.460	10	111.420
	SS/CPIF	Raytheon/AZ	0		,960	1Q	55,469	1Q	111,429
	SS/CPIF	JHU/APL/MD	0		,876	1Q	4,400	1Q	15,276
	FFRDC	MIT/LL/MA	0		,050	1Q	800	1Q	11,850
	MIPR	NSWC/DD/VA	0		,867	1Q	4,800	1Q	11,667
	MIPR	NSWC/PHD/CA	0	2,	,697	1Q	2,000	1Q	4,697
	MIPR	NAWC/CL/CA	0	1	,100	1Q	800	1Q	1,900
	MIPR	NSWC/IH/MD	0	1	,100	1Q	800	1Q	1,900
	Various	Various	0	2.	,200	1Q	3,200	1Q	5,400
	MIPR	NSWC/Corona/CA	0		550	1Q	400	1Q	950
Subtotal Product Development			0	154	,237		94,038		248275

Remarks

		y (MDA) Exhibit R-3	KDI &E Projec			Februar	y 2000	
APPROPRIATION/BUDGET RDT&E, DW/04 Advance		Development and D	rototypes (AC		IOMENCLATUR 892C Ballistic I		Aegis	
,	*	*	Tototypes (AC)	0003	674C Damstic		rigio	
II. Support Costs Cost	(\$ in 1 nousa	nds)	i	i	FY 2008		FY 2009	
	Contract	Performing	Total		Award/		Award/	
	Method	Activity &	PYs	FY 2008	Oblg	FY 2009	Oblg	Total
Cost Categories:	& Type	Location	Cost	Cost	Date	Cost	Date	Cost
Subtotal Support Costs		Location	Cost	Cost	Dute	Cost	Dute	Cost
Remarks								
Kemar K5								
III. Test and Evaluation	Cost (\$ in '	Thousands)						
					FY 2008		FY 2009	
	Contract	Performing	Total		Award/		Award/	
	Method	Activity &	PYs	FY 2008	Oblg	FY 2009	Oblg	Total
Cost Categories:	& Type	Location	Cost	Cost	Date	Cost	Date	Cost
Aegis BMD Testing								
	MIPR	PMRF/HI	0	4,000	1Q	4,000	1Q	8,000
	MIPR	SMDC/AL	0	1,500	1Q	1,500	1Q	3,000
	MIPR	NSWC/DD/VA	0	5,000	1Q	5,000	1Q	10,000
	CPFF	JHU/APL/MD	0	9,000	1Q	7,967	1Q	16,967
		Lockheed Martin/						
	CPAF	NJ	0	11,433	1Q	8,750	1Q	20,183
	MIPR	NSWC/PHD/CA	0	3,500	1Q	3,500	1Q	7,000
	CPFF	MIT/LL/MA	0	2,500	1Q	2,500	1Q	5,000
	MIPR	AIRPAC/HI	0	1,500	1Q	1,500	1Q	3,000
	MIPR	SPAWAR/CA	0	2,500	1Q	2,500	1Q	5,000
	V/	Various	0	12,467	1Q	9,732	1Q	22,199
	Various							
Targets	various							105010
	various	MDA/VA	0	66,799	N/A	39,164	N/A	105,963
Targets Subtotal Test and Evaluation	various	MDA/VA	0	66,799 120,199	N/A	39,164 86,113	N/A	206312

1024

RDT&E, DW/04 Advanced	<u> </u>		iototypes (nei		892C Ballistic I	viissiie Derense	11613	
IV. Management Services	<u>Cost (\$ 11</u>	n Thousands)	i		FY 2008		FY 2009	
	Contract	Performing	Total		Award/		Award/	
	Method	Activity &	PYs	FY 2008	Oblg	FY 2009	Oblg	Total
Cost Categories:	& Type	Location	Cost	Cost	Date	Cost	Date	Cost
SM-3 Missile Development	51							
Aegis BMD Testing								
0 0		General Dynamics/						
	CPFF	NJ	0	11,050	1Q	7,650	1Q	18,700
	CPFF	Paradigm/VA	0	500	1Q	500	1Q	1,000
	CPFF	Gryphon/MD	0	500	1Q	500	1Q	1,000
		Lockheed Martin/						
	CPAF	NJ	0	250	1Q	500	1Q	750
	CPAF	Raytheon/AZ	0	250	1Q	500	1Q	750
	MIPR	NAVSEA/DC	0	2,300	1Q	2,500	1Q	4,800
	MIPR	MDA/VA	0	6,450	1/2Q	9,850	1Q	16,300
Subtotal Management Services			0	21,300		22,000		43300
Remarks Project Total Cost		1	0	295,736	1	202,151		497,887
Remarks								

Missile Defense A	genc	y (M	IDA)) Exl	nibit	R-4	Sch	edul	e Pro	ofile								Da Fe	te bru a	ary 1	200	8						
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component De	evelo	opm	ent :	and	Pro	toty	pes	(AC	D&]	P)		-1 N(5 038						le Do	efen	se A	egis	5						
Fiscal Year		20	007			20	08			20	09			20	010			20)11			20)12			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
Flight Tests																												
FTM-13																												
FTM-14							Δ																					
FTM-15										Δ																		
BMD 4.0.1 At-Sea Demo (ASD)											Δ																	
Fielding Deliveries/Ships	_				_				_				_				_				_				_			
BMD 3.6 Fielding (DDGs and CGs)					₹				\leq																			
Fielding Deliveries/Missiles	_				_				_				_				_				-				_			
SM-3 Blk IA Deliveries					₹									4														
			Sign	ficon	t Ever	ot (00	molot	<u>(</u>)		Le	egei			Sign	ificant	Evo	at (pla	nnod	`									
			Mile	stone	Deci	ision ((comp					2 7	7	Mile	stone	Deci	sion	(planr										
					est (c evel T			ete)							nent T em Le				d)									
	Δ_				Activ		Jompi	010)				Δ_			ned A			Janne	.u)									

Project: BX09 AEGIS BMD Block 2.0

APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Compone	nt Development and I		il February 2008 R-1 NOMENCLATURE 0603892C Ballistic Missile Defense Aegis							
Schedule Profile	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013			
Flight Tests										
FTM-13		1Q								
FTM-14		3Q								
FTM-15			2Q							
BMD 4.0.1 At-Sea Demo (ASD)			3Q							
Fielding Deliveries/Ships										
BMD 3.6 Fielding (DDGs and CGs)		1Q-4Q	1Q							
Fielding Deliveries/Missiles										
SM-3 Block IA Deliveries		1Q-4Q	1Q-4Q	1Q-2Q						

Missile Defense Agency (MDA) Exhibit R-2A RDT&E	ïcation		Date Februa r	uary 2008					
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes	s (ACD&P)	R-1 NOMENCLATURE 0603892C Ballistic Missile Defense Aegis							
COST (\$ in Thousands)	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013		
EX09 AEGIS BMD Block 5.0	0	597,990	644,206	651,171	596,260	498,345	441,785		
RDT&E Articles Qty	0	0	2	11	33	23	17		

Note: The content in project EX09 is a continuation of the efforts reported in projects 0809, 0909, and 0009 and was explained in those projects in PB08.

RDT&E Articles: FY09 - BMD 4.0.1 Testbed computer program (1), one (1) BMD 4.0.1 Cruiser (EDM). FY10 - Nine (9) SM-3 Block IA missiles, one (1) Pathfinder SM-3 Block IB missile, upgraded EDM of BMD 4.0.1 computer program with BSP (1). FY11 - Fourteen (14) SM-3 Block IA missiles, Eighteen (18) SM-3 Block IB missiles, one (1) BMD 4.0.1 CG with BSP. FY12 - Twenty-one (21) SM-3 Block IB missiles, two (2) BMD 4.0.1 DDGs with BSP. FY13 - Thirteen (13) SM-3 Block IB missiles, two (2) BMD 4.0.1 DDGs with BSP, two (2) BMD 5.0 (Open Architecture) DDGs.

A. Mission Description and Budget Item Justification

Aegis BMD program development in Block 5.0 supports the BMDS mission of intercepting ballistic missiles in all regions, in all phases, and of all ranges as follows:

- In all regions: Provide enhanced, sea-based Long Range Surveillance and track (LRS&T) and engagement capabilities.
- In all phases of ballistic missile flight: LRS&T capability against missile threats in all stages; engagement capability against missile threats in the midcourse and terminal stages.
- Against all ranges:
 - LRS&T capability against ballistic missile threats of all ranges
 - Enhanced engagement capability (BMD 4.0.1 and the SM-3 Block IB missile): battlespace expanded to include Intermediate-Range Ballistic Missile (IRBM)-class threats

Aegis BMD supported LDC by providing Long Range Surveillance and Track (LRS&T) data to other elements of the BMDS. Aegis BMD will further improve both national and international security with its ability to launch Standard Missile 3 (SM-3) missiles based upon data received via the Tactical Digital Information Link (TADIL) network. Through development and fielding of the Aegis BMD Signal Processor and upgrades to the SM-3 Block IA missile (SM-3 Block IB), Aegis BMD will improve discrimination capability and performance against more diverse and longer range threats.

Project: EX09 AEGIS BMD Block 5.0

	Date
cation	February 2008
R-1 NOMENCLATURE	
0603892C Ballistic Missile Defense Aegis	
	R-1 NOMENCLATURE

The BMD 4.0.1 Combat System will expand Aegis BMD effectiveness against the threat base. It will provide a full upgrade to the Aegis BMD Weapon System (BMD 4.0.1) and an upgraded SM-3 missile, SM-3 Block IB.

Missile Upgrades for the SM-3 Block IB include improvements to the kinetic warhead's seeker and Divert and Attitude Control System (DACS). Seeker improvements will include the introduction of seeker All-Reflective-Optics (ARO) to improve optics performance, and a Kinetic Warhead Advanced Signal Processor (ASP) to mitigate diminished manufacturing source issues in SM-3 Block IA missiles. Additionally, the increased processing capability of the ASP will support new discrimination algorithms. The optics and processing improvements will enhance the Aegis BMD contribution to the BMDS missions by providing greater sensitivity and seeker discrimination capability. Other missile improvements include the integration of a two-color seeker and development of the Throttleable Divert and Attitude Control System (TDACS). These enhancements will be tested and verified for the SM-3 Block IB configuration.

BMD 4.0.1 will deliver in two spirals:

- Spiral one (BMD 4.0.1 Testbed) will deliver an initial engagement system capability with the SM-3 Block IA missile. It will build on BSP enhancements to the LRS&T mission by adding mission capability for flight missions.
- Spiral two (BMD 4.0.1) will continue through the System Engineering Development and test in process and culminate as an operationallycertified system capable of firing the SM-3 Block IA or IB missile.

Other capability enhancements include:

- Improvements in BMDS Command and Control, Battle Management, and Communications (C2BMC) to ensure future BMDS sensor enhancements and the resulting discrimination capabilities are able to be communicated, correlated, and acted upon.
- Improved engagement coordination capability with THAAD and PATRIOT to conserve upper tier missiles.
- Analysis for planned upgrades to the SM-3 missile to expand battlespace and improve discrimination, divert, and probability of mission success.

BMD 5.0 will integrate BMD 4.0.1 and the BMD mission with the Navy-developed Open Architecture system. This effort will transition Aegis BMD from older, MIL-standard computers to newer Commercial Off The Shelf (COTS) computing plants. This change is necessary for Aegis BMD to remain compatible with Navy assets as Navy ship modernization plans are executed. This change will improve human-systems interface through display enhancements and eliminate the need for a separate computing system specific to the BMD mission. This will also enable more ships to serve as candidates for the BMD mission as the threat projection changes. Open architecture will be included in future fielded BMD system improvements.

Project: EX09 AEGIS BMD Block 5.0

		Date
Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification		February 2008
APPROPRIATION/BUDGET ACTIVITY	R-1 NOMENCLATURE	
RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	0603892C Ballistic Missile Defense Aegis	

In collaboration with the MDA Systems Engineer, Aegis BMD is contributing to the BMDS in development of engagement sequence groups (ESGs). Aegis BMD supports an autonomous engagement against Short Range Ballistic Missiles (SRBMs) and Medium Range Ballistic Missiles (MRBMs) without requiring external cueing. It supports an engagement against SRBMs and MRBMs using data from other BMDS elements and external sensors. Aegis BMD will also provide target track data to support Ground Based Interceptor Launch and Engagement against Long Range Ballistic Missiles (LRBMs) and Intermediate Range Ballistic Missiles (IRBMs) via input for the Ground-based Midcourse Defense (GMD) Sensor Task Plan (STP) and Weapons Task Plan (WTP).

MDA and US Northern Command recognize that the Continental United States remains vulnerable to the potential threat of a missile launched from ships off the East Coast. Initiated in FY06, the Department of Defense conducted a comprehensive study, led by MDA, NORTHCOM and STRATCOM of the threat, and the architectural engineering and operational implications for defending against such threat. Building upon previous activities, which include multiple tests of the Passive Coherent Locator and Over the Horizon Radars, this analysis and an Operator-in-the-Loop (OITL) exercise will enable understanding our current abilities in, and potential requirements for, surveillance, detection, attribution, threat identification and characterization, tracking and engagement as well as kill assessment and population defense.

B. Accomplishments/Planned Program

	FY 2007	FY 2008	FY 2009
BMD 4.0.1 Weapon System Development	0	263,332	241,310
RDT&E Articles (Quantity)	0	0	1

The Aegis BMD Weapon System Engineering group will develop BMD 4.0.1 to provide an operationally-certified system with significant improvements in discrimination capability, configured to operate with either the SM-3 Block IA or IB.

FY08 Planned Program:

- Continue development of BMD 4.0.1 Testbed, leading to an Engineering Assessment in FY09.
- Conduct the BMD 4.0.1 Critical Design Review (CDR), to review the contractor's design to meet engineering requirements and approval to proceed with MEIT leading to a BMD 4.0.1 demonstration and certification.

FY09 Planned Program: RDT&E Articles: BMD 4.0.1 Testbed Computer Program (1)

- Conduct BMD 4.0.1 Testbed Engineering Assessment
- Complete development of BSP Engineering Development Model (EDM).
- Support FTM-16, using BMD 4.0.1 Testbed and the BSP EDM.

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Missile Defense Agency (MDA) Exhibit R-2A RDT	ae Project Justin			
TION/BUDGET ACTIVITY V/04 Advanced Component Development and Prototy	mag (A CD P D)	R-1 NOMENCLATU	Missile Defense Aegis	
	•		0	
e development and testing of BMD 4.0.1, leading to	an Engineering	Assessment in FY1	0.	
	FY	2007	FY 2008	FY 2009
on System Development		0	68,359	59,980
s (Quantity)		0	0	
 BMD 5.0 System Requirements Review (SRR). AD 5.0 A-Spec, System B-1 & B-2 Specs. BMD 5.0 System Design Review (SDR). ed Program: stem B-5 Specs (some in Unified Modeling Languag BMD 5.0 Preliminary Design Review (PDR), to revients. 				g the BMD 5.0
	EV	2007	FY 2008	FY 2009
Development		0	231,299	141,688
s (Quantity)		0	0	(
I FY09, Aegis BMD will continue the development of the to the kinetic warhead's seeker and Divert and Att Reflective-Optics (ARO) to improve optics performant its include the two-color seeker and development of ed Program: e SM-3 Block IB All-Reflective Optics (ARO) engin e SM-3 Block IB Advanced Signal Processor (ASP)	titude Control Synce, and a Kinet the Throttleable neering for impro	vstem (DACS). See ic Warhead Advand Divert and Attitude oved missile discrim	ker improvements will incl ced Signal Processor (ASP) e Control System (TDACS) nination capabilities.	lude the introduction of). Other missile
				-

		Date	
Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project		February 2008	
APPROPRIATION/BUDGET ACTIVITY	R-1 NOMENCL		
RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&	P) 0603892C Ball	listic Missile Defense Aegis	
• Conduct testing of SM-3 Block IB two-color seeker upgrade.			
Continue SM-3 Block IB TDACS development.			
• Conduct SM-3 Block IB CDR (4Q FY08).			
FY09 Planned Program:			
• Complete SM-3 Block IB All-Reflective Optics (ARO) engineering for	· improved missile di	scrimination capabilities.	
• Complete SM-3 Block IB Advanced Signal Processor (ASP) design eff	forts for improved mi	ssile discrimination.	
• Complete testing of SM-3 Block IB two-color seeker upgrade.	•		
Complete SM-3 Block IB TDACS development.			
• Begin element integration of the SM-3 Block IB missile.			
 Begin acquisition of one (1) SM-3 Block IB Pathfinder round. 			
begin acquisition of one (1) SW 5 Block ib Faummael found.			
	FY 2007	FY 2008	FY 2009
Flight Testing	0	0	8,935
RDT&E Articles (Quantity)	0	0	0
This task provides funding for Aegis BMD flight testing, as well as Aegis	BMD participation in	BMDS-level testing.	
FY09 Planned Program:			
• Participate in BMD 4.0.1 At-Sea Demo (funded in project BX09).			
• Participate in selected BMDS tests, per guidance in the BMDS Integrat	ed Master Test Plan	(IMTP).	
	FY 2007	FY 2008	FY 2009
BMD 4.0.1 Fielding	0	0	- ,.
RDT&E Articles (Quantity)	0	0	1
This project funds the installation of the BMD 4.0.1 computer program on	U.S. Navy Cruisers a	and destroyers.	
FY09 Planned Program: RDT&E Articles: One (1) BMD 4.0.1 EDM insta			
• Install BMD 4.0.1 Engineering Development Model (EDM)to support	flight testing.		
• Begin procurement of BMD 4.0.1 suites, to include BMD Signal Proce	ssor (BSP) units.		

			Date	
Missile Defense Agency (MDA) Exhibit R-2A RDT&E Pro APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (AC		R-1 NOMENCLATU	February 2008 URE Missile Defense Aegis	
		7 2007	FY 2008	FY 2009
SM-3 Block IA Missile Fielding		0	20,000	57,085
RDT&E Articles (Quantity)		0	0	0
FY08 Planned Program:Begin procurement of twenty three (23) SM-3 Block IA missiles.				
FY09 Planned Program:Continue procurement of twenty three (23) SM-3 Block IA missiles				
	FY	7 2007	FY 2008	FY 2009
SM-3 Block IB Missile Fielding		0	5,000	73,466
RDT&E Articles (Quantity)		0	0	C
 FY08 Planned Program: Begin long lead funding for twenty four (24) SM-3 Block IB missile FY09 Planned Program: Begin procurement of twenty four (24) SM-3 Block IB missiles. 	es.			
	FY	7 2007	FY 2008	FY 2009
Asymmetric Threat Initiative		0	10,000	0
RDT&E Articles (Quantity)		0	0	0
 FY08 Planned Program: Conduct Experiments, develop prototypes, and recommend deployn Perform more detailed analysis of options/needs for wide area surve and communications. Develop a recommended architecture for homeland asymmetric miss enhance missile defense capabilities over time. Report on the results of efforts to date along with a recommended p guide further investments in this critical capability. 	eillance,	combat identification	on and command and contro	ol, battle management gy upgrades that would

Project: EX09 AEGIS BMD Block 5.0

Missile Defense Agency (MDA)	E	DT & E Droiog	t Justification		Date Febr	uary 2008		
Missile Defense Agency (MDA) APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Develops			R-1 N	NOMENCLATU 892C Ballistic	JRE			
C. Other Program Funding Summary								
	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	Total Cost
PE 0207998C BRAC	0	103,219	159,938	61,931	8,724	0	0	333,812
PE 0603175C Ballistic Missile Defense Technology	183,849	108,423	118,718	115,234	120,152	127,012	130,358	903,746
PE 0603881C Ballistic Missile Defense Terminal Defense Segment	1,082,454	1,045,276	1,019,073	795,659	719,847	548,283	439,752	5,650,344
PE 0603882C Ballistic Missile Defense Midcourse Defense Segment	2,985,140	2,243,213	2,209,262	2,276,848	1,385,258	946,437	1,103,532	13,149,690
PE 0603883C Ballistic Missile Defense Boost Defense Segment	622,218	510,241	421,229	423,927	652,642	799,792	991,839	4,421,888
PE 0603884C Ballistic Missile Defense Sensors	514,989	586,121	1,221,143	1,184,280	1,099,649	1,077,632	823,583	6,507,397
PE 0603886C Ballistic Missile Defense System Interceptors	341,358	340,107	386,817	500,966	708,803	815,433	553,136	3,646,620
PE 0603888C Ballistic Missile Defense Test and Targets	584,615	621,861	673,691	672,976	690,938	708,991	719,209	4,672,281
PE 0603890C Ballistic Missile Defense System Core	425,889	413,934	432,262	482,947	605,219	561,947	571,498	3,493,696
PE 0603891C Special Programs - MDA	347,377	196,892	288,315	304,234	538,050	818,136	786,349	3,279,353
PE 0603893C Space Tracking & Surveillance System	311,402	231,528	242,441	266,509	560,130	735,727	938,191	3,285,928
PE 0603894C Multiple Kill Vehicle	133,615	229,943	354,455	488,294	649,632	708,582	879,385	3,443,906
PE 0603895C BMD System Space Program	0	16,552	29,771	41,638	56,199	133,915	157,548	435,623
PE 0603896C BMD C2BMC	249,179	447,616	289,277	287,194	270,762	256,767	259,159	2,059,954
PE 0603897C BMD Hercules	46,268	52,462	55,955	55,289	56,400	51,902	52,784	371,060
PE 0603898C BMD Joint Warfighter Support	49,833	49,394	69,982	73,997	77,205	80,168	81,948	482,527
PE 0603904C Missile Defense Integration & Operations Center	104,389	78,557	96,404	100,437	100,366	101,512	102,840	684,505
PE 0603905C BMD Concurrent Test and Operations	21,870	0	0	0	0	0	0	21,870
PE 0603906C Regarding Trench	0	1,986	2,978	4,964	4,963	8,933	8,933	32,757
PE 0603907C Sea Based X-Band Radar (SBX)	0	165,243	0	0	0	0	0	165,243
PE 0605502C Small Business Innovative Research - MDA	142,510	0	0	0	0	0	0	142,510
PE 0901585C Pentagon Reservation	15,527	6,019	19,734	5,040	5,284	5,370	5,456	62,430
PE 0901598C Management Headquarters - MDA	93,350	80,392	86,453	70,355	69,855	69,855	69,855	540,115

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		Date
Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justif	fication	February 2008
APPROPRIATION/BUDGET ACTIVITY	R-1 NOMENCLATURE	
RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	0603892C Ballistic Missil	e Defense Aegis

D. Acquisition Strategy

The Aegis BMD element acquisition approach supports evolutionary development, continuously building upon demonstrated capabilities to advance overall BMDS capability. After considering all the technical and management aspects of the program and to meet the requirements presented by an evolving ballistic missile threat, the Aegis BMD program has awarded sole source contracts to Raytheon and Lockheed Martin to continue development of the SM-3 missile and the Aegis BMD Weapon System, respectively.

2.41 1						Date Eshara	2009	
		y (MDA) Exhibit R-3	RDT&E Project			Februar	ry 2008	
APPROPRIATION/BUDGET RDT&E, DW/04 Advanced		Development and D			NOMENCLATUR 13892C Ballistic I		- A orig	
,	-	*	rototypes (ACL	J&F) 000	5892C Damsuc	MISSIle Delense	e Aegis	
I. Product Development	<u>Cost (\$ in '</u>	<u>fhousands</u>)						
	Contract Method	Performing Activity &	Total PYs	FY 2008	FY 2008 Award/ Oblg	FY 2009	FY 2009 Award/ Oblg	Total
Cost Categories:	& Type	Location	Cost	Cost	Date	Cost	Date	Cost
BMD 4.0.1 Weapon System Development								
	SS/CPAF	Lockheed Martin/ NJ	0	180,386	1Q	161,833	1Q	342,219
	MIPR	NSWC/DD/VA	0	15,576		13,828	1Q	29,404
	MIPR	NSWC/PHD/CA	0	4,322	-	2,148	1Q	6,470
	MIPR	JHU/APL/MD	0	6,546	-	3,895	1Q	10,441
	MIPR	SPAWAR/CA	0	2,629	1Q	1,289	1Q	3,918
	MIPR	VA Sites/VA	0	5,080	1Q	3,008	1Q	8,088
	Various	Various	0	4,972	1/2Q	2,259	1Q	7,231
	MIPR	Aegis Techrep/NJ	0	2,095	1Q	957	1Q	3,052
BMD 5.0 Weapon System Development								
		Lockheed Martin/						
	CPAF	NJ	0	47,622	,	36,707	1Q	84,329
	MIPR	NSWC/DD/VA	0	3,063	,	3,555	1Q	6,618
	CPFF	JHU/APL/MD	0	3,042	,	3,516	1Q	6,558
	CPFF	MIT/LL/MA	0	2,022	`	996	1Q	3,018
	CPAF	VA Sites/VA	0	1,394	•	934	1Q	2,328
	Various	Various	0	466		449	1Q	915
	MIPR	Aegis Techrep/NJ	0	957	1Q	703	1Q	1,660
SM-3 Block IB Development								
	CPAF	Raytheon/AZ	0	162,584	-	91,187	1Q	253,771
	MIPR	NSWC DD/VA	0	6,500	-	4,123	1Q	10,623
	MIPR	JHU/APL/MD	0	6,500		4,321	1Q	10,821
	MIPR	NSWC/CR/MD	0	1,900	`	997	1Q	2,897
	MIPR	NSWC/CL/CA	0	1,850	1Q	997	1/2Q	2,847

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	6 A					Date	2009	
		y (MDA) Exhibit R-3	RDT&E Project C			Februar	·y 2008	
APPROPRIATION/BUDGET A RDT&E, DW/04 Advanced		Development and P	Prototypes (ACD&		OMENCLATUR 892C Ballistic I		Aegis	
					FY 2008		FY 2009	
	Contract	Performing	Total		Award/		Award/	
	Method	Activity &		FY 2008	Oblg	FY 2009	Oblg	Total
Cost Categories:	& Type	Location	Cost	Cost	Date	Cost	Date	Cost
	MIPR	NSWC IH/MD	0	2,800	1Q	1,888	1Q	4,688
	MIPR	NSWC Corona/CA	0	2,800	1Q	1,888	1Q	4,688
	MIPR	MIT/LL/MA	0	3,600	1/2Q	2,410	1Q	6,010
	MIPR	NSWC/PHD/CA	0	1,850	1Q	997	1Q	2,847
	Various	Various	0	2,100	1/3Q	1,888	1/3Q	3,988
BMD 4.0.1 Fielding					A		-	
		Lockheed Martin/						
	SS/CPAF	NJ	0	0	N/A	30,260	1Q	30,260
	MIPR	NAVSEA/VA	0	0	N/A	5,203	1Q	5,203
	MIPR	NSWC/DD/VA	0	0	N/A	5,251	1Q	5,251
	MIPR	NSWC PHD/CA	0	0	N/A	8,492	1Q	8,492
	MIPR	SPAWAR/CA	0	0	N/A	2,302	1Q	2,302
		SUPSHIP/BATH/						
	MIPR	ME	0	0	N/A	2,612	1Q	2,612
		SUPSHIP/PASC/						
	FPI	MS	0	0	N/A	3,863	1Q	3,863
	Various	Various	0	0	N/A	3,759	1Q	3,759
SM-3 Block IA Missile Fielding								
	CPAF	Raytheon/AZ	0	16,800	1Q	50,638	1Q	67,438
	MIPR	NSWC/IH/MD	0	800	1Q	765	1Q	1,565
	MIPR	NSWC/DD/VA	0	800	1Q	1,277	1Q	2,077
	MIPR	NSEC/PHD/CA	0	800	1Q	1,159	1Q	1,959
	CPAF	JHU/APL/MD	0	0	N/A	656	1Q	656
	MIPR	NSWC/Corona/CA	0	0	N/A	108	1Q	108
	MIPR	MDA/VA	0	0	N/A	1,826	1Q	1,826
	Various	Various	0	800	1/2Q	656	1/2Q	1,456
SM-3 Block IB Missile Fielding								
	CPAF	Raytheon/AZ	0	4,200	2/4Q	65,169	1Q	69,369

Project: EX09 AEGIS BMD Block 5.0

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Missila	Defense Agene	y (MDA) Exhibit R-3	DDT&F Projec	+ Cost Analysis		Date Februar	••• ⁷ 2008	
APPROPRIATION/BUDGET A		y (MIDA) Exilipit K-5	KDI &E FIUJEU		OMENCLATUR		y 2000	
RDT&E, DW/04 Advanced		Development and P	rototypes (AC		392C Ballistic N		e Aegis	
					FY 2008		FY 2009	
	Contract	Performing	Total		Award/		Award/	
	Method	Activity &	PYs	FY 2008	Oblg	FY 2009	Oblg	Total
Cost Categories:	& Type	Location	Cost	Cost	Date	Cost	Date	Cost
	MIPR	NSWC/IH/MD	0	200	1/2Q	985	1Q	1,185
	MIPR	NSWC/DD/VA	0	200	1/2Q	1,643	1Q	1,843
	MIPR	NSWC/PHD/CA	0	200	1/2Q	1,491	1Q	1,691
	CPAF	JHU/APL/MD	0	0	N/A	844	1/2Q	844
	MIPR	NSWC/Corona/CA	0	0	N/A	141	1Q	141
	MIPR	MDA/VA	0	0	4Q	2,349	1Q	2,349
	Various	Various	0	200	1/2Q	844	1/3Q	1,044
Asymmetric Threat Initiative								
	1 (100	MDA/VA	0	10,000	1/2Q	0	N/A	10,000
	MIPR	NIDA/VA	0	10,000	1/22	0		
Subtotal Product Development Remarks			0	507,656		539,066		1046722
Remarks								1046722
-	\$ in Thousa	unds)	0		FY 2008		FY 2009	1046722
Remarks	\$ in Thousa	ands) Performing	0 Total	507,656	FY 2008 Award/	539,066	FY 2009 Award/	
Remarks II. Support Costs Cost (Sin Thousa Contract Method	Performing Activity &	0 Total PYs	507,656 FY 2008	FY 2008 Award/ Oblg	539,066 FY 2009	FY 2009 Award/ Oblg	Total
Remarks	\$ in Thousa	Performing Activity & Location	0 Total	507,656	FY 2008 Award/	539,066	FY 2009 Award/	
Remarks II. Support Costs Cost (Cost Categories: BMD 4.0.1 Weapon System	Sin Thousa Contract Method	Performing Activity &	0 Total PYs	507,656 FY 2008	FY 2008 Award/ Oblg	539,066 FY 2009	FY 2009 Award/ Oblg	Total
Remarks II. Support Costs Cost (Cost Categories: BMD 4.0.1 Weapon System	Sin Thousa Contract Method & Type	Performing Activity & Location General Dynamics/	0 Total PYs Cost	507,656 FY 2008 Cost	FY 2008 Award/ Oblg Date	539,066 FY 2009 Cost	FY 2009 Award/ Oblg Date	Total Cost
Remarks II. Support Costs Cost (Cost Categories: BMD 4.0.1 Weapon System	Sin Thousa Contract Method & Type CPFF	Performing Activity & Location General Dynamics/ NJ	0 Total PYs Cost 0	507,656 FY 2008 Cost 18,458	FY 2008 Award/ Oblg Date 1Q	539,066 FY 2009 Cost 14,039	FY 2009 Award/ Oblg Date 1Q	Total Cost 32,497
Remarks II. Support Costs Cost (Cost Categories: BMD 4.0.1 Weapon System	Sin Thousa Contract Method & Type CPFF CPFF	Performing Activity & Location General Dynamics/ NJ Paradigm/VA	0 Total PYs Cost 0 0	507,656 FY 2008 Cost 18,458 4,543	FY 2008 Award/ Oblg Date 1Q 1Q	539,066 FY 2009 Cost 14,039 6,112	FY 2009 Award/ Oblg Date 1Q N/A	Total Cost 32,497 10,655
Remarks II. Support Costs Cost (Cost Categories: BMD 4.0.1 Weapon System	Sin Thousa Contract Method & Type CPFF CPFF CPFF	Performing Activity & Location General Dynamics/ NJ Paradigm/VA Gryphon/MD Lockheed	0 Total PYs Cost 0 0 0	507,656 FY 2008 Cost 18,458 4,543 1,043	FY 2008 Award/ Oblg Date 1Q 1Q 1Q	539,066 539,066 FY 2009 Cost 14,039 6,112 1,312	FY 2009 Award/ Oblg Date 1Q N/A N/A	Total Cost 32,497 10,655 2,355

Project: EX09 AEGIS BMD Block 5.0

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APPROPRIATION/BUDGET A RDT&E, DW/04 Advanced	ACTIVITY	y (MDA) Exhibit R-3 Development and Pr	4		R-1 N	OMENCLATUR 892C Ballistic I	RE Missile Defense	e Aegis	
	$\overline{}$					FY 2008		FY 2009	
	Contract	Performing	Total			Award/		Award/	
	Method	Activity &	PYs	FY 2008	8	Oblg	FY 2009	Oblg	Total
Cost Categories:	& Type	Location	Cost	Cost		Date	Cost	Date	Cost
	MIPR	MDA/VA	0	11	,944	1Q	23,415	N/A	35,359
BMD 5.0 Weapon System Development	1								
-		Lockheed Martin/							
	CPFF	NJ	0	4	4,554	1Q	4,240	1Q	8,794
	CPFF	Paradigm/VA	0		845	1Q	930	1Q	1,775
	CPFF	Gryphon/MD	0		245	1Q	330	1Q	575
	1	Lockheed Martin/							
	CPAF	NJ	0		122	1Q	165	1Q	287
	CPAF	Raytheon/AZ	0		122	1Q	165	1Q	287
	MIPR	NAVSEA/DC	0	1	,102	1Q	1,487	1Q	2,589
	MIPR	MDA/VA	0	2	2,803	1Q	5,803	1/3Q	8,606
SM-3 Block IB Development									
		General Dynamics/							
	CPFF	NJ	0		5,926	1Q	8,633	1Q	25,559
	CPFF	Paradigm/VA	0	4	4,471	1Q	3,581	1Q	8,052
	CPFF	Gryphon/MD	0		970	1Q	780	1Q	1,750
		Lockheed Martin/							
	CPAF	NJ	0		485	1Q	390	1Q	875
	CPAF	Raytheon/AZ	0		485	1Q	390	1Q	875
	MIPR	NAVSEA/DC	0	4	4,367	1Q	3,512	1Q	7,879
	MIPR	MDA/VA	0	11	,111	1Q	13,706	1Q	24,817
Subtotal Support Costs			0	90),334		96,205		186539

Remarks

DDD ODD L THOM TO COT		y (MDA) Exhibit R-3	KDT&E Projec			Februa	ry 2008	
APPROPRIATION/BUDGET RDT&E, DW/04 Advanced		Dovolonment and D	mototypes (A C		NOMENCLATU	JRE 2 Missile Defens	o Aogis	
·	-	-	rototypes (AC	D&P) 00	05892C Damstic	: MISSILE Delens	e Aegis	
III. Test and Evaluation	Cost (\$ in '	Thousands)	i		1	i		
					FY 2008		FY 2009	
	Contract	Performing	Total	EX 2 000	Award/	EV 2 000	Award/	T 1
	Method	Activity &	PYs	FY 2008	Oblg	FY 2009	Oblg	Total
Cost Categories:	& Type	Location	Cost	Cost	Date	Cost	Date	Cost
Flight Testing) (IDD	DIDEAU				(02	10	<0 2
	MIPR	PMRF/HI	0	(682	1Q	682
	MIPR	SMDC/AL	0	(256	1Q	256
	MIPR	NSWC/DD/VA	0	(853	1Q	853
	CPFF	JHU/APL/MD	0	() N/A	1,450	1Q	1,450
	CPAF	Lockheed Martin/ NJ	0	() N/A	1,706	1Q	1,706
	MIPR	NSWC/PHD/CA	0	(597	1Q 1Q	597
	CPFF	MIT/LL/MA	0	(427	1Q 1Q	427
	MIPR	AIRPAC/HI	0	(256	1Q 1Q	256
	MIPR	SPAWAR/CA	0	(427	1Q 1Q	427
	Various	SPAWAK/CA	0	(2,281	1Q 1Q	2,281
Subtotal Test and Evaluation	various		0	(8,935	IQ	8935
Remarks			0	(,	8,933		6933
IV. Management Service	es Cost (\$ ir	n Thousands)			FY 2008		FY 2009	
	Contract	Performing	Total		Award/		Award/	
	Method	Activity &	PYs	FY 2008	Oblg	FY 2009	Oblg	Total
	muuuu	i cuvity a			-	Cost	Date	Cost
Cost Categories.	& Type	Location	Cost	Cost	Date			
	& Type	Location	Cost	Cost	Date	Cost	Duto	
Subtotal Management Services	& Type	Location	Cost	Cost	Date	Cost	Dute	
Subtotal Management Services	& Type	Location	Cost	Cost	Date			
Cost Categories: Subtotal Management Services Remarks Project Total Cost	& Type	Location	Cost	Cost 597,990		644,206		1,242,196

APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component	Devel	opm	ent	and	Pro	toty	pes ((AC	D&]	P)				NCL Bal				e De	efen	se A	egis							
Fiscal Year		20	007			20	08			20	09			20	10			2011			2		2012			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	2
Development Milestones																												
BMD 4.0.1 Development					ᇫ													Ь										Γ
BMD 4.0.1 Testbed EE					Δ																							Γ
BMD 4.0.1 In-Process Review						Δ																						T
BMD 4.0.1 Critical Design Review (CDR)								Δ																				Γ
BMD 4.0.1 Engineering Assessment									Δ																			T
BMD 4.0.1 Demo													Δ															Γ
BMD 4.0.1 CPAP														Δ														T
BMD 4.0.1 Certification																		Δ										T
BMD 5.0 Development					Δ																	$ \land $						T
BMD 5.0 System Design Review					Δ																							Γ
BMD 5.0 Preliminary Design Review									Δ																			T
BMD 5.0 Critical Design Review													Δ															T
BMC 5.0 Demo																				Δ								T
										Le	eger														8			-
		•					mplet (comp					_ ₹						anned) (plann										
		.				comp						Ś	>	Elem														
							omple	ete)				, É	7					lanne	ed)									
			Con	nplete	Activ	∕ity						Δ		Planr	ned A	ctivit	у											

Missile Defense Agency (MDA) Exhibit R-4 Schedule Profile APPROPRIATION/BUDGET ACTIVITY R-1 NOMENCLATURE														Dat Fe	te bru a	ary	2008	8										
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Do											R							le De	efen	se A	egis	5						
									_																			
Fiscal Year	2007 2008 2009								009			20)10			20)11			20	12			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
Development Milestones		1 -		<u> </u>		<u> </u>		<u> </u>	-	<u> </u>	1-	<u> </u>		1 -	-	<u> </u>		1 -		<u> </u>			-					
BMD 5.0 Cert		Γ			Ī			Γ			Γ											Δ						
Flight Tests			<u> </u>			_	<u> </u>	<u> </u>			<u> </u>			•														
BMD 4.0.1 At-Sea Demo (ASD)												Δ																
FTM-16																Δ												
FTM-17																			Δ									
FTM-18																							Δ					
FTM-19																											Δ	
Fielding Deliveries/Ships																												
BMD 4.0.1 Ship Installations										⊾																		_∆
BMD 5.0 Ship Installations																										4		_∆
Fielding Deliveries/Missiles													_															
SM-3 Blk IA Deliveries																▲												
SM-3 Blk IB Deliveries																			Δ-									
		•	Sign	ificon	+ 510	nt (or	mple	to)		L	ege		`	Sign	ificon	+ 510	nt (pla	anned	`									
		•	Mile	stone	e Dec	ision	(com)			7	۲ ۲	Mile	stone	Deci	ision	(plann										
				nent T			olete) comp	lete)					>				planne est (r	ed) blanne	d)									
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APPROPRIATION/BUDGET ACTIVITY	Agency (MDA) Exhi			MENCLATURE	February 20		
RDT&E, DW/04 Advanced Component l	Development and I	Prototynes (ACD			sile Defense Aeg	is	
	bevelopment und I		u () 000203		she Derense rreg		
Schedule Profile	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Development Milestones							
BMD 4.0.1 Development		1Q-4Q	1Q-4Q	1Q-4Q	1Q-2Q		
BMD 4.0.1 Testbed EE		1Q					
BMD 4.0.1 In-Process Review		2Q					
BMD 4.0.1 Critical Design Review (CDR)		4Q					
BMD 4.0.1 Engineering Assessment			1Q				
BMD 4.0.1 Demo				1Q			
BMD 4.0.1 CPAP				2Q			
BMD 4.0.1 Certification					2Q		
BMD 5.0 Development		1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-2Q	
BMD 5.0 System Design Review		1Q					
BMD 5.0 Preliminary Design Review			1Q				
BMD 5.0 Critical Design Review				1Q			
BMC 5.0 Demo					4Q		
BMD 5.0 Cert						2Q	
Flight Tests							
BMD 4.0.1 At-Sea Demo (ASD)			4Q				
FTM-16				4Q			
FTM-17					3Q		
FTM-18						3Q	
FTM-19							3Q
Fielding Deliveries/Ships							
BMD 4.0.1 Ship Installations			2Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q
BMD 5.0 Ship Installations					<u> </u>		2Q-4Q
Fielding Deliveries/Missiles							
SM-3 Block IA Deliveries				4Q	1Q-2Q		
SM-3 Block IB Deliveries					3Q-4Q	1Q-4Q	1Q-2Q

	CLASSI						
				Date			
Missile Defense Agency (MDA) Exhibit R-2A RDT&E	Project Justi			Februar	y 2008		
APPROPRIATION/BUDGET ACTIVITY			NCLATURE				
RDT&E, DW/04 Advanced Component Development and Prototypes	(ACD&P)	0603892C	Ballistic Mis	ssile Defense	e Aegis		
COST (\$ in Thousands)	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
XX09 AEGIS BMD Sustainment	0	43,800	42,501	45,772	31,166	30,571	29,280
RDT&E Articles Qty	0	0	0	0	0	0	0
Note: The content in project XX09 is a continuation of the efforts re	enorted in n	rojects 0709	0809 0900	and 0009	and was ern	lained in th	050
A. Mission Description and Budget Item Justification Aegis BMD has negotiated agreements with the U.S. Navy for the c efforts are leveraged off of already-existing contracts and infrastruc				systems on	-board U.S.	Navy ships.	Support
B. Accomplishments/Planned Program	F	Y 2007		FY 2008		FY 200	9
AWS Maintenance	1	1 2007	0	112000	20,000	11200	18,863
RDT&E Articles (Quantity)			0		0		0
 This effort provides funding for operator and maintenance training, fielded assets. FY08 Planned Program: Provide In-service Engineering support to Aegis BMD: Weapor Provide operational and maintenance training for Aegis BMD sl Provide logistics support (including technical manuals, spares, a BMD: Weapon System and Vertical Launching System. Provide leadership and engineering/technical support to conduct Respond to Fleet issues related to Aegis BMD installations, BMD 	n System and hip crews. and Reliabili t Aegis Com	d Vertical La ty, Maintair abat Systems	aunching Sy ability, and S Assessmen	stem. Availability		C	
 FY09 Planned Program: Provide In-service Engineering support to Aegis BMD: Weapor Provide operational and maintenance training for Aegis BMD sl 	•	d Vertical La	aunching Sy	stem.			

Project: XX09 AEGIS BMD Sustainment

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E P	Project Justification	Date February 2008	
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (R-1 NOMENCI ACD&P) 0603892C Ba	LATURE Illistic Missile Defense Aegis	
 Provide logistics support (including technical manuals, spares, an BMD: Weapon System and Vertical Launching System. Provide leadership and engineering/technical support to conduct A Respond to Fleet issues related to Aegis BMD installations, BMD 	Aegis Combat Systems As	ssessments.	s and products) for Aegis
	FY 2007	FY 2008	FY 2009

SM-3 Missile Maintenance023,80023,638RDT&E Articles (Quantity)0000This effort provides funding for operator and maintenance training, engineering support, and logistics support and maintenance of Aegis BMD

FY08 Planned Program:

fielded assets.

- Provide In-service Engineering support to Aegis BMD: SM-3 missile.
- Provide operational and maintenance training for Aegis BMD ship crews.
- Provide logistics support (including technical manuals, spares, and Reliability, Maintainability, and Availability analysis and products) for Aegis BMD: SM-3 missile.
- Provide leadership and engineering/technical support to conduct Aegis Combat Systems Assessments.
- Respond to Fleet issues related to Aegis BMD operations and BMD events.

FY09 Planned Program:

- Provide In-service Engineering support to Aegis BMD: SM-3 missile.
- Provide operational and maintenance training for Aegis BMD ship crews.
- Provide logistics support (including technical manuals, spares, and Reliability, Maintainability, and Availability analysis and products) for Aegis BMD: SM-3 missile.
- Provide leadership and engineering/technical support to conduct Aegis Combat Systems Assessments.
- Respond to Fleet issues related to Aegis BMD operations and BMD events.

Project: XX09 AEGIS BMD Sustainment

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Missile Defense Agency (MDA)	D	DT & E Droiog	t Instification		Date Febr	uary 2008		
Missile Defense Agency (MDA) APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Develops			R-1 N	NOMENCLATU 892C Ballistic	JRE			
C. Other Program Funding Summary								
	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	Total Cost
PE 0207998C BRAC	0	103,219	159,938	61,931	8,724	0	0	333,812
PE 0603175C Ballistic Missile Defense Technology	183,849	108,423	118,718	115,234	120,152	127,012	130,358	903,746
PE 0603881C Ballistic Missile Defense Terminal Defense Segment	1,082,454	1,045,276	1,019,073	795,659	719,847	548,283	439,752	5,650,344
PE 0603882C Ballistic Missile Defense Midcourse Defense Segment	2,985,140	2,243,213	2,209,262	2,276,848	1,385,258	946,437	1,103,532	13,149,690
PE 0603883C Ballistic Missile Defense Boost Defense Segment	622,218	510,241	421,229	423,927	652,642	799,792	991,839	4,421,888
PE 0603884C Ballistic Missile Defense Sensors	514,989	586,121	1,221,143	1,184,280	1,099,649	1,077,632	823,583	6,507,397
PE 0603886C Ballistic Missile Defense System Interceptors	341,358	340,107	386,817	500,966	708,803	815,433	553,136	3,646,620
PE 0603888C Ballistic Missile Defense Test and Targets	584,615	621,861	673,691	672,976	690,938	708,991	719,209	4,672,281
PE 0603890C Ballistic Missile Defense System Core	425,889	413,934	432,262	482,947	605,219	561,947	571,498	3,493,696
PE 0603891C Special Programs - MDA	347,377	196,892	288,315	304,234	538,050	818,136	786,349	3,279,353
PE 0603893C Space Tracking & Surveillance System	311,402	231,528	242,441	266,509	560,130	735,727	938,191	3,285,928
PE 0603894C Multiple Kill Vehicle	133,615	229,943	354,455	488,294	649,632	708,582	879,385	3,443,906
PE 0603895C BMD System Space Program	0	16,552	29,771	41,638	56,199	133,915	157,548	435,623
PE 0603896C BMD C2BMC	249,179	447,616	289,277	287,194	270,762	256,767	259,159	2,059,954
PE 0603897C BMD Hercules	46,268	52,462	55,955	55,289	56,400	51,902	52,784	371,060
PE 0603898C BMD Joint Warfighter Support	49,833	49,394	69,982	73,997	77,205	80,168	81,948	482,527
PE 0603904C Missile Defense Integration & Operations Center	104,389	78,557	96,404	100,437	100,366	101,512	102,840	684,505
PE 0603905C BMD Concurrent Test and Operations	21,870	0	0	0	0	0	0	21,870
PE 0603906C Regarding Trench	0	1,986	2,978	4,964	4,963	8,933	8,933	32,757
PE 0603907C Sea Based X-Band Radar (SBX)	0	165,243	0	0	0	0	0	165,243
PE 0605502C Small Business Innovative Research - MDA	142,510	0	0	0	0	0	0	142,510
PE 0901585C Pentagon Reservation	15,527	6,019	19,734	5,040	5,284	5,370	5,456	62,430
PE 0901598C Management Headquarters - MDA	93,350	80,392	86,453	70,355	69,855	69,855	69,855	540,115

Project: XX09 AEGIS BMD Sustainment

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		Date
Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justifi	cation	February 2008
APPROPRIATION/BUDGET ACTIVITY	R-1 NOMENCLATURE	
RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	0603892C Ballistic Missil	e Defense Aegis

D. Acquisition Strategy

Support contracts for U.S. Navy ships, including those designated as BMD-ships, are designated and maintained by the U.S. Navy. This includes support for assets being deployed on U.S. Navy ships, such as the SM-3 missile.

Missil	e Defense Agenc	y (MDA) Exhibit R-3	RDT&E Projec	t Cost Analysis		Date Februa	rv 2008	
APPROPRIATION/BUDGET		y (MDA) Exhibit K-5	KD I GE I TOJEC		IOMENCLATUR		ly 2000	
RDT&E, DW/04 Advance		Development and P	rototypes (AC		892C Ballistic I		e Aegis	
I. Product Developmen	t Cost (\$ in '	Thousands)						
^					FY 2008		FY 2009	
	Contract	Performing	Total		Award/		Award/	
	Method	Activity &	PYs	FY 2008	Oblg	FY 2009	Oblg	Total
Cost Categories:	& Type	Location	Cost	Cost	Date	Cost	Date	Cost
Subtotal Product Development								
Remarks								
		• `						
II. Support Costs Cost	i (\$ in Thousa	inds)	F		EV 2000		EV. 2 000	
			T ()		FY 2008		FY 2009	
	Contract	Performing	Total	EX 2000	Award/	EX 2000	Award/	T ()
	Method	Activity &	PYs Cast	FY 2008	Oblg	FY 2009	Oblg	Total
Cost Categories: AWS Maintenance	& Type	Location	Cost	Cost	Date	Cost	Date	Cost
				450	10	250	10	000
Weapon System	MIPR	JHU/APL/MD	0	450	1Q	350	1Q	800
Weapon System	MIPR	CSCS (ATRC)/VA	0	1,975	N/A	1,775	1Q	3,750
Weapon System	MIPR	NSWC Corona/CA	0	1,060	N/A	860	1Q	1,920
		NSWC/DD/VA	0	795	N/A	695	1Q	1,490
Weapon System	MIPR						,	
Weapon System	MIPR	NSWC/PHD/CA	0	3,881	N/A	3,644	1Q	7,525
Weapon System		NSWC/PHD/CA Various/Various		3,881 839			,	
Weapon System Weapon System	MIPR Various	NSWC/PHD/CA Various/Various Lockheed Martin/	0	839	N/A N/A	3,644 639	1Q 1/2Q	7,525 1,478
Weapon System Weapon System Weapon System	MIPR	NSWC/PHD/CA Various/Various	0		N/A	3,644	1Q	7,525
Weapon System Weapon System Weapon System SM-3 Missile Maintenance	MIPR Various CPAF	NSWC/PHD/CA Various/Various Lockheed Martin/ NJ	0 0 0	839 11,000	N/A N/A N/A	3,644 639 10,900	1Q 1/2Q 1Q	7,525 1,478 21,900
Weapon System Weapon System Weapon System SM-3 Missile Maintenance Missile	MIPR Various CPAF CPAF	NSWC/PHD/CA Various/Various Lockheed Martin/ NJ Raytheon/AZ	0 0 0	839 11,000 14,000	N/A N/A N/A 1Q	3,644 639 10,900 14,038	1Q 1/2Q 1Q 1Q	7,525 1,478 21,900 28,038
Weapon System Weapon System Weapon System SM-3 Missile Maintenance Missile Missile	MIPR Various CPAF CPAF MIPR	NSWC/PHD/CA Various/Various Lockheed Martin/ NJ Raytheon/AZ NSWC/PHD/CA	0 0 0 0 0 0	839 11,000 14,000 2,500	N/A N/A N/A 1Q N/A	3,644 639 10,900 14,038 2,500	1Q 1/2Q 1Q 1Q 1Q N/A	7,525 1,478 21,900 28,038 5,000
Weapon System Weapon System Weapon System SM-3 Missile Maintenance Missile Missile	MIPR Various CPAF CPAF CPAF MIPR MIPR	NSWC/PHD/CA Various/Various Lockheed Martin/ NJ Raytheon/AZ NSWC/PHD/CA NSWC/DD/VA	0 0 0 0 0 0 0	839 11,000 14,000 2,500 2,500	N/A N/A N/A 1Q N/A N/A	3,644 639 10,900 14,038 2,500 2,500	1Q 1/2Q 1Q 1Q 1Q N/A N/A	7,525 1,478 21,900 28,038 5,000 5,000
Weapon System Weapon System Weapon System SM-3 Missile Maintenance Missile Missile Missile Missile	MIPR Various CPAF CPAF MIPR MIPR MIPR	NSWC/PHD/CA Various/Various Lockheed Martin/ NJ Raytheon/AZ NSWC/PHD/CA NSWC/DD/VA NSWC Corona/CA	0 0 0 0 0 0 0 0	839 11,000 14,000 2,500 2,500 2,000	N/A N/A N/A 1Q N/A N/A N/A	3,644 639 10,900 14,038 2,500 2,500 2,000	1Q 1/2Q 1Q 1Q N/A N/A N/A	7,525 1,478 21,900 28,038 5,000 5,000 4,000
Weapon System Weapon System Weapon System SM-3 Missile Maintenance Missile Missile Missile Missile Missile	MIPR Various CPAF CPAF MIPR MIPR MIPR MIPR	NSWC/PHD/CA Various/Various Lockheed Martin/ NJ Raytheon/AZ NSWC/PHD/CA NSWC/DD/VA NSWC Corona/CA NSWC IH/MD	0 0 0 0 0 0 0 0 0 0	839 11,000 14,000 2,500 2,500 2,000 1,000	N/A N/A N/A 1Q N/A N/A N/A N/A	3,644 639 10,900 14,038 2,500 2,500 2,000 1,000	1Q 1/2Q 1Q 1Q 1Q N/A N/A N/A N/A	7,525 1,478 21,900 28,038 5,000 5,000 4,000 2,000
Weapon System Weapon System Weapon System	MIPR Various CPAF CPAF MIPR MIPR MIPR	NSWC/PHD/CA Various/Various Lockheed Martin/ NJ Raytheon/AZ NSWC/PHD/CA NSWC/DD/VA NSWC Corona/CA	0 0 0 0 0 0 0 0	839 11,000 14,000 2,500 2,500 2,000	N/A N/A N/A 1Q N/A N/A N/A	3,644 639 10,900 14,038 2,500 2,500 2,000	1Q 1/2Q 1Q 1Q N/A N/A N/A	7,525 1,478 21,900 28,038 5,000 5,000 4,000

Project: XX09 AEGIS BMD Sustainment

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RDT&E, DW/04 Advance	d Component D	evelopment and	Prototypes (AC)	D&P) 060)3892C Ballistic	Missile Defens	se Aegis	
III. Test and Evaluation	Cost (\$ in T	'housands)						
					FY 2008		FY 2009	
	Contract	Performing	Total		Award/		Award/	
	Method	Activity &	PYs	FY 2008	Oblg	FY 2009	Oblg	Total
Cost Categories:	& Type	Location	Cost	Cost	Date	Cost	Date	Cost
Subtotal Test and Evaluation			<u> </u>					
Remarks								
IV. Management Servic	es Cost (\$ in	Thousands)	r			, , , , , , , , , , , , , , , , , , , ,		
					FY 2008		FY 2009	
	Contract	Performing	Total		Award/		Award/	
	Method	Activity &	PYs	FY 2008	Oblg	FY 2009	Oblg	Total
Cost Categories:	& Type	Location	Cost	Cost	Date	Cost	Date	Cost
Subtotal Management Services								
Remarks								
			0	43,800		42,501		86,301
Project Total Cost			0	45,800		42,501		80,301
Project Total Cost Remarks								

Missile Defense Agency (MDA) Exhibit R-2A RDT&E	Project Justif	ication		Date Februar	y 2008		
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes	(ACD&P)		NCLATURE Ballistic Mis	ssile Defense	Aegis		
COST (\$ in Thousands)	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
0918 Sea-Based Terminal Block 2008	28,000	0	0	0	0	0	0
RDT&E Articles Qty	0	0	0	0	0	0	0

Note: The content previously planned in project 0918 for FY 08-13 has been moved to project BX18, in accordance with the Missile Defense Agency revised Block structure.

A. Mission Description and Budget Item Justification

The Near-Term Sea-Based Terminal (SBT) project in Block 2008 supports the BMDS mission of intercepting ballistic missiles in all regions, in all phases, and of all ranges, as follows:

- In all regions: provide enhanced engagement capability.
- In all phases of ballistic missile flight: engagement capability against missile threats in the terminal flight stage.
- All ranges: Near-Term SBT provides capability against SRBM and limited PRBM targets.

Aegis BMD supported LDC by providing Long Range Surveillance and Track (LRS&T) data to other elements of the BMDS. Aegis BMD further improved both national and international security with its ability to launch Standard Missile 3 Block IA (SM-3 Block IA) missiles based upon data received via the Tactical Digital Information Link (TADIL) network in the final Block 2006 configuration, BMD 3.6.

In Block 2008, Aegis BMD will provide a follow-on capability to BMD 3.6, in response to recent Real World Events. Near-Term SBT (BMD 3.6.1) will provide for an integrated Sea Based Terminal capability against a finite set of Short Range Ballistic Missiles. BMD 3.6.1 will incorporate a fuze modified SM-2 Block IV missile provided by a separate OPNAV sponsored effort and will build on BMD 3.6 to provide a terminal phase capability. The BMD 3.6.1 will continue efforts to refine Aegis Launch on AN/TPY-2 and will bridge the gap between the operational deployment of BMD 3.6 and BMD 4.0.1.

Aegis BMD will field a near-term Sea-Based Terminal capability beginning in FY 2009. In addition to the near-term SBT capability, Aegis BMD will perform various upgrades to BMD 3.6 in BMD 3.6.1; updates will include early integration efforts for Aegis BMD launch on AN/TPY-2 capability.

Missile Defense Agency (MDA)	Fyhihit P_ 2A P	DT&F Project	Instification		Date Febr	uary 2008		
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Develop			R-1 N	NOMENCLATI 8892C Ballisti	URE	•		
B. Accomplishments/Planned Program								
			FY 2007		FY 200	8	FY 2	009
Weapon System				21,000		0		0
RDT&E Articles (Quantity)				0		0		0
 FY07 Accomplishments: Conducted System Readiness Review and I Completed threat analyses and threat databa Completed memory and timing studies for t Began Element Test and Evaluation (ETE) and Evaluation (ETE) 	se modificational	ons for the seleprocessing rec	ected threat quirements.	t set.	contractor fo	or key decisio	on points.	
			FY 2007		FY 200	8	FY 2	009
Test & Evaluation				7,000		0		0
RDT&E Articles (Quantity)				0		0		0
 Test and Evaluation funding supports the analyse FY07 Accomplishments: Began procurement of FMA target for Near C. Other Program Funding Summary 			Ĩ	argn.				
	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	Total Cost
PE 0207998C BRAC	0	103,219	159,938	61,931	8,724	0	0	333,812
PE 0603175C Ballistic Missile Defense Technology	183,849	108,423	118,718	115,234	120,152	127,012	130,358	903,746
PE 0603881C Ballistic Missile Defense Terminal Defense Segment	1,082,454	1,045,276	1,019,073	795,659	719,847	548,283	439,752	5,650,344
PE 0603882C Ballistic Missile Defense Midcourse Defense Segment	2,985,140	2,243,213	2,209,262	2,276,848	1,385,258	946,437	1,103,532	13,149,690
PE 0603883C Ballistic Missile Defense Boost Defense Segment	622,218	510,241	421,229	423,927	652,642	799,792	991,839	4,421,888

Project: 0918 Sea-Based Terminal Block 2008

Missile Defense Agency (MDA)	Exhibit R-2A F	RDT&E Projec	et Justificatie)n	Date Feb	ruary 2008		
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Developr			R-1	1 NOMENCLAT 03892C Ballist i		ense Aegis		
RD1 & D, D W/04 Auvanceu Component Develop						clise Acgis		Total
	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	Cost
PE 0603884C Ballistic Missile Defense Sensors	514,989	586,121	1,221,143	3 1,184,280	1,099,649	1,077,632	823,583	6,507,397
PE 0603886C Ballistic Missile Defense System Interceptors	341,358	340,107	386,817	7 500,966	708,803	815,433	553,136	3,646,620
PE 0603888C Ballistic Missile Defense Test and Targets	584,615	621,861	673,69	1 672,976	690,938	708,991	719,209	4,672,281
PE 0603890C Ballistic Missile Defense System Core	425,889	413,934	432,262	2 482,947	605,219	561,947	571,498	3,493,696
PE 0603891C Special Programs - MDA	347,377	196,892	288,31	5 304,234	538,050	818,136	786,349	3,279,353
PE 0603893C Space Tracking & Surveillance System	311,402	231,528	242,44	1 266,509	560,130	735,727	938,191	3,285,928
PE 0603894C Multiple Kill Vehicle	133,615	229,943	354,455	5 488,294	649,632	708,582	879,385	3,443,906
PE 0603895C BMD System Space Program	0	16,552	29,77	1 41,638	56,199	133,915	157,548	435,623
PE 0603896C BMD C2BMC	249,179	447,616	289,27	7 287,194	270,762	256,767	259,159	2,059,954
PE 0603897C BMD Hercules	46,268	52,462	55,95	5 55,289	56,400	51,902	52,784	371,060
PE 0603898C BMD Joint Warfighter Support	49,833	49,394	69,982	2 73,997	77,205	80,168	81,948	482,527
PE 0603904C Missile Defense Integration & Operations Center	104,389	78,557	96,404	4 100,437	100,366	101,512	102,840	684,505
PE 0603905C BMD Concurrent Test and Operations	21,870	0	(0 0	0	0	0	21,870
PE 0603906C Regarding Trench	0	1,986	2,978	8 4,964	4,963	8,933	8,933	32,757
PE 0603907C Sea Based X-Band Radar (SBX)	0	165,243	(0 0	0	0	0	165,243
PE 0605502C Small Business Innovative Research - MDA	142,510	0	(0 0	0	0	0	142,510
PE 0901585C Pentagon Reservation	15,527	6,019	19,734	4 5,040	5,284	5,370	5,456	62,430
PE 0901598C Management Headquarters - MDA	93,350	80,392	86,453	3 70,355	69,855	69,855	69,855	540,115

D. Acquisition Strategy

The Aegis BMD element acquisition approach supports evolutionary development, continuously building upon demonstrated capabilities to advance overall BMDS capability. After considering all the technical and management aspects of the program and to meet the requirements presented by an evolving ballistic missile threat, the Aegis BMD program has awarded sole source contract to Lockheed Martin to continue development of the Aegis BMD Weapon System. The U.S. Navy is performing modifications to the 100 SM-2 Block IV missiles.

	CTIVITY Component]	Development and P	rototypes (ACI		NOMENCLATUR 892C Ballistic		e Aegis	
I. Product Development	Cost (\$ in 7	Thousands)						
L					FY 2008		FY 2009	
	Contract	Performing	Total		Award/		Award/	
	Method	Activity &	PYs	FY 2008	Oblg	FY 2009	Oblg	Total
Cost Categories:	& Type	Location	Cost	Cost	Date	Cost	Date	Cost
Weapon System								
		Lockheed Martin/						
	CPAF	NJ	13,500	0	N/A	0	N/A	13,500
	MIPR	NSWCDD/VA	500	0	N/A	0	N/A	500
	CPFF	JHU/APL/MD	500	0	N/A	0	N/A	500
	Various	Various	500	0	N/A	0	N/A	500
Subtotal Product Development			15,000	0		0		15000
II. Support Costs Cost (Total		FY 2008		FY 2009	
II. Support Costs Cost (S	Contract	Performing	Total PYs	FY 2008	Award/	FY 2009	Award/	Total
			Total PYs Cost	FY 2008 Cost		FY 2009 Cost		Total Cost
Cost Categories:	Contract Method	Performing Activity &	PYs		Award/ Oblg		Award/ Oblg	
Cost Categories: Subtotal Support Costs	Contract Method	Performing Activity &	PYs		Award/ Oblg		Award/ Oblg	
Cost Categories: Subtotal Support Costs Remarks	Contract Method & Type	Performing Activity & Location	PYs		Award/ Oblg		Award/ Oblg	
Cost Categories: Subtotal Support Costs Remarks	Contract Method & Type	Performing Activity & Location	PYs		Award/ Oblg		Award/ Oblg	
Cost Categories: Subtotal Support Costs Remarks	Contract Method & Type	Performing Activity & Location Thousands) Performing	PYs	Cost	Award/ Oblg Date		Award/ Oblg Date FY 2009 Award/	
Cost Categories: Subtotal Support Costs Remarks III. Test and Evaluation	Contract Method & Type Cost (\$ in 7 Contract Method	Performing Activity & Location Fhousands) Performing Activity &	PYs Cost Total PYs	Cost FY 2008	Award/ Oblg Date FY 2008 Award/ Oblg	Cost FY 2009	Award/ Oblg Date FY 2009 Award/ Oblg	Cost
Cost Categories: Subtotal Support Costs Remarks III. Test and Evaluation Cost Categories:	Contract Method & Type Cost (\$ in 7 Contract	Performing Activity & Location Thousands) Performing	PYs Cost Total	Cost	Award/ Oblg Date FY 2008 Award/	Cost	Award/ Oblg Date FY 2009 Award/	Cost
Cost Categories: Subtotal Support Costs Remarks III. Test and Evaluation Cost Categories: Test & Evaluation	Contract Method & Type Cost (\$ in 7 Contract Method	Performing Activity & Location Fhousands) Performing Activity &	PYs Cost Total PYs	Cost FY 2008	Award/ Oblg Date FY 2008 Award/ Oblg	Cost FY 2009	Award/ Oblg Date FY 2009 Award/ Oblg	Cost
II. Support Costs Cost (S Cost Categories: Subtotal Support Costs Remarks III. Test and Evaluation Cost Categories: Test & Evaluation Subtotal Test and Evaluation Remarks	Contract Method & Type Cost (\$ in 7 Contract Method	Performing Activity & Location Fhousands) Performing Activity &	PYs Cost Total PYs	Cost FY 2008	Award/ Oblg Date FY 2008 Award/ Oblg	Cost FY 2009	Award/ Oblg Date FY 2009 Award/ Oblg	Cost

	Defense Agency	(MDA) Exhibit R-3	RDT&E Projec	t Cost Analysis		Date Februa	ary 2008	
APPROPRIATION/BUDGET A				R-1 I	NOMENCLATU			
RDT&E, DW/04 Advanced	-	-	Prototypes (AC	D&P) 0603	3892C Ballistic	e Missile Defens	se Aegis	
IV. Management Service	s Cost (\$ in	Thousands)						
	Contract Method	Performing Activity &	Total PYs	FY 2008	FY 2008 Award/ Oblg	FY 2009	FY 2009 Award/ Oblg	Total
Cost Categories:	& Type	Location	Cost	Cost	Date	Cost	Date	Cost
Subtotal Management Services								
Remarks								
Project Total Cost			15,000	0		0		15,000
Remarks			- ,	-		-		- ,

				Date			
Missile Defense Agency (MDA) Exhibit R-2A R	DT&E Project Justi	fication		Februar	y 2008		
APPROPRIATION/BUDGET ACTIVITY		R-1 NOME	NCLATURE				
RDT&E, DW/04 Advanced Component Development and Prot	otypes (ACD&P)	0603892C	Ballistic Mis	ssile Defense	Aegis		
COST (\$ in Thousands)	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
BX18 Sea-Based Terminal BMD Block 2.0	0	71,414	19,858	3,098	1,191	0	0
RDT&E Articles Qty	0	3	6	6	5	0	0
	. .						

Note: This project was funded in FY07 under project 0918, Sea-Based Terminal Block 2008.

RDT&E Articles: FY08 - Delivery of the BMD 3.6.1 computer program (1), one (1) BMD 3.6.1 CG, one (1) FMA target. FY09 - One (1) BMD 3.6.1 CG, five (5) BMD 3.6.1 DDGs. FY10 - Six (6) BMD 3.6.1 DDGs. FY11 - One (1) BMD 3.6.1 CG, four (4) BMD 3.6.1 DDGs.

A. Mission Description and Budget Item Justification

The Near-Term Sea-Based Terminal (SBT) project supports the BMDS mission of intercepting ballistic missiles in all regions, in all phases, and of all ranges, as follows:

- In all regions: provide enhanced engagement capability.
- In all phases of ballistic missile flight: engagement capability against missile threats in the terminal flight stage.
- All ranges: Near-Term SBT provides capability against SRBM and limited IRBM targets.

Aegis BMD supported LDC by providing Long Range Surveillance and Track (LRS&T) data to other elements of the BMDS. Aegis BMD further improved both national and international security with its ability to launch Standard Missile-3 Block IA (SM-3 Block IA) missiles based upon data received via the Tactical Digital Information Link (TADIL) network in the final configuration, BMD 3.6.

Aegis BMD will provide a follow-on capability to BMD 3.6, in response to recent Real World Events. Near-Term SBT (BMD 3.6.1) will provide for an integrated Sea Based Terminal capability against a finite set of Short Range Ballistic Missiles. BMD 3.6.1 will incorporate a fuze modified SM-2 Block IV missile provided by a separate OPNAV sponsored effort and will build on BMD 3.6 to provide a terminal phase capability. The BMD 3.6.1 will continue efforts to refine Aegis Launch on AN/TPY-2 and will bridge the gap between the operational deployment of BMD 3.6 and BMD 4.0.1.

Aegis BMD will field a near-term Sea-Based Terminal capability beginning in FY 2009. In addition to the near-term SBT capability, Aegis BMD will perform various upgrades to BMD 3.6 in BMD 3.6.1; updates will include early integration efforts for Aegis BMD launch on AN/TPY-2 capability.

Missile Defense Agency (MDA) Exhibit R-2A RDT&E H	Project Justif	ication	Date February 2008	
APPROPRIATION/BUDGET ACTIVITY	i ojeci Juštii	R-1 NOMENCLATU		
RDT&E , DW/04 Advanced Component Development and Prototypes ((ACD&P)		Missile Defense Aegis	
B. Accomplishments/Planned Program				
	FY	2007	FY 2008	FY 2009
Weapon System Development		0	37,350	6,469
RDT&E Articles (Quantity) In this project, Weapon System funding will focus on the developme		0	1	0
 FY08 Planned Program: RDT&E Articles: BMD 3.6.1 Computer Pr Conduct the Test Readiness Review (TRR) for BMD 3.6.1, to en Complete ETE and MEIT. Conduct Engineering Assessment (EA) for BMD 3.6.1. Participate in At Sea Flight Test Mission leading to certification if FY09 Planned Program: Certify BMD 3.6.1 for installation and operational use on Aegis I 	sure modifi in FY 2009		-Based Terminal requireme	ents.
	FY	2007	FY 2008	FY 2009
Test & Evaluation		0	21,100	9,531
PDT&F Articles (Ouentity)				
RDT&E Articles (Quantity) Test and Evaluation funding supports the analysis and execution of the security of	he FTM-14	0 and FTM-15 campa	0 jgns.	0

Missile Defense Agency (MDA)	Exhibit R-2A R		lustificatior			Date February 2008				
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Develop			R-1	R-1 NOMENCLATURE 0603892C Ballistic Missile Defense Aegis						
FY09 Planned Program:			*			-				
• Participate in FTM-15 (full write up is inclu	ided in projec	t BX09, Aegis	BMD Blo	ock 2.0).						
	1 5			,						
			FY 2007		FY 200)8	FY 2	2009		
BMD 3.6.1 Deployment				0		650		3,85		
RDT&E Articles (Quantity)				0		1				
This efforts accounts for the installation of the	BMD 3.6.1 co	mputer program	m on Aeg	is Cruisers ar	d Destroyers	5.				
FY09 Planned Program: RDT&E Articles: InstInstall BMD 3.6.1 on one (1) Cruiser and fi			ne (1) Crui	ser and five	(5) Destroyer	8.				
			FY 2007		FY 200)8	FY 2	2009		
Targets				0		12,314				
RDT&E Articles (Quantity)				0		1				
 This effort provides the Missile Defense Agence associated launch services. FY08 Planned Program: RDT&E Articles: 1 F. Provide an FMA SRMB target in support of The launch of this target is from the Mobile C. Other Program Funding Summary 	MA Target f FTM-14	C	t hardward	e, target rang	e support, log	gistics suppoi	rt, target integ	gration, and		
C. Other Program Funding Summary								Total		
	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	Cost		
PE 0207998C BRAC	0	103,219	159,938	61,931	8,724	0	0	333,812		
PE 0603175C Ballistic Missile Defense Technology	183,849	108,423	118,718	115,234	120,152	127,012	130,358	903,746		
PE 0603881C Ballistic Missile Defense Terminal Defense Segment	1,082,454	1,045,276	1,019,073	795,659	719,847	548,283	439,752	5,650,344		
Project: BX18 Sea-Based Terminal BMD Block 2.0						Μ	IDA Exhibit R-2A	A (PE 0603892)		

Missile Defense Agency (MDA)	Exhibit R-2A R	DT&E Projec	t Justificat	on	Date Feb	ruary 2008		
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Developm		¥	R	1 NOMENCLAT	URE	v		
	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	Total Cost
PE 0603882C Ballistic Missile Defense Midcourse Defense Segment	2,985,140	2,243,213	2,209,2	2 2,276,848	1,385,258	946,437	1,103,532	13,149,690
PE 0603883C Ballistic Missile Defense Boost Defense Segment	622,218	510,241	421,22	9 423,927	652,642	799,792	991,839	4,421,888
PE 0603884C Ballistic Missile Defense Sensors	514,989	586,121	1,221,14		1,099,649	1,077,632	823,583	6,507,397
PE 0603886C Ballistic Missile Defense System Interceptors	341,358	340,107	386,8		708,803	815,433	553,136	3,646,620
PE 0603888C Ballistic Missile Defense Test and Targets	584,615	621,861	673,6		690,938	708,991	719,209	4,672,281
PE 0603890C Ballistic Missile Defense System Core	425,889	413,934	432,2		605,219	561,947	571,498	3,493,696
PE 0603891C Special Programs - MDA	347,377	196,892	288,3		538,050	818,136	786,349	3,279,353
PE 0603893C Space Tracking & Surveillance System	311,402	231,528	242,44	1 266,509	560,130	735,727	938,191	3,285,928
PE 0603894C Multiple Kill Vehicle	133,615	229,943	354,4	488,294	649,632	708,582	879,385	3,443,906
PE 0603895C BMD System Space Program	0	16,552	29,7	41,638	56,199	133,915	157,548	435,623
PE 0603896C BMD C2BMC	249,179	447,616	289,2	287,194	270,762	256,767	259,159	2,059,954
PE 0603897C BMD Hercules	46,268	52,462	55,9	5 55,289	56,400	51,902	52,784	371,060
PE 0603898C BMD Joint Warfighter Support	49,833	49,394	69,9	2 73,997	77,205	80,168	81,948	482,527
PE 0603904C Missile Defense Integration & Operations Center	104,389	78,557	96,4	100,437	100,366	101,512	102,840	684,505
PE 0603905C BMD Concurrent Test and Operations	21,870	0		0 0	0	0	0	21,870
PE 0603906C Regarding Trench	0	1,986	2,9	4,964	4,963	8,933	8,933	32,757
PE 0603907C Sea Based X-Band Radar (SBX)	0	165,243		0 0	0	0	0	165,243
PE 0605502C Small Business Innovative Research - MDA	142,510	0		0 0	0	0	0	142,510
PE 0901585C Pentagon Reservation	15,527	6,019	19,73	5,040	5,284	5,370	5,456	62,430
PE 0901598C Management Headquarters - MDA	93,350	80,392	86,4	70,355	69,855	69,855	69,855	540,115

D. Acquisition Strategy

The Aegis BMD element acquisition approach supports evolutionary development, continuously building upon demonstrated capabilities to advance overall BMDS capability. After considering all technical and management aspects of the program and to meet the requirements presented by an evolving ballistic missile threat, the Aegis BMD program has awarded a sole source contract to Lockheed Martin to continue development of the Aegis BMD Weapon System. The U.S. Navy is performing modifications to the 100 SM-2 Block IV missiles.

Missile I	Defense Agenc	y (MDA) Exhibit R-3	RDT&E Proje	ct Cost Analysis	S	Date Februa	ry 2008	
APPROPRIATION/BUDGET A RDT&E, DW/04 Advanced	ACTIVITY	v		R-1	NOMENCLATU 3892C Ballistic	RE	·	
I. Product Development	Cost (\$ in 7	Fhousands)						
	Contract Method	Performing Activity &	Total PYs	FY 2008	FY 2008 Award/ Oblg	FY 2009	FY 2009 Award/ Oblg	Total
Cost Categories:	& Type	Location	Cost	Cost	Date	Cost	Date	Cost
Weapon System Development	CPAF	Lockheed Martin/	0	29,500	1/2Q	5,225	1/2Q	34,725
	MIPR	NSWCDD/VA	0	4,650	1/4Q	0	N/A	4,650
	CPFF	JHU/APL/MD	0	930	1Q	1,244	1Q	2,174
	Various	Various	0	400	1/2Q	0	N/A	400
	FPI	MDA/VA	0	1,170	1/4Q	0	N/A	1,170
	MIPR	Aegis Techrep/NJ	0	700	1Q	0	4Q	700
BMD 3.6.1 Deployment								
	CPAF	Lockheed Martin/ NJ	0	650	N/A	3,858	1/3Q	4,508
Subtotal Product Development			0	38,000		10,327		48327

Remarks

II. Support Costs Cost (\$ in Thousands)

					FY 2008		FY 2009	
	Contract	Performing	Total		Award/		Award/	
	Method	Activity &	PYs	FY 2008	Oblg	FY 2009	Oblg	Total
Cost Categories:	& Type	Location	Cost	Cost	Date	Cost	Date	Cost
Subtotal Support Costs								
		•	•	•				

Remarks

Missile I	Defense Agency	v (MDA) Exhibit R-3	RDT&E Projec	t Cost Analysis		Date Februar	ry 2008	
APPROPRIATION/BUDGET A	ACTIVITY			R-1 N	OMENCLATUR		•	
RDT&E, DW/04 Advanced	Component J	Development and F	Prototypes (AC	D&P) 06038	892C Ballistic I	Missile Defense	e Aegis	
III. Test and Evaluation	Cost (\$ in 7	Thousands)						
					FY 2008		FY 2009	
	Contract	Performing	Total		Award/		Award/	
	Method	Activity &	PYs	FY 2008	Oblg	FY 2009	Oblg	Total
Cost Categories:	& Type	Location	Cost	Cost	Date	Cost	Date	Cost
Test & Evaluation								
	MIPR	PMRF/HI	0	2,206	1Q	627	1Q	2,833
	MIPR	NSWC/DD/VA	0	3,200	1Q	1,280	1Q	4,480
	CPFF	JHU/APL/MD	0	5,597	1Q	1,880	1Q	7,477
	MIPR	NSEC/PHD/CA	0	2,444	1Q	1,258	1Q	3,702
	CPAF	Lock Martin/ NJ	0	5,888	1Q	3,286	1Q	9,174
	Various	Various	0	500	1Q	500	1Q	1,000
	MIPR	MDA/VA	0	1,265	1Q	700	1Q	1,965
Targets								
	MIPR	MDA/VA	0	12,314	N/A	0	N/A	12,314
Subtotal Test and Evaluation Remarks			0	33,414		9,531		42945
IV. Management Services	Contract Method	Thousands) Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award/ Oblg Date	FY 2009 Cost	FY 2009 Award/ Oblg Date	Total Cost
IV. Management Services Cost Categories: Subtotal Management Services	Contract	Performing Activity &			Award/ Oblg		Award/ Oblg	
Cost Categories:	Contract Method	Performing Activity &	PYs		Award/ Oblg		Award/ Oblg	
Cost Categories: Subtotal Management Services	Contract Method	Performing Activity &	PYs		Award/ Oblg		Award/ Oblg	

Missile Defense A	genc	ey (M	IDA)) Exl	hibit	: R- 4	l Sch	edul	le Pr	ofile								Da Fe		ary	200	8						
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component De	evelo	opm	ent :	and	Pro	toty	pes	(AC	D&	P)			ОМІ 392С					le De	efen	se A	egi	s						
Fiscal Year		20	07			20	008			20)09			20)10			20)11			2	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
Development Milestones																												
BMD 3.6.1 Engineering Assessment (EA)						Δ																						
BMD 3.6.1 Certification									Δ																			
Flight Tests																												
FTM-14							Δ																					
FTM-15										Δ																		\square
Fielding Deliveries/Ships																												
BMD 3.6.1 Ship Installations						₽																						
										Ĺ	ege			<u> </u>													<u> </u>	
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			Elem	nent T	est (o	comp	olete)					<	>	Elen	nent T	est (p	olanne	ed)	-									
					evel T e Activ		comp	lete)							em Le nned A			blanne	ed)			-						
			·									·		·														

Missile Defense	Agency (MDA) Exhi	bit R-4A Schedul	e Detail		Date February 20	08				
APPROPRIATION/BUDGET ACTIVITY		R-1 NC	R-1 NOMENCLATURE							
RDT&E, DW/04 Advanced Component	Development and I	0&P) 060389	92C Ballistic Mis	sile Defense Aeg	gis					
Schedule Profile	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013			
Development Milestones										
BMD 3.6.1 Engineering Assessment (EA)		2Q								
BMD 3.6.1 Certification			1Q							
Flight Tests										
FTM-14		3Q								
FTM-15			2Q							
Fielding Deliveries/Ships										
BMD 3.6.1 Ship Installations		2Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q					

				Date	• • • • •		
Missile Defense Agency (MDA) Exhibit R-2A RDT&E	Project Justi	fication		Februar	y 2008		
APPROPRIATION/BUDGET ACTIVITY		R-1 NOME	NCLATURE				
RDT&E, DW/04 Advanced Component Development and Prototypes	s (ACD&P)	0603892C	Ballistic Mis	ssile Defense	Aegis		
COST (\$ in Thousands)	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
WX18 Far Term Sea Based Terminal Capability Development	0	13,000	38,909	49,645	44,665	163,770	176,669
RDT&E Articles Qty	0	0	0	0	0	0	0
		•			1		

Note: In the FY 2008 President's Budget, the Far-Term Sea Based Terminal program was shown in project R218 in this PE (0603892C); funding began in FY08 for this effort.

A. Mission Description and Budget Item Justification

The Far-Term Sea Based Terminal (FTSBT) project (BMD 5.X), is an Aegis BMD future capability development, with a projected fielding date of 2014. FTSBT will expand the Near-Term Sea Based Terminal capability developed and delivered as baseline BMD 3.6.1 in Block 2.0, providing a more capable and robust SBT capability and expanding the battlespace to enable the system against a greater range of targets. BMD 5.X ill be built with the Aegis BMD Weapon System in OPen Architecture. Current planning certifies tactical capability in FY14, for inclusion with the U.S. Navy's spiral 6 upgrades.

The weapon system development and deployment effort will be sole source to Lockheed Martin. It is anticipated that the missile development work will be competed among multiple vendors.

B. Accomplishments/Planned Program

	FY 2007	FY 2008	FY 2009
Weapon System Development	0	13,000	28,981
RDT&E Articles (Quantity)	0	0	0

This projects provides funding for the development of the weapon system position of the FTSBT effort within the U.S. Navy's Open Architecture system.

FY08 Planned Program:

• Begin SBT weapon system requirements definition; perform specifications analysis.

FY09 Planned Program:

- Continue SBT weapon system requirements definition and specifications analysis.
- Begin system engineering of weapon system functionality.

Project: WX18 Far Term Sea Based Terminal Capability Development

		UNCLE				Date			
Missile Defense Agency (MDA)	Exhibit R-2A F	RDT&E Projec	t Justific	ation		Feb	ruary 2008		
APPROPRIATION/BUDGET ACTIVITY				R-1 N	IOMENCLAT	URE			
RDT&E, DW/04 Advanced Component Develop	ment and Prot	totypes (ACD	&P)	0603	892C Ballisti	ic Missile Def	ense Aegis		
			FY 2	2007		FY 200	8	FY 2	009
Missile Development					0		0		9,928
RDT&E Articles (Quantity)					0		0		0
This project funds missile development efforts	to support FT	SBT efforts			ļ				
rins project runds missile de terophient errorts									
FY09 Planned Program:									
 Begin missile downselect process. 									
• Begin missile downselect process.									
C. Other Program Funding Summary									
C. Other Program Funding Summary	1 1					l		I	Total
	FY 2007	FY 2008	FY 200	09	FY 2010	FY 2011	FY 2012	FY 2013	Cost
PE 0207998C BRAC	0	103,219		9,938	61,931	8,724	0	0	333,812
PE 0603175C Ballistic Missile Defense Technology	183,849	108,423		3,718	115,234	120,152	127,012	130,358	903,746
PE 0603881C Ballistic Missile Defense Terminal Defense			-	,	- , -	- , -			,
Segment	1,082,454	1,045,276	1,019	,073	795,659	719,847	548,283	439,752	5,650,344
PE 0603882C Ballistic Missile Defense Midcourse Defense									
Segment	2,985,140	2,243,213	2,209	,262	2,276,848	1,385,258	946,437	1,103,532	13,149,690
PE 0603883C Ballistic Missile Defense Boost Defense	(22.218	510 241	401	220	402.007	(52 (42	700 702	001.820	4 401 000
Segment	622,218	510,241		,229	423,927	652,642	799,792	991,839	4,421,888
PE 0603884C Ballistic Missile Defense Sensors	514,989	586,121	1,221		1,184,280	1,099,649	1,077,632	823,583	6,507,397
PE 0603886C Ballistic Missile Defense System Interceptors	341,358	340,107		6,817	500,966	708,803	815,433	553,136	3,646,620
PE 0603888C Ballistic Missile Defense Test and Targets	584,615	621,861		,691	672,976	690,938	708,991	719,209	4,672,281
PE 0603890C Ballistic Missile Defense System Core	425,889	413,934		2,262	482,947	605,219	561,947	571,498	3,493,696
PE 0603891C Special Programs - MDA PE 0603893C Space Tracking & Surveillance System	347,377	196,892		3,315	304,234	538,050	818,136	786,349	3,279,353
PE 0603893C Space Tracking & Surveillance System PE 0603894C Multiple Kill Vehicle	311,402	231,528 229,943		2,441 ,455	266,509 488,294	560,130 649,632	735,727 708,582	938,191 879,385	3,285,928
PE 0603894C Multiple Kill Venicle PE 0603895C BMD System Space Program	133,615 0	16,552		,455 9,771	488,294 41,638	649,632 56,199	133,915	879,385 157,548	3,443,906 435,623
PE 0603895C BMD System Space Program PE 0603896C BMD C2BMC	249.179				287,194	270,762	256,767	259,159	
PE 0603896C BMD C2BMC PE 0603897C BMD Hercules	46,268	447,616 52,462		9,277 5,955	55,289	270,762 56,400	256,767	259,159 52,784	2,059,954 371,060
PE 0603897C BMD Hercules PE 0603898C BMD Joint Warfighter Support	40,208	49,394		955 9,982	73,997	77,205	80,168	52,784 81,948	482,527
PE 0603898C BMD Joint Warngner Support PE 0603904C Missile Defense Integration & Operations	49,033	49,394	09	,982	15,991	77,205	80,108	01,948	402,327
Center	104,389	78,557	96	5,404	100,437	100,366	101,512	102,840	684,505
	101,009	10,001	70	,	100,107	100,500	101,012	102,010	001,000

Project: WX18 Far Term Sea Based Terminal Capability Development

Missile Defense Agency (MDA)	ation		Date Feb	ruary 2008					
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Developm		R-1 NOMENCLATURE 0603892C Ballistic Missile Defense Aegis							
									Total
	FY 2007	FY 2008	FY 200)9	FY 2010	FY 2011	FY 2012	FY 2013	Cost
PE 0603905C BMD Concurrent Test and Operations	21,870	0		0	0	0	0	0	21,870
PE 0603906C Regarding Trench	0	1,986	2,	,978	4,964	4,963	8,933	8,933	32,757
PE 0603907C Sea Based X-Band Radar (SBX)	0	165,243		0	0	0	0	0	165,243
PE 0605502C Small Business Innovative Research - MDA	142,510	0		0	0	0	0	0	142,510
PE 0901585C Pentagon Reservation	15,527	6,019	19,	,734	5,040	5,284	5,370	5,456	62,430
PE 0901598C Management Headquarters - MDA	93,350	80,392	86,	,453	70,355	69,855	69,855	69,855	540,115

D. Acquisition Strategy

MDA/D directed that Aegis BMD begin the acquisition planning for the Far-Term Sea Based Terminal program. The AWS development and deployment effort will be sole source to Lockheed Martin. It is anticipated that the missile development work will likely be competed among multiple vendors.

I. Product Development	Cost (\$ in 7	Thousands)						
*					FY 2008		FY 2009	
	Contract	Performing	Total		Award/		Award/	
	Method	Activity &	PYs	FY 2008	Oblg	FY 2009	Oblg	Total
Cost Categories:	& Type	Location	Cost	Cost	Date	Cost	Date	Cost
Weapon System Development								
		Lockheed Martin/						
	C/CPAF	NJ	0	10,220	1Q	23,981	1Q	34,201
	C/CPFF	JHU/APL/MD	0	1,000	1Q	2,000	1Q	3,000
	MIPR	NSWC/DD/VA	0	1,000	1Q	1,260	1Q	2,260
	MIPR	MDA/VA	0	780	1Q	1,740	1Q	2,520
Missile Development								
		Raytheon/						
	CPAF	Various	0	0	N/A	6,940	N/A	6,940
	MIPR	NSWC DD /VA	0	0	N/A	994	N/A	994
	CPAF	JHU/APL/MD	0	0	N/A	1,394	N/A	1,394
	MIPR	MDA/VA	0	0	N/A	600	N/A	600
Subtotal Product Development			0	13,000		38,909		51909
-								
Remarks	Contract	Performing	Total	EX 2000	FY 2008 Award/	EN 2000	FY 2009 Award/	
Remarks II. Support Costs Cost (Contract Method	Performing Activity &	PYs	FY 2008	Award/ Oblg	FY 2009	Award/ Oblg	Total
Remarks	Contract	Performing		FY 2008 Cost	Award/	FY 2009 Cost	Award/	Total Cost

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		(MDA) Exhibit R-3	3 RDT&E Projec				ary 2008	
APPROPRIATION/BUDGET					NOMENCLATU			
RDT&E, DW/04 Advance	-	-	Prototypes (AC	D&P) 060	3892C Ballistic	Missile Defens	se Aegis	
III. Test and Evaluation	<u>Cost (\$ in T</u>	'housands)	· · · · · ·		1	t	· · · · · ·	
			T 1		FY 2008		FY 2009	
	Contract Method	Performing Activity &	Total PYs	EV 2009	Award/	EX 2000	Award/ Oblg	T-4-1
Cost Categories:	& Type	Location	Cost	FY 2008 Cost	Oblg Date	FY 2009 Cost	Date	Total Cost
Subtotal Test and Evaluation		Location	Cost	Cost	Date	Cost	Date	Cost
Remarks								
Xemai KS								
	O (†)							
IV. Management Servic	es Cost (\$ in	Thousands)			FY 2008	Γ	FY 2009	
	Contract	Performing	Total		Award/		Award/	
	Method	Activity &	PYs	FY 2008	Oblg	FY 2009	Oblg	Total
Cost Categories:	& Type	Location	Cost	Cost	Date	Cost	Date	Cost
Subtotal Management Services		Location	0051	0050	Dute	0050	Dute	Cost
Remarks								
Kemarks								
Project Total Cost			0	13,000		38,909	T	51,909
5			0	13,000		38,909		51,909
Remarks								
Remarks								
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Missile Defense A	Agenc	cy (N	1DA) Ex	hibit	: R-4	Sch	edul	le Pr	ofile								Da Fe		ary	200	8						
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component D	evelo	opm	ent	and	Pro	toty	pes	(AC	D&	P)					LAT llist i			le D	efen	se A	egis	6						
Fiscal Year		20	007			20	008			20)09			20	010			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
Development Milestones				-													-		•									
BMD 5.1 / 5.X System Requirements Review									Δ																			
BMD 5.1 / 5.X System Design Review													Δ															
BMD 5.1 / 5.X Preliminary Design Review-1																	Δ											
BMD 5.1 / 5.X Preliminary Design Review-2																					Δ							
BMD 5.1 / 5.X Critical Design Review					1																						Δ	
Milestones																										<u> </u>		
Requirements Analysis					Δ													Ι				1						
Missile Down Select											Δ-			\Box														
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Project: WX18 Far Term Sea Based Terminal Capability Development

Missile Defense A	Agency (MDA) Exhi	bit R-4A Schedul	e Detail			Date February 20	08		
APPROPRIATION/BUDGET ACTIVITY			F	R-1 NOM	MENCLATURE				
RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P) 0603892C Ballistic Missile Defense Aegis									
Schedule Profile	FY 2007	FY 2008	FY 20	09	FY 2010	FY 2011	FY 2012	FY 2013	
Development Milestones									
BMD 5.1 / 5.X System Requirements Review			1Q						
BMD 5.1 / 5.X System Design Review					1Q				
BMD 5.1 / 5.X Preliminary Design Review-1						1Q			
BMD 5.1 / 5.X Preliminary Design Review-2							1Q		
BMD 5.1 / 5.X Critical Design Review								3Q	
Milestones									
Requirements Analysis		1Q-4Q	1Q-2	Q					
Missile Down Select			3Q-4	Q	1Q-2Q				

Missile Defense Agency (MDA) Exhibit R-2A RDT&F	fication		Date Februa r	y 2008			
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes		NCLATURE Ballistic Mis	ssile Defense	Aegis			
COST (\$ in Thousands)	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
0402 Japanese Cooperative Program	47,900	0	0	0	0	0	0
RDT&E Articles Qty	0	0	0	0	0	0	0

Note: The content previously planned in project 0402 for FY 08-13 has been moved to project WX09, in accordance with the Missile Defense Agency revised Block structure.

A. Mission Description and Budget Item Justification

The U.S./Japan Joint Cooperative Research (JCR) program conducted cooperative research in Ballistic Missile Defense. The research focused on the development of advanced missile technologies in four components of the SM-3 guided missile: sensor, advanced kinetic warhead, second stage propulsion and lightweight nosecone. In FY06, the JCR project concluded with the flight testing of the lightweight nosecone in Joint Control Test Vehicle-1 (JCTV-1).

In addition, the U.S. and Japan have a mutual interest in the evolutionary development of improvements to the Standard Missile-3 (SM-3). In FY06 the two countries signed a Memorandum of Understanding (MOU) for the co-development of an upgraded, 21-inch diameter SM-3 missile (SM-3 Block IIA). The objective of the SM-3 Cooperative Development (SCD) project is the development and initial at-sea flight test of the SM-3 Block IIA missile. The SM-3 Block IIA missile development will build upon established joint research investments by both the U.S. and Japan. The analysis approaches, system trade methodologies, and BMD system performance established in the U.S./Japan BMD Joint Analysis (JAWS) completed in March 2005 are the foundation for developing the SM-3 Block IIA missile. Key technology improvements over the current SM-3 Block IA missile planned for the SM-3 Block IIA missile include a significant increase in velocity and range provided by a 21-inch diameter rocket motor propulsion stack, and increased seeker sensitivity and divert capability incorporated in an advanced kinetic warhead. Key component technologies to be developed under this Annex include, but are not limited to: Lightweight nosecone, advanced kinetic warhead, 21-inch second stage rocket motor, and 21-inch third stage rocket motor.

The U.S. and Japan will equitably share both work and cost.

The Scope of Work of the SCD project will be conducted through a three-phased engineering approach, which completes by 2014. Phase I consists of requirements definition for the SM-3 Block IIA missile configuration, concurrent with initial risk reduction efforts related to the 21-inch propulsion components, lightweight nosecone, advanced seeker, larger Divert and Attitude Control System (DACS), and preliminary test plans. Also in Phase I, information exchange related to production and maintenance of the SM-3 Block IIA missile will be initiated. Upon completion of

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E P	raject Instification	Date February 2008	
APPROPRIATION/BUDGET ACTIVITY	R-1 NOMENCL		
RDT&E, DW/04 Advanced Component Development and Prototypes (A		listic Missile Defense Aegis	
requirements definition, a schedule for development and testing, and will define the performance allocation and component configuration f define the performance allocation and component configuration for th	for the development and te	sting of the SM-3 Block II mis	sile; Phase III will
The SM-3 Block IIA missile will increase the area that can be defend t will leverage enhanced capability provided by BMDS sensor upgra		rease the probability of kill aga	inst a larger threat set.
The SCD project will:			
 Develop components for the SM-3 Block IIA missile and integrat 21" 2nd and 3rd stage components: 21" nosecone Advanced kinetic warhead Advanced Seeker Improved Large Diameter Divert and Attitude Control System to exploit the capability of the Modify the Aegis Weapon System to exploit the capability of the Integrate the SM-3 Block IIA missile and VLS with Aegis ship system 	stem SM-3 Block II/IIA missile		om BMDS sensors.
 Includes development of a light weight VLS canister 	stems		
Conduct test and evaluation using ground and flight tests			
 SM-3 Block IIA missile 			
• Aegis BMD ship systems			
• Aegis BMD weapon systems			
B. Accomplishments/Planned Program			
	FY 2007	FY 2008	FY 2009
M-3 Block IIA Development - Missile DT&E Articles (Quantity)	47,900	0	
	· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·	
This project funds the development of the SM-3 Block IIA missile. T	he SM-3 Block IIA is a 21	-inch diameter missile.	
FY07 Accomplishments:			
• Initiated Phase I of the SM-3 Cooperative Development project.			
1 1 1 J			

Project: 0402 Japanese Cooperative Program

		UNCLE	1991LIED					
					Date			
Missile Defense Agency (MDA)	Exhibit R-2A F	RDT&E Projec				ruary 2008		
APPROPRIATION/BUDGET ACTIVITY				NOMENCLAT				
RDT&E, DW/04 Advanced Component Develop	ment and Prot	totypes (ACD	0&P) 0603	3892C Ballisti	c Missile Def	ense Aegis		
• Conducted a System Concept Review for th	e SM-3 Block	x IIA missile						
• Prepared for a System Requirements Review	v for the SM-	3 Block IIA	missile (con	ducted 1Q FY	<i>Y</i> 08).			
• Continued risk reduction efforts related to the	ne 21-inch mi	ssile compor	nents, seeker	, and DACS.				
• Continued risk reduction efforts related to the	ne 21-inch mi	ssile compor	nents, seeker	and DACS.				
• Prepared preliminary test plans for the SM-		-	····, ····	,				
 Initiated information exchange with Japan r 			nd maintenar	nce of the SM	-3 Block IIA	missile		
 Initiated Aegis Weapon System design stud 	1				DIOCK III	r missile.		
· Initiated Acgis Weapon System design stud		I-J DIOCK IIF		011.				
C. Other Program Funding Summary								
C. Other Frogram Funding Summary								Total
	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	Cost
PE 0207998C BRAC	0	103,219	159,938	61,931	8,724	0	0	333,812
PE 0603175C Ballistic Missile Defense Technology	183,849	108,423	118,718	115,234	120,152	127,012	130,358	903,746
PE 0603881C Ballistic Missile Defense Terminal Defense								
Segment	1,082,454	1,045,276	1,019,073	795,659	719,847	548,283	439,752	5,650,344
PE 0603882C Ballistic Missile Defense Midcourse Defense Segment	2,985,140	2,243,213	2,209,262	2,276,848	1,385,258	946,437	1,103,532	13,149,690
PE 0603883C Ballistic Missile Defense Boost Defense	2,985,140	2,245,215	2,209,202	2,270,848	1,385,258	940,437	1,105,552	13,149,090
Segment	622,218	510,241	421,229	423,927	652,642	799,792	991,839	4,421,888
PE 0603884C Ballistic Missile Defense Sensors	514,989	586,121	1,221,143	1,184,280	1,099,649	1,077,632	823,583	6,507,397
PE 0603886C Ballistic Missile Defense System Interceptors	341,358	340,107	386,817	500,966	708,803	815,433	553,136	3,646,620
PE 0603888C Ballistic Missile Defense Test and Targets	584,615	621,861	673,691	672,976	690,938	708,991	719,209	4,672,281
PE 0603890C Ballistic Missile Defense System Core	425,889	413,934	432,262	482,947	605,219	561,947	571,498	3,493,696
PE 0603891C Special Programs - MDA	347,377	196,892	288,315	304,234	538,050	818,136	786,349	3,279,353
PE 0603893C Space Tracking & Surveillance System	311,402	231,528	242,441	266,509	560,130	735,727	938,191	3,285,928
PE 0603894C Multiple Kill Vehicle	133,615	229,943	354,455	488,294	649,632	708,582	879,385	3,443,906
PE 0603895C BMD System Space Program	0	16,552	29,771	41,638	56,199	133,915	157,548	435,623
PE 0603896C BMD C2BMC	249,179	447,616	289,277	287,194	270,762	256,767	259,159	2,059,954
PE 0603897C BMD Hercules	46,268	52,462	55,955	55,289	56,400	51,902	52,784	371,060
PE 0603898C BMD Joint Warfighter Support	49,833	49,394	69,982	73,997	77,205	80,168	81,948	482,527
PE 0603904C Missile Defense Integration & Operations	104 290	79 557	06 404	100 427	100 266	101 512	102.840	694 505
Center	104,389	78,557	96,404	100,437	100,366	101,512	102,840	684,505

Project: 0402 Japanese Cooperative Program

Line Item 81 -

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Missile Defense Agency (MDA)	Exhibit R-2A F	RDT&E Projec	t Justifica	ation		Date Feb	ruary 2008		
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Developm	IOMENCLAT 892C Ballisti	URE c Missile Def	ense Aegis						
	FY 2007	FY 2008	FY 200)9	FY 2010	FY 2011	FY 2012	FY 2013	Total Cost
PE 0603905C BMD Concurrent Test and Operations	21,870	0		0	0	0	0	0	21,870
PE 0603906C Regarding Trench	0	1,986	2,	,978	4,964	4,963	8,933	8,933	32,757
PE 0603907C Sea Based X-Band Radar (SBX)	0	165,243		0	0	0	0	0	165,243
PE 0605502C Small Business Innovative Research - MDA	142,510	0		0	0	0	0	0	142,510
PE 0901585C Pentagon Reservation	15,527	6,019	19,	,734	5,040	5,284	5,370	5,456	62,430
PE 0901598C Management Headquarters - MDA	93,350	80,392	86,	,453	70,355	69,855	69,855	69,855	540,115

D. Acquisition Strategy

The SM-3 Cooperative Program for the SM-3 Block IIA missile will utilize a performance based approach that ties program decision milestones to the performance of development prototypes, as well as Control Test Vehicle (CTV) and Guidance Test Vehicle (GTV) flight test article performance. Acquisition of hardware, software modifications and required services will occur in conjunction with contractual and tasking efforts for U. S. Navy work and events.

APPROPRIATION/BUDGET					NOMENCLATU			
RDT&E, DW/04 Advanced	Component I	Development and I	Prototypes (AC	D&P) 060	3892C Ballistic	Missile Defense	e Aegis	
I. Product Development	Cost (\$ in T	Thousands)						
*		, , , , , , , , , , , , , , , , , , ,			FY 2008		FY 2009	
	Contract	Performing	Total		Award/		Award/	
	Method	Activity &	PYs	FY 2008	Oblg	FY 2009	Oblg	Total
Cost Categories:	& Type	Location	Cost	Cost	Date	Cost	Date	Cost
SM-3 Block IIA Development - Missile								
	SS/CPAF	Raytheon/AZ	45,194	0	N/A	0	N/A	45,194
	MIPR	MDA/VA	2,706	0	N/A	0	N/A	2,706
Subtotal Product Development			47,900	0		0		47900
II. Support Costs Cost (\$ in Thousan	nds)	i		- 	iiii	i	
	ά• π	1)						
II. Support Costs Cost (\$ in Thousan	nds)	i		EV 2009	i	EV 2000	
II. Support Costs Cost (Total		FY 2008		FY 2009	
II. Support Costs Cost (Contract	Performing	Total PYs	FY 2008	Award/	FY 2009	Award/	Total
II. Support Costs Cost (Contract Method	Performing Activity &	PYs	FY 2008 Cost	Award/ Oblg	FY 2009 Cost	Award/ Oblg	Total
Cost Categories:	Contract	Performing		FY 2008 Cost	Award/	FY 2009 Cost	Award/	Total Cost
Cost Categories: Subtotal Support Costs	Contract Method	Performing Activity &	PYs		Award/ Oblg		Award/ Oblg	
Cost Categories: Subtotal Support Costs	Contract Method	Performing Activity &	PYs		Award/ Oblg		Award/ Oblg	
Cost Categories: Subtotal Support Costs Remarks	Contract Method & Type	Performing Activity & Location	PYs		Award/ Oblg Date		Award/ Oblg Date	
Cost Categories: Subtotal Support Costs Remarks	Contract Method & Type Cost (\$ in 1	Performing Activity & Location	PYs Cost		Award/ Oblg Date		Award/ Oblg Date	
Cost Categories: Subtotal Support Costs Remarks	Contract Method & Type Cost (\$ in 1 Contract	Performing Activity & Location	PYs Cost Total	Cost	Award/ Oblg Date	Cost	Award/ Oblg Date FY 2009 Award/	Cost
Cost Categories: Subtotal Support Costs Remarks III. Test and Evaluation	Contract Method & Type Cost (\$ in T Contract Method	Performing Activity & Location Thousands) Performing Activity &	PYs Cost Total PYs	Cost FY 2008	Award/ Oblg Date FY 2008 Award/ Oblg	Cost FY 2009	Award/ Oblg Date	Cost
Cost Categories: Subtotal Support Costs Remarks III. Test and Evaluation Cost Categories:	Contract Method & Type Cost (\$ in 1 Contract	Performing Activity & Location	PYs Cost Total	Cost	Award/ Oblg Date	Cost	Award/ Oblg Date FY 2009 Award/	Cost
Cost Categories: Subtotal Support Costs	Contract Method	Performing Activity &	PYs		Award/ Oblg		Award/ Oblg	
Cost Categories: Subtotal Support Costs Remarks III. Test and Evaluation	Contract Method & Type Cost (\$ in T Contract Method	Performing Activity & Location Thousands) Performing Activity &	PYs Cost Total PYs	Cost FY 2008	Award/ Oblg Date FY 2008 Award/ Oblg	Cost FY 2009	Award/ Oblg Date	Cost
Cost Categories: Subtotal Support Costs Remarks III. Test and Evaluation Cost Categories:	Contract Method & Type Cost (\$ in T Contract Method	Performing Activity & Location Thousands) Performing Activity &	PYs Cost Total PYs	Cost FY 2008	Award/ Oblg Date FY 2008 Award/ Oblg	Cost FY 2009	Award/ Oblg Date	Cost
Cost Categories: Subtotal Support Costs Remarks III. Test and Evaluation Cost Categories: Subtotal Test and Evaluation	Contract Method & Type Cost (\$ in T Contract Method	Performing Activity & Location Thousands) Performing Activity &	PYs Cost Total PYs	Cost FY 2008	Award/ Oblg Date FY 2008 Award/ Oblg	Cost FY 2009	Award/ Oblg Date	Cost
Cost Categories: Subtotal Support Costs Remarks III. Test and Evaluation	Contract Method & Type Cost (\$ in T Contract Method	Performing Activity & Location Thousands) Performing Activity &	PYs Cost Total PYs	Cost FY 2008	Award/ Oblg Date FY 2008 Award/ Oblg	Cost FY 2009	Award/ Oblg Date	Cost
Cost Categories: Subtotal Support Costs Remarks III. Test and Evaluation Cost Categories: Subtotal Test and Evaluation	Contract Method & Type Cost (\$ in T Contract Method	Performing Activity & Location Thousands) Performing Activity &	PYs Cost Total PYs	Cost FY 2008	Award/ Oblg Date FY 2008 Award/ Oblg	Cost FY 2009	Award/ Oblg Date	Cost
Cost Categories: Subtotal Support Costs Remarks III. Test and Evaluation Cost Categories: Subtotal Test and Evaluation	Contract Method & Type Cost (\$ in T Contract Method	Performing Activity & Location Thousands) Performing Activity &	PYs Cost Total PYs	Cost FY 2008	Award/ Oblg Date FY 2008 Award/ Oblg	Cost FY 2009	Award/ Oblg Date	Cost

ACTIVITY			R-1 N	NOMENCLATU	IRE		
	evelopment and H	Prototypes (AC				se Aegis	
s Cost (\$ in '	Thousands)						
Contract Method	Performing Activity &	Total PYs	FY 2008	FY 2008 Award/ Oblg	FY 2009	FY 2009 Award/ Oblg	Total
& Type	Location	Cost	Cost	Date	Cost	Date	Cost
L							
+		47,900	0		0		47,900
		,,	· · ·				,
	Contract	Cost (\$ in Thousands) Contract Performing Method Activity &	Cost (\$ in Thousands) Contract Performing Method Activity &	Cost (\$ in Thousands) Contract Performing Method Activity & & Type Location Cost Cost	Cost (\$ in Thousands) FY 2008 Contract Performing Total Award/ Method Activity & PYs FY 2008 Oblg & Type Location Cost Cost Date	Cost (\$ in Thousands) Contract Performing Method Activity & PYs FY 2008 & Type Location Cost Cost Date Cost	Cost (\$ in Thousands) FY 2008 FY 2009 Contract Performing Total Award/ Award/ Method Activity & PYs FY 2008 Oblg FY 2009 Oblg & Type Location Cost Cost Date Cost Date

Missile Defense Agency (MDA) Exhibit R-2A RDT&E	Date Februar	y 2008							
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)			R-1 NOMENCLATURE 0603892C Ballistic Missile Defense Aegis						
COST (\$ in Thousands)	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013		
WX09 Japanese Cooperative Capability Development	0	89,383	179,742	290,224	359,409	330,121	409,019		
RDT&E Articles Qty	0	0	0	0	0	0	0		

Note: The content in project WX09 is a continuation of the efforts reported in projects 0402 and R109 and was explained in those projects in PB08.

A. Mission Description and Budget Item Justification

The U.S./Japan Joint Cooperative Research (JCR) program conducted cooperative research in Ballistic Missile Defense. The research focused on the development of advanced missile technologies in four components of the SM-3 guided missile: sensor, advanced kinetic warhead, second stage propulsion and lightweight nosecone. In FY06, the JCR project concluded with the flight testing of the lightweight nosecone in Joint Control Test Vehicle-1 (JCTV-1).

In addition, the U.S. and Japan have a mutual interest in the evolutionary development of improvements to the Standard Missile-3 (SM-3). In FY06 the two countries signed a Memorandum of Understanding (MOU) for the co-development of an upgraded, 21-inch diameter SM-3 missile (SM-3 Block IIA). The objective of the SM-3 Cooperative Development (SCD) project is the development and initial at-sea flight test of the SM-3 Block IIA missile development will build upon established joint research investments by both the U.S. and Japan. The analysis approaches, system trade methodologies, and BMD system performance established in the U.S./Japan BMD Joint Analysis (JAWS) completed in March 2005 are the foundation for developing the SM-3 Block IIA missile. Key technology improvements over the current SM-3 Block IA missile planned for the SM-3 Block IIA missile include a significant increase in velocity and range provided by a 21-inch diameter rocket motor propulsion stack, and increased seeker sensitivity and divert capability incorporated in an advanced kinetic warhead. Key component technologies to be developed under this Annex include, but are not limited to: Lightweight nosecone, advanced kinetic warhead, 21-inch second stage rocket motor, and 21-inch third stage rocket motor.

The U.S. and Japan will equitably share both work and cost.

The Scope of Work of the SCD project will be conducted through a three-phased engineering approach, which completes by 2014. Phase I consists of requirements definition for the SM-3 Block IIA missile configuration, concurrent with initial risk reduction efforts related to the 21-inch propulsion components, lightweight nosecone, advanced seeker, larger Divert and Attitude Control System (DACS), and preliminary test plans. Also in Phase I, information exchange related to production and maintenance of the SM-3 Block IIA missile will be initiated. Upon completion of requirements definition, a schedule for development and testing, and work share and cost share for development and testing will be refined. Phase II will define the

Project: WX09 Japanese Cooperative Capability Development Line Item 81 -

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justifi	cation	Date February 2008
APPROPRIATION/BUDGET ACTIVITY	R-1 NOMENCLATURE	February 2000
RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	0603892C Ballistic Missil	le Defense Aegis
performance allocation and component configuration for the development and te performance allocation and component configuration for the development and te	0	
The SM-3 Block IIA missile will increase the area that can be defended by Aegis It will leverage enhanced capability provided by BMDS sensor upgrades.	s BMD and increase the p	robability of kill against a larger threat set.
The SCD project will:		
• Develop components for the SM-3 Block IIA missile and integrate them into	an All Up Round (AUR).	
0		
 21" 2nd and 3rd stage components: 21" nosecone 		
 O 21^o nosecone O Advanced kinetic warhead 		
 Advanced Seeker 		
 Improved Large Diameter Divert and Attitude Control System 		
• Begin engineering of the Aegis Weapon System to exploit the capability of the	he SM-3 Block II/IIA mis	sile and use of threat track data from
BMDS sensors.		
• Integrate the SM-3 Block IIA missile and VLS with Aegis ship systems		
 Includes development of a light weight VLS canister Conduct test and evaluation using ground and flight tests 		
 Conduct test and evaluation using ground and flight tests SM-3 Block IIA missile 		
 Aegis BMD ship systems 		
• Aegis BMD weapon system		
BMD 5.1 will integrate the SM-3 Block IIA missile with the Aegis BMD Weapor improvements:	on System in Open Archite	ecture, incorporating other Weapon System
• Defeat a wide variety of ballistic missiles in the presence of counter counterr Ballistic Missiles (MRBMs), Intermediate Range Ballistic Missiles (IRBMs) Continental Ballistic Missiles (ICBMs).		
• Feature Aided Track Correlation (FATC)		
Forcenet/GIG Compliance		
Project: WX09 Japanese Cooperative Capability Development		MDA Exhibit R-2A (PE 0603892C)
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			Date	
Missile Defense Agency (MDA) Exhibit R-2A RDT&E Proje	ect Justifi		February 2008	
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACI	D 8-D)	R-1 NOMENCLAT	TURE tic Missile Defense Aegis	
	Dal)	0003072C Dallis	uc missile Defense Aegis	
• Improvements to BMDS Multi-Element Sensor Data Fusion.				
• Engage on Remote (EoR)				
In collaboration with the MDA systems engineer, Aegis BMD is contribu	uting to	the PMDS in des	valorment of angagement	aquanca groups (ESCs)
Aegis BMD 5.1 will support an autonomous engagement against SRBM	0		1 00	
cueing. It will also support an engagement against SRBMs, MRBMs, IR				1 0
sensors. Aegis BMD will also provide target track data to support Groun		U		
input for the Ground-based Midcourse Defense (GMD) Sensor Task Plan				
	· /	I	× /	
B. Accomplishments/Planned Program				
	FY	2007	FY 2008	FY 2009
SCD Missile Development		0	64,349	101,549
RDT&E Articles (Quantity)		0	0	C
This project funds the development of the SM-3 Block IIA missile. The	SM-3 BI	OCK IIA 18 a 21-11	nch diameter missile.	
FY08 Planned Program:				
 Continue development of SM-3 Block IIA components: 				
 21-inch diameter missile 2nd and 3rd stage components: 				
 21-inch diameter nosecone 				
 Advanced kinetic warhead 				
• Advanced Seeker				
 Improved Large Diameter Divert and Attitude Control System 				
• Participate in the System Requirements Review (SRR) for the SCD e	effort.			
FY09 Planned Program:				
• Continue development of SM-3 Block IIA components:				
 21-inch diameter missile 2nd and 3rd stage components: 				
 21-inch diameter nosecone 				
 Advanced kinetic warhead 				
 Advanced Seeker 				
Project: WV00 Jananese Cooperative Canability Development			٦	1DA Exhibit R-2A (PE 0603892C)
Project: WX09 Japanese Cooperative Capability Development			N	1DA EXHIBIT K-2A (PE 0005892C)

		IED	Date	
Missile Defense Agency (MDA) Exhibit R-2A RDT&E H	Project Justif	ication	February 2008	
PPROPRIATION/BUDGET ACTIVITY DT&E, DW/04 Advanced Component Development and Prototypes (R-1 NOMENCLATU		
• Improved Large Diameter Divert and Attitude Control Syster Participate in the System Design Review (SDR) for the SCD effor Participate in BMD 4.0.1 ENG REL engineering reviews.				
	FY	2007	FY 2008	FY 2009
CD Weapon System Development		0	14,300	32,10
DT&E Articles (Quantity)		0	0	
 Continue requirements definition for BMD 4.0.1 ENG REL. Develop system specifications to support flight testing of SM-3 E Participate in the System Requirements Review (SRR) for the SO Begin initial performance analysis for the flight test program. Y09 Planned Program: Continue requirements definition and analysis for lightweight can Participate in the System Design Review (SDR) for the SCD effort Continue requirements definition for BMD 4.0.1 ENG REL. Develop system specifications to support flight testing of SM-3 E Begin range analysis and change/modification package changes. 	CD effort. nister and vo	ertical launch syster performance requir	6	

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E P			
\mathcal{M}	raiget Instification	Date February 2008	
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (A	R-1 NOMENCI		
	FY 2007	FY 2008	FY 2009
BMD 5.1 Weapon System Development	0	10,734	28,692
RDT&E Articles (Quantity)	0	0	0
BMD 5.1 will integrate SM-3 Block IIA missile improvements with th 4.0.1 ENG REL and BMD 5.0, to include Open Architecture.	ne Aegis BMD Weapon S	ystem, leveraging on impro	vements achieved in BMD
 FY08 Planned Program: Begin model development for BMD 5.1 performance. Conduct analyses of BMD 5.1 threat set. Draft the BMD 5.1 Engineering Capability Specification (ECS). Begin development of RF discrimination techniques. Develop requirements for BMD 5.1. Begin performance predictions for the weapon system. Analyze VLS changes. Begin development of a BMD 5.1 TBSS/TBDD. FY09 Planned Program: Conduct System Requirements Review (SRR), Review ECS and point of the technique for technique for the technique for techn	n SRR.	ne contractor for BMD 5.1.	

Missile Defense Agency (MDA)	Fyhihit D 7A D	DT&F Draine	t Inctification		Date Febr	ruary 2008		
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Develop			R-1 I	NOMENCLAT 3892C Ballisti	URE	· ·		
			FY 2007		FY 200	8	FY 20)09
Infrastructure Support				0		0		17,335
RDT&E Articles (Quantity)				0		0		(
This project supports Infrastructure efforts in th	e areas of Inf	ormation Tec	hnology, Qu	ality Assura	nce, and com	mon Threat l	Engineering e	fforts.
 Provide Quality, Safety, and Mission Assura Provide Dedicated Information Technology software licenses, sustainment and informat Provide Common Threat Engineering data to su system and sub-system requirements). 	services for r ion assurance	nission species certification	fic research					
C. Other Program Funding Summary	EY 2007	FY 2008	EY 2009	FY 2010	FY 2011	EY 2012	FY 2013	Total
	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011 8 724	FY 2012	FY 2013	Cost
PE 0207998C BRAC	0	103,219	159,938	61,931	8,724	0	0	Cost 333,812
PE 0207998C BRAC PE 0603175C Ballistic Missile Defense Technology								Cost
PE 0207998C BRAC	0	103,219	159,938	61,931	8,724	0	0	Cost 333,812
PE 0207998C BRAC PE 0603175C Ballistic Missile Defense Technology PE 0603881C Ballistic Missile Defense Terminal Defense Segment PE 0603882C Ballistic Missile Defense Midcourse Defense Segment	0 183,849	103,219 108,423	159,938 118,718	61,931 115,234	8,724 120,152	0 127,012	0 130,358	Cost 333,812 903,746
PE 0207998C BRAC PE 0603175C Ballistic Missile Defense Technology PE 0603881C Ballistic Missile Defense Terminal Defense Segment PE 0603882C Ballistic Missile Defense Midcourse Defense	0 183,849 1,082,454	103,219 108,423 1,045,276	159,938 118,718 1,019,073	61,931 115,234 795,659	8,724 120,152 719,847	0 127,012 548,283	0 130,358 439,752	Cost 333,812 903,746 5,650,344
PE 0207998C BRAC PE 0603175C Ballistic Missile Defense Technology PE 0603881C Ballistic Missile Defense Terminal Defense Segment PE 0603882C Ballistic Missile Defense Midcourse Defense Segment PE 0603883C Ballistic Missile Defense Boost Defense Segment	0 183,849 1,082,454 2,985,140	103,219 108,423 1,045,276 2,243,213	159,938 118,718 1,019,073 2,209,262	61,931 115,234 795,659 2,276,848	8,724 120,152 719,847 1,385,258	0 127,012 548,283 946,437	0 130,358 439,752 1,103,532	Cost 333,812 903,746 5,650,344 13,149,690
PE 0207998C BRAC PE 0603175C Ballistic Missile Defense Technology PE 0603881C Ballistic Missile Defense Terminal Defense Segment PE 0603882C Ballistic Missile Defense Midcourse Defense Segment PE 0603883C Ballistic Missile Defense Boost Defense Segment PE 0603884C Ballistic Missile Defense Sensors	0 183,849 1,082,454 2,985,140 622,218	103,219 108,423 1,045,276 2,243,213 510,241	159,938 118,718 1,019,073 2,209,262 421,229	61,931 115,234 795,659 2,276,848 423,927	8,724 120,152 719,847 1,385,258 652,642	0 127,012 548,283 946,437 799,792	0 130,358 439,752 1,103,532 991,839	Cost 333,812 903,746 5,650,344 13,149,690 4,421,888
PE 0207998C BRAC PE 0603175C Ballistic Missile Defense Technology PE 0603881C Ballistic Missile Defense Terminal Defense Segment PE 0603882C Ballistic Missile Defense Midcourse Defense Segment PE 0603883C Ballistic Missile Defense Boost Defense Segment PE 0603884C Ballistic Missile Defense Sensors PE 0603886C Ballistic Missile Defense System Interceptors	0 183,849 1,082,454 2,985,140 622,218 514,989	103,219 108,423 1,045,276 2,243,213 510,241 586,121	159,938 118,718 1,019,073 2,209,262 421,229 1,221,143	61,931 115,234 795,659 2,276,848 423,927 1,184,280	8,724 120,152 719,847 1,385,258 652,642 1,099,649	0 127,012 548,283 946,437 799,792 1,077,632	0 130,358 439,752 1,103,532 991,839 823,583	Cost 333,812 903,746 5,650,344 13,149,690 4,421,888 6,507,397
PE 0207998C BRAC PE 0603175C Ballistic Missile Defense Technology PE 0603881C Ballistic Missile Defense Terminal Defense Segment PE 0603882C Ballistic Missile Defense Midcourse Defense Segment PE 0603883C Ballistic Missile Defense Boost Defense	0 183,849 1,082,454 2,985,140 622,218 514,989 341,358	103,219 108,423 1,045,276 2,243,213 510,241 586,121 340,107	159,938 118,718 1,019,073 2,209,262 421,229 1,221,143 386,817	61,931 115,234 795,659 2,276,848 423,927 1,184,280 500,966	8,724 120,152 719,847 1,385,258 652,642 1,099,649 708,803	0 127,012 548,283 946,437 799,792 1,077,632 815,433	0 130,358 439,752 1,103,532 991,839 823,583 553,136	Cost 333,812 903,746 5,650,344 13,149,690 4,421,888 6,507,397 3,646,620
PE 0207998C BRAC PE 0603175C Ballistic Missile Defense Technology PE 0603881C Ballistic Missile Defense Terminal Defense Segment PE 0603882C Ballistic Missile Defense Midcourse Defense Segment PE 0603883C Ballistic Missile Defense Boost Defense Segment PE 0603884C Ballistic Missile Defense Sensors PE 0603886C Ballistic Missile Defense Test and Targets PE 0603880C Ballistic Missile Defense Test and Targets PE 0603890C Ballistic Missile Defense System Core PE 0603891C Special Programs - MDA	0 183,849 1,082,454 2,985,140 622,218 514,989 341,358 584,615	103,219 108,423 1,045,276 2,243,213 510,241 586,121 340,107 621,861	159,938 118,718 1,019,073 2,209,262 421,229 1,221,143 386,817 673,691	61,931 115,234 795,659 2,276,848 423,927 1,184,280 500,966 672,976	8,724 120,152 719,847 1,385,258 652,642 1,099,649 708,803 690,938	0 127,012 548,283 946,437 799,792 1,077,632 815,433 708,991	0 130,358 439,752 1,103,532 991,839 823,583 553,136 719,209	Cost 333,812 903,746 5,650,344 13,149,690 4,421,888 6,507,397 3,646,620 4,672,281
PE 0207998C BRAC PE 0603175C Ballistic Missile Defense Technology PE 0603881C Ballistic Missile Defense Terminal Defense Segment PE 0603882C Ballistic Missile Defense Midcourse Defense Segment PE 0603883C Ballistic Missile Defense Boost Defense Segment PE 0603884C Ballistic Missile Defense Sensors PE 0603886C Ballistic Missile Defense System Interceptors PE 0603888C Ballistic Missile Defense Test and Targets PE 0603890C Ballistic Missile Defense System Core	0 183,849 1,082,454 2,985,140 622,218 514,989 341,358 584,615 425,889	103,219 108,423 1,045,276 2,243,213 510,241 586,121 340,107 621,861 413,934	159,938 118,718 1,019,073 2,209,262 421,229 1,221,143 386,817 673,691 432,262	61,931 115,234 795,659 2,276,848 423,927 1,184,280 500,966 672,976 482,947	8,724 120,152 719,847 1,385,258 652,642 1,099,649 708,803 690,938 605,219	0 127,012 548,283 946,437 799,792 1,077,632 815,433 708,991 561,947	0 130,358 439,752 1,103,532 991,839 823,583 553,136 719,209 571,498	Cost 333,812 903,746 5,650,344 13,149,690 4,421,888 6,507,397 3,646,620 4,672,281 3,493,696

Project: WX09 Japanese Cooperative Capability Development

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Missile Defense Agency (MDA)	Exhibit R-2A F	RDT&E Projec				ruary 2008		
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Develop	ment and Pro	totypes (ACD		NOMENCLAT 892C Ballisti	ore c Missile Def	ense Aegis		
	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	Total Cost
PE 0603895C BMD System Space Program	0	16,552	29,771	41,638	56,199	133,915	157,548	435,623
PE 0603896C BMD C2BMC	249,179	447,616	289,277	287,194	270,762	256,767	259,159	2,059,954
PE 0603897C BMD Hercules	46,268	52,462	55,955	55,289	56,400	51,902	52,784	371,060
PE 0603898C BMD Joint Warfighter Support	49,833	49,394	69,982	73,997	77,205	80,168	81,948	482,527
PE 0603904C Missile Defense Integration & Operations Center	104,389	78,557	96,404	100,437	100,366	101,512	102,840	684,505
PE 0603905C BMD Concurrent Test and Operations	21,870	0	0	0	0	0	0	21,870
PE 0603906C Regarding Trench	0	1,986	2,978	4,964	4,963	8,933	8,933	32,757
PE 0603907C Sea Based X-Band Radar (SBX)	0	165,243	0	0	0	0	0	165,243
PE 0605502C Small Business Innovative Research - MDA	142,510	0	0	0	0	0	0	142,510
PE 0901585C Pentagon Reservation	15,527	6,019	19,734	5,040	5,284	5,370	5,456	62,430
PE 0901598C Management Headquarters - MDA	93,350	80,392	86,453	70,355	69,855	69,855	69,855	540,115

D. Acquisition Strategy

The SM-3 Cooperative Development program for the SM-3 Block IIA missile will utilize a performance-based approach that ties program decision milestones to the performance of development prototypes, as well as Control Test Vehicle and Guidance Test Vehicle flight test article performance. Acquisition of hardware, software modifications and required services will occur in conjunction with contractual and tasking efforts to U.S. Navy work and events, and as defined by signed agreements between the Governments of the United States and Japan.

Minster				C	1		Date Eabrea	2009	
APPROPRIATION/BUDGET A	ACTIVITY	y (MDA) Exhibit R-3	¥		R-1 N	OMENCLATUR	E	ary 2008	
RDT&E, DW/04 Advanced	*	<u>*</u>	rototypes (ACL	J&P)	06038	892C Ballistic I	Missile Defen	se Aegis	
I. Product Development	<u>Cost (\$ in 7</u>	<u>fhousands)</u>							
Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 200 Cost	8	FY 2008 Award/ Oblg Date	FY 2009 Cost	FY 2009 Award/ Oblg Date	Total Cost
SCD Missile Development		Location	COSt	COSt		Date	COSt	Date	Cost
SCD Missue Development	SS/CPAF	Raytheon/AZ	0		,714	1Q	87,029	1Q	140,743
	MIPR	NSWC DD/VA	0		,359	1Q	3,500	1Q	5,859
	CPFF	JHU/APL/MD	0		,949	1Q	4,000	1Q	6,949
		MIT/MA	0		,180	1Q	1,500	1Q	2,680
	MIPR	MSWC PHD/CA	0		,949	1Q	3,500	1Q	6,449
	MIPR	NSWC IH/MD	0	1	,198	1Q	2,020	1Q	3,218
SCD Weapon System Development									
	CPAF	Lockheed Martin/ NJ	0	11	,150	1Q	25,926	1Q	37,076
	CPFF	JHU/APL/MD	0	1	,130	1Q	1,850	1Q	2,980
	MIPR	NSCW/DD/VA	0		350	1Q	1,220	1Q	1,570
		MIT/MA	0	1	,550	1Q	2,200	1Q	3,750
	Various	Various	0		120	1/2Q	420	1/2Q	540
	MIPR	Techrep/NJ	0		0	N/A	550	1Q	550
BMD 5.1 Weapon System Development									
		Lockheed Martin/							
	CPAF	NJ	0	7	,859	1Q	23,912	1Q	31,771
	CPAF	JHU/APL/MD	0		875	1Q	1,700	1Q	2,575
	MIPR	NSWCDD/VA	0		650	1Q	1,500	1Q	2,150
	MIPR	SPAWAR/CA	0		300	1Q	400	1Q	700
	MIPR	VA Sites/VA	0		375	1Q	750	1Q	1,125
	Various	Various	0		325	1/3Q	150	1/2Q	475
	MIPR	Aegis Techrep/NJ	0		350	1Q	280	1Q	630
Subtotal Product Development			0	89	,383		162,407		251790

Project: WX09 Japanese Cooperative Capability Development

APPROPRIATION/BUDGET RDT&E, DW/04 Advanced		evelopment and l	Prototypes (AC)		1 NOMENCLATU 03892C Ballistic		e Aegis	
Remarks	ľ	r	J J J J J J J J J J				0	
II. Support Costs Cost	(\$ in Thousar	nds)						
					FY 2008		FY 2009	
	Contract	Performing	Total		Award/		Award/	
	Method	Activity &	PYs	FY 2008	Oblg	FY 2009	Oblg	Total
Cost Categories:	& Type	Location	Cost	Cost	Date	Cost	Date	Cost
Infrastructure Support								
	MIPR	MDA/VA	0) N/A	17,335	1/2Q	17,335
Subtotal Support Costs			0)	17,335		17335
Remarks								
III. Test and Evaluation	Cost (\$ in T	'housands)						
III. Test and Evaluation		nousanus j			FY 2008		FY 2009	
	Contract	Performing	Total		Award/		Award/	
	Method	Activity &	PYs	FY 2008	Oblg	FY 2009	Oblg	Total
Cost Categories:	& Type	Location	Cost	Cost	Date	Cost	Date	Cost
Subtotal Test and Evaluation	51							
Remarks								
Kemai KS								
IV. Management Service	Cast (fin	Thousands)						
IV. Management Service		Thousanus)			FY 2008		FY 2009	
	Contract	Performing	Total		Award/		Award/	
	Method	Activity &	PYs	FY 2008	Oblg	FY 2009	Oblg	Total
Cost Categories:	& Type	Location	Cost	Cost	Date	Cost	Date	Cost
cost cutogories.	a Type	Location	2001	0000	Duic	0000	Duit	2051
Subtotal Management Services								
Subtotal Management Services								
Subtotal Management Services Remarks								
			0	89,38	3	179,742		269,125
Remarks Project Total Cost			0	89,38	3	179,742		269,125
Remarks			0	89,38	3	179,742		269,125

Missile Defense A APPROPRIATION/BUDGET ACTIVITY	geno	ey (N	IDA)) Ex	hibit	: R- 4	Sch	edul	e Pro	ofile		1 NO	OME	ENCI	LAT	URE		Fel	orua	ary 2	2008	5						
RDT&E, DW/04 Advanced Component Do	evelo	opm	ent a	and	Pro	toty	pes	(AC	D &	P)	06	6038	92C	Ba	llisti	c M	issil	e De	fens	se A	egis	;						
Fiscal Year		20	007	-		20	008			20	09			20	10			20	11			20	12	-		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
SM-3 Blk IIA Development Milestones																												
SM-3 Blk IIA System Requirements Review (SRR)					4																							
SM-3 Blk IIA SRR-2							Δ																					
SM-3 Blk IIA System Design Review (SDR)									Δ																			
SM-3 Blk II Preliminary Design Review															Δ													
SM-3 Blk IIA Critical Design Review																				Δ								
Development Milestones																												
BMD 4.0.1 ENG REL Development					ᇫ																\land							
BMD 4.0.1 ENG REL Mission Review										Δ																		
BMD 4.0.1 ENG REL SDD														Δ														
BMD 4.0.1 ENG REL Engineering Assessment																					Δ							
BMD 5.1 / 5.X Development					Δ-																							
BMD 5.1 / 5.X System Requirements Review									Δ																			
BMD 5.1 / 5.X System Design Review													Δ															
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			Elem	nent T	est (comp	lete)					Ś	>	Elem	ent T	est (p	lanne	ed)										
							compl	ete)				~		-				lanne	d)									
	Δ		Com	plete	Activ	vity						Δ_		Plan	ned A	ctivit	у											

Project: WX09 Japanese Cooperative Capability Development

Missile Defense A	genc	ey (N	/IDA) Ex	hibit	: R-4	Sch	edul	le Pr	ofile								Da Fe	te brua	ary	200	8						
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Do	evelo	opm	ent	and	Pro	toty	pes	(AC	D&	P)		-1 N0 6038					E [issil	e Do	efen	se A	egis	5						
	_																											
Fiscal Year		20	007			20)08			20)09			20	010			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
Development Milestones													<u> </u>						<u> </u>	<u> </u>					<u> </u>			
BMD 5.1 / 5.X Preliminary Design Review-1																	Δ											
BMD 5.1 / 5.X Preliminary Design Review-2																					Δ							
BMD 5.1 / 5.X Critical Design Review																											Δ	
Flight Tests																												
PTV-1																								Δ				
PTV-2																										Δ		
PTV-3																												Δ
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Project: WX09 Japanese Cooperative Capability Development

Missile Defense A	gency (MDA) Exhi	bit R-4A Schedul	e Detail		Date February 20	08	
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component D	evelopment and I	Prototypes (ACE		MENCLATURE 2C Ballistic Mis	sile Defense Aeg	is	
Schedule Profile	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
SM-3 Block IIA Development Milestones	112007	112000	112007	112010			112010
SM-3 Block IIA System Requirements Review (SRR)		1Q					
SM-3 Block IIA SRR-2		3Q					
SM-3 Block IIA System Design Review (SDR)			1Q				
SM-3 Block II Preliminary Design Review				3Q			
SM-3 Block IIA Critical Design Review					4Q		
Development Milestones							
BMD 4.0.1 ENG REL Development		1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q	
BMD 4.0.1 ENG REL Mission Review			2Q				
BMD 4.0.1 ENG REL SDD				2Q			
BMD 4.0.1 ENG REL Engineering Assessment						1Q	
BMD 5.1 / 5.X Development		1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q
BMD 5.1 / 5.X System Requirements Review			1Q				
BMD 5.1 / 5.X System Design Review				1Q			
BMD 5.1 / 5.X Preliminary Design Review-1					1Q		
BMD 5.1 / 5.X Preliminary Design Review-2						1Q	
BMD 5.1 / 5.X Critical Design Review							3Q
Flight Tests							
PTV-1						4Q	
PTV-2							2Q
PTV-3							4Q

Missile Defense Agency (MDA) Exhibit R-2A RDT&E	Project Justif	ication		Date Februar	y 2008		
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes	s (ACD&P)		NCLATURE Ballistic Mis	ssile Defense	Aegis		
COST (\$ in Thousands)	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
0602 Program-Wide Support	14,118	0	0	0	0	0	0
RDT&E Articles Qty	0	0	0	0	0	0	0

Note: Efforts within this project continue in FY 2008 under project ZX40.

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 2007	FY 2008	FY 2009
Civilian Salaries and Support	14,118	0	0
RDT&E Articles (Quantity)	0	0	0

See Section A: Mission Description and Budget Item Justification

Missile Defense Agency (MDA)	E	DT & E Droiog	t Justification		Date Febr	uary 2008		
Missile Defense Agency (MDA) APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Develops			R-1 N	NOMENCLATU 892C Ballistic	JRE			
C. Other Program Funding Summary								
	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	Total Cost
PE 0207998C BRAC	0	103,219	159,938	61,931	8,724	0	0	333,812
PE 0603175C Ballistic Missile Defense Technology	183,849	108,423	118,718	115,234	120,152	127,012	130,358	903,746
PE 0603881C Ballistic Missile Defense Terminal Defense Segment	1,082,454	1,045,276	1,019,073	795,659	719,847	548,283	439,752	5,650,344
PE 0603882C Ballistic Missile Defense Midcourse Defense Segment	2,985,140	2,243,213	2,209,262	2,276,848	1,385,258	946,437	1,103,532	13,149,690
PE 0603883C Ballistic Missile Defense Boost Defense Segment	622,218	510,241	421,229	423,927	652,642	799,792	991,839	4,421,888
PE 0603884C Ballistic Missile Defense Sensors	514,989	586,121	1,221,143	1,184,280	1,099,649	1,077,632	823,583	6,507,397
PE 0603886C Ballistic Missile Defense System Interceptors	341,358	340,107	386,817	500,966	708,803	815,433	553,136	3,646,620
PE 0603888C Ballistic Missile Defense Test and Targets	584,615	621,861	673,691	672,976	690,938	708,991	719,209	4,672,281
PE 0603890C Ballistic Missile Defense System Core	425,889	413,934	432,262	482,947	605,219	561,947	571,498	3,493,696
PE 0603891C Special Programs - MDA	347,377	196,892	288,315	304,234	538,050	818,136	786,349	3,279,353
PE 0603893C Space Tracking & Surveillance System	311,402	231,528	242,441	266,509	560,130	735,727	938,191	3,285,928
PE 0603894C Multiple Kill Vehicle	133,615	229,943	354,455	488,294	649,632	708,582	879,385	3,443,906
PE 0603895C BMD System Space Program	0	16,552	29,771	41,638	56,199	133,915	157,548	435,623
PE 0603896C BMD C2BMC	249,179	447,616	289,277	287,194	270,762	256,767	259,159	2,059,954
PE 0603897C BMD Hercules	46,268	52,462	55,955	55,289	56,400	51,902	52,784	371,060
PE 0603898C BMD Joint Warfighter Support	49,833	49,394	69,982	73,997	77,205	80,168	81,948	482,527
PE 0603904C Missile Defense Integration & Operations Center	104,389	78,557	96,404	100,437	100,366	101,512	102,840	684,505
PE 0603905C BMD Concurrent Test and Operations	21,870	0	0	0	0	0	0	21,870
PE 0603906C Regarding Trench	0	1,986	2,978	4,964	4,963	8,933	8,933	32,757
PE 0603907C Sea Based X-Band Radar (SBX)	0	165,243	0	0	0	0	0	165,243
PE 0605502C Small Business Innovative Research - MDA	142,510	0	0	0	0	0	0	142,510
PE 0901585C Pentagon Reservation	15,527	6,019	19,734	5,040	5,284	5,370	5,456	62,430
PE 0901598C Management Headquarters - MDA	93,350	80,392	86,453	70,355	69,855	69,855	69,855	540,115

Project: 0602 Program-Wide Support

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Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification				Date Februar	Date February 2008			
		R-1 NOMENCLATURE 0603892C Ballistic Missile Defense Aegis						
COST (\$ in Thousands)	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	
ZX40 Program-Wide Support	0	15,014	30,416	43,055	30,857	31,002	32,886	
RDT&E Articles Qty	0	0	0	0	0	0	0	

Note: In accordance with the Missile Defense Agency revised block structure, the content previously planned in Project 0602 for FY08-FY13 is now captured in Project ZX40.

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 2007	FY 2008	FY 2009
Civilian Salaries and Support	0	15,014	30,416
RDT&E Articles (Quantity)	0	0	0

See Section A: Mission Description and Budget Item Justification

Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification Date February 2008								
Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justification February 2008 APPROPRIATION/BUDGET ACTIVITY R-1 NOMENCLATURE RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P) 0603892C Ballistic Missile Defense Aegis								
C. Other Program Funding Summary								
	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	Total Cost
PE 0207998C BRAC	0	103,219	159,938	61,931	8,724	0	0	333,812
PE 0603175C Ballistic Missile Defense Technology	183,849	108,423	118,718	115,234	120,152	127,012	130,358	903,746
PE 0603881C Ballistic Missile Defense Terminal Defense Segment	1,082,454	1,045,276	1,019,073	795,659	719,847	548,283	439,752	5,650,344
PE 0603882C Ballistic Missile Defense Midcourse Defense Segment	2,985,140	2,243,213	2,209,262	2,276,848	1,385,258	946,437	1,103,532	13,149,690
PE 0603883C Ballistic Missile Defense Boost Defense Segment	622,218	510,241	421,229	423,927	652,642	799,792	991,839	4,421,888
PE 0603884C Ballistic Missile Defense Sensors	514,989	586,121	1,221,143	1,184,280	1,099,649	1,077,632	823,583	6,507,397
PE 0603886C Ballistic Missile Defense System Interceptors	341,358	340,107	386,817	500,966	708,803	815,433	553,136	3,646,620
PE 0603888C Ballistic Missile Defense Test and Targets	584,615	621,861	673,691	672,976	690,938	708,991	719,209	4,672,281
PE 0603890C Ballistic Missile Defense System Core	425,889	413,934	432,262	482,947	605,219	561,947	571,498	3,493,696
PE 0603891C Special Programs - MDA	347,377	196,892	288,315	304,234	538,050	818,136	786,349	3,279,353
PE 0603893C Space Tracking & Surveillance System	311,402	231,528	242,441	266,509	560,130	735,727	938,191	3,285,928
PE 0603894C Multiple Kill Vehicle	133,615	229,943	354,455	488,294	649,632	708,582	879,385	3,443,906
PE 0603895C BMD System Space Program	0	16,552	29,771	41,638	56,199	133,915	157,548	435,623
PE 0603896C BMD C2BMC	249,179	447,616	289,277	287,194	270,762	256,767	259,159	2,059,954
PE 0603897C BMD Hercules	46,268	52,462	55,955	55,289	56,400	51,902	52,784	371,060
PE 0603898C BMD Joint Warfighter Support	49,833	49,394	69,982	73,997	77,205	80,168	81,948	482,527
PE 0603904C Missile Defense Integration & Operations Center	104,389	78,557	96,404	100,437	100,366	101,512	102,840	684,505
PE 0603905C BMD Concurrent Test and Operations	21,870	0	0	0	0	0	0	21,870
PE 0603906C Regarding Trench	0	1,986	2,978	4,964	4,963	8,933	8,933	32,757
PE 0603907C Sea Based X-Band Radar (SBX)	0	165,243	0	0	0	0	0	165,243
PE 0605502C Small Business Innovative Research - MDA	142,510	0	0	0	0	0	0	142,510
PE 0901585C Pentagon Reservation	15,527	6,019	19,734	5,040	5,284	5,370	5,456	62,430
PE 0901598C Management Headquarters - MDA	93,350	80,392	86,453	70,355	69,855	69,855	69,855	540,115

Project: ZX40 Program-Wide Support

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		Date
Missile Defense Agency (MDA) Exhibit R-2A RDT&E Project Justifi	February 2008	
APPROPRIATION/BUDGET ACTIVITY	R-1 NOMENCLATURE	
RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)	0603892C Ballistic Missile Defense Aegis	

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Project: ZX40 Program-Wide Support

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