

UNCLASSIFIED

MDAExhibitR -2RDT&EBudgetItemJustification	Date February2003
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APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDevelopmentandPrototypes(ACD&P)	R-1NOMENCLATURE 0603889CBallisticMissileDefenseProducts
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COST(\$inThousands)	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
TotalPECost	0	0	343644	384763	333636	343447	349335	360951
0701 CommandandControl,BattleManagementandCommunications(C2BMC)Block2004	0	0	114472	79306	0	0	0	0
0801 CommandandControl,BattleManagementandCommunications(C2BMC)Block2006	0	0	53247	104481	115707	0	0	0
0901 CommandandControl,BattleManagementandCommunications(C2BMC)Block2008	0	0	736	11662	27070	144464	144988	146638
0702HerculesBlock 2004	0	0	18161	27427	0	0	0	0
0802HerculesBlock2006	0	0	19481	17893	44729	44669	0	0
0902HerculesBlock2008	0	0	18810	17276	16905	16883	62342	60255
0703JointWarfighterSupportBlock2004	0	0	24139	12861	0	0	0	0
0803JointWarfighterSupportBlock 2006	0	0	0	11784	23644	12292	0	0
0903JointWarfighterSupportBlock2008	0	0	0	0	0	12292	28530	30502
0204JointNationalIntegrationCenter(JNIC)	0	0	79122	85876	85236	92228	91283	99443
0602ProgramOperations	0	0	15476	16197	20345	20619	22192	24113

A.MissionDescriptionandBudgetItemJustification

FundingforthiseffortwaspreviouslycapturedundertheBallisticMissileDefenseSystemSegmentProgramElement(PE0603880C).

BasedonPresidentialdirection,MDAisdevelopinganinitialdefensiveoperationalcapabilitythat isbasedontheBMDSTestBedandaugmentedwithadditionaldevelopmentassets.MDAwill continue to employ the Test Bed for testing beyond initial fielding to evolve an integrated, layered Ballistic Missile Defense capability.

TheBallisticMissileDefense(BMD)ProductsProgramElement(PE)providestheresourceto define, integrate, test, demonstrate and evolve the multi-layered BMDScapable of defending the United States, deployed forces, friends, and allies. The BMD Products mission will be comprised of four primary projects: C2BMC, Joint Warfighter, Joint National Integration Center and Hercules. Through the employment of the Missile Defense National Team (MDNT), a single, integrated layered Ballistic Missile Defense System (BMDS) will be acquired. The MDNT will develop and verify BMD S level designs and products for all ground, sea, air and space based elements through the use of models and the BMDSTest Bed. The flowdown of BMD System Capability Specifications resulting from MDNT efforts in Systems Engineering & Integration (SE&I) Command, Control and Battle Management and Communications (C2BMC) will guide the integration of elements into the BMDS system, the BMDSC2BMC architecture, and the BMDSTest Bed.

TheBMDS Command, Control, Battle Management and Communications (C2BMC) element is the integrating function across all BMD S elements. It is also the function that integrates the BMDS into the C2 structure of the Combatant Commanders and into that of allies and friends. The C2BMC role in BMD S is as follows:

- Provides Planning, Control, Monitoring, and Execution of the BMDS
- Provides connectivity and information exchange between external elements and components of the BMDS
- Provides the capability to operate the elements in an integrated, layered, fashion, and
- Provides the Human in Control (HIC) to BMDS.

UNCLASSIFIED

MDA Exhibit R -2 RDT & E Budget Item Justification	Date February 2003
---	------------------------------

APPROPRIATION/BUDGET ACTIVITY 4. Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603889C Ballistic Missile Defense Products
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A Missile Defense National Team for C2BMC (MDNTB) was assembled to assist MDA with this project. The MDNTB, consisting of MDA, a defense contractor team (MDNTB (I)), Federally Funded Research and Development Centers (FFRDC), University Affiliated Research Centers (UARC) and Scientific Engineering and Technical Assistance (SETA) providers, will develop and deliver a flexible integrated BMD SC2 BMC.

The Joint Warfighter Support program ensures that warfighter operational perspectives and concerns are reflected in the development of Ballistic Missile Defense (BMD) capabilities. The Deputy for Force Structure Integration and Deployment (TR) works with the Combatant Commanders, Services and Joint Staff through seminars, wargames, and exercises to achieve this goal. Through interaction, areas of improvement in BMD capability are identified for action. This project also supports planning initial defensive operations, integration of SPACECOM/NORTHCOM in required wargames, tabletops, experiments, and System Integrated Tests and Hardware in the Loop Tests required for enhanced use of JNIC in support of operational concept development.

The Joint National Integration Center (JNIC) operates as the field-operating agency of MDA and maintains a world-class research, development, test and evaluation and rapid prototyping center. The center consists of a highly secure consolidated research and development building and a support building totaling almost a million square feet. It provides MDA with a high performance computing capability and a worldwide secure communications connectivity throughout the missile defense community. The JNIC is a premier modeling and simulation and software development center for missile defense.

Project Hercules is a national effort to develop robust detection, tracking, and discrimination algorithms to counter off-nominal and evolving missile threats. Hercules is also developing a physics-based Decision Architecture, which applies advanced decision theory to future BMD SC command, control, and battle management (C2BM) concepts. In addition to a general program to develop algorithms useful against targets in all phases of flight, Hercules has specific projects for developing algorithms for forward based sensors, the Decision Architecture, and mitigating countermeasures. Hercules develops algorithms to enhance BMD SC element capabilities in Block 04, 06, 08 and beyond and will provide these algorithms to the BMD SC elements for insertion into their respective programs.

Program Operations under this project covers personnel and related support costs, statutory and fiscal requirements. May include funding for government civilians performing program-wide oversight functions such as contracting, program integration, safety, quality and mission assurance at Missile Defense Agency (MDA); cost estimating; audit; technology integration across all MDA projects; and assessment of schedule, cost and performance, documentation of related programmatic issues and, foreign currency fluctuations on limited number of foreign contracts. Also includes funding for charges on canceled appropriations in accordance with Public Law 101-510.

B. Program Change Summary	FY2002	FY2003	FY 2004	FY2005
Previous President's Budget (FY2003 PB)	0	0	0	0
Current President's Budget (FY2004 PB)	0	0	343644	384763
Total Adjustments	0	0	343644	384763
Congressional Specific Program Adjustments	0	0	0	0
Congressional Undistributed Adjustments	0	0	0	0
Reprogrammings	0	0	343644	384763
SBIR/STTR Transfer	0	0	0	0

Funding for this effort was previously captured under the Ballistic Missile Defense System Segment Program Element (PE0603880C).

UNCLASSIFIED

MDA Exhibit R -2 ARDT&E Project Justification	Date February 2003
--	------------------------------

APPROPRIATION/BUDGET ACTIVITY 4. Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603889C Ballistic Missile Defense Products
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COST (\$ in Thousands)	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
0701 Command and Control, Battle Management and Communications (C2BMC) Block 2004	0	0	114472	79306	0	0	0	0
RDT&E Articles Qty	0	0	3	2	0	0	0	0

A. Mission Description and Budget Item Justification

Beginning in FY2004, funding for this effort will transition from BMD Systems Program Element (PE) (0603880C - Project 1010) to the new Ballistic Missile Defense Products PE (0603889C - Project 0701).

The BMDSC2 provides a flexible, integrated component to plan, direct, control and monitor missile defense activities. C2 sets the framework for all subordinate commands' actions, including decisions concerning the defense course of actions; for relay down, consistent doctrine, etc. In addition, it provides the means to quickly re-plan and adapt to changing mission requirements. C2 develops the operational warfighting aids required for the command structure to formulate and implement informed decisions. BMDSC2 integrates, where applicable, new capabilities into National C2 Systems, Global Command and Control System (GCCS), Theater Battle Management Core Systems (TBMCS), North American Air Defense/US Combatant Commander Space Command Warfighter Support System (N/UWSS), Joint Defensive Planner (JDP) and other relevant C2 mission applications. The BMDSC2 also integrates the Combatant Commanders, North American Treaty Organization (NATO) and other allies, friends, and other external systems to which BMDSC2 will connect. Block 2004 C2 component provides prototype support to Combatant Commanders. This may change as a result of annual Block capability reviews.

The BMDSC2 will substantially enhance BMD effectiveness beyond that achievable by stand-alone systems. The BM component integrates skill chain functions (surveillance, detect/track/classify, engage and assess) across the layered defenses (boost, mid-course, terminal, and external sensors (Space Based Infrared System Low - SBIRSLow)) and evolves with the BMD elements. Initially, BM will deliver the hardware/software (HW/SW) necessary to provide the means for executing pre-planned responses by integrating available information to provide the user with increased automation capability and ability to integrate information from increasingly diverse resources. BM will eventually provide a highly flexible and configurable framework for real-time, adaptive coordination of missile defense assets, while also supporting the incorporation of new elements. Block 2004 BM component currently plans to integrate Ground Missile Defense System (GMD), Theater High Altitude Air Defense (THAAD), Airborne Laser (ABL), Patriot 3 (PAC-3) Interceptor, Aegis BMD, Space Based Infrared System Low - SBIRSLow, and Defense Support Program (DSP). This may change as a result of annual Block capability reviews.

The BMDSC communication efforts will consolidate, refine requirements, and develop upgrade to existing communications systems that are being developed by the BMDSC. It is responsible for developing capabilities that will allow all components to exchange data, and to permit C2 orders to be transmitted to the weapon and sensor systems. Delivery of the Joint Range Extension (JRE) long-haul communications capability during the FY02/FY03 timeframe is critical, and timely, warfighter need in this area. The communication network(s) will seamlessly connect BMDSC assets and link them with other applicable DoD and non-DoD networks and assets as required by optimizing the use of existing and future data and information conduits and protocols such as the Global Information Grid.

The desired Block 2004 BMDSC2 BMC capabilities are as follows:

-C2: a Common Operational Picture (COP); Dissemination of BMDSC Early Warning and Impact Point Prediction (IPP)/Launch Point Estimate (LPE) data to BMDSC elements; Set weapons release conditions and Disseminate Weapons Release Conditions to BMDSC Elements; Deliberate and Dynamic Planning using Joint Defense Planner (JDP); Analyze BMD plan using JEDA (Joint Engine for Defense Analysis); and Collaborate Plan with Army Missile Defense Warning System (AMDWS) and Area Air Defense Commander (AADC).

-BM: Track Correlation/Fusion; Track/Mid-Course Feature Handover and Precision Cue; Threat Object Cluster Discrimination and Classification.

UNCLASSIFIED

MDA Exhibit R -2 ARDT&E Project Justification	Date February 2003
--	------------------------------

APPROPRIATION/BUDGET ACTIVITY 4. Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603889C Ballistic Missile Defense Products
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-Comms: Integrated Global Command Network (GCN)/Defense Information System Network (DISN)/Link 16 and other Networks; Limited RT Network Management Monitoring; and Message Format Conversion.

B. Accomplishments/Planned Program

	FY2002	FY2003	FY2004	FY2005
Missile Defense National Team BMC2/C (MDNTB(I))			57769	42635
RDT&E Articles (Quantity)			3	2

RDT&E Articles

- FY2004: BMDSC2BMCElement Spirals 4.3 and 4.4, one BMDSC2BMCSuite;
- FY2005: BMDSC2BMCElement Spiral 4.5 and one BMDSC2BMCSuite.

The Missile Defense National Team for C2BMC (MDNTB(I)) will deliver BMDSC2BMCElement definition, system design, planning for the content of each Block as well as the integration of C2BMC components. Four major activities shall be completed: 1) define the BMDSC2BMCElement Capabilities and the evolutionary plan for achieving those capabilities; 2) develop, integrate and test a supportable Test Bed System Level C2BMC capability that could also be deployed in the event of initial defensive operations; 3) support demonstrations and experiments; 4) define the approach to support the initial defensive operations capabilities and define the components and attributes of the necessary acquisition package for transitioning the BMDSC2BMC to full-scale development and deployment.

FY2004:

- To achieve the above objectives, the MDNTB(I) shall develop and provide the Block 2004 BMDSC2BMC system architecture and operational architecture description data to include BMDSC2BMCElement and interfaced data for each BMDSElement, and for the Objective BMDSC2BMCElement as necessary. Block 2004 shall consist of five (5) software spirals (4.1 through 4.5) and will feature improvements to the BMDSC2 system. Spiral 4.3 (Situational Awareness and Execution) and Spiral 4.4 (Sensor Cueing) are planned for delivery in FY2004. Work on the Objective Architectures shall be accomplished as required.
- Develop a new stand-alone C2BMC suite prototype to provide a BMDSC2BMC capability; and weapons system/sensors system BMC2CHW/SW that perform as components of the C2BMCElement.
- Operate and upgrade the C2BMC -Experimental (C2BMC -X) environment at the JNIC to perform/support demonstrations, experiments (including technology insertion), exercises, wargames, and user assessments.
- Operate and upgrade the two Development and Testing (D&T) laboratories and the three Integration and Testing (I&T) laboratories at Huntsville, AL, and Colorado Springs, CO., for BMDSC2BMC Test Bed prototype development. One of the C2BMC I&T Suites will double as the BMDSC2BMCSuite at the JNIC.
- Perform analysis of current deployment capabilities and logistics requirements of the C2BMC composite element and impact analysis for deploying the C2BMCElement for an initial defensive operations capability and the production version of the deployable system.

FY2005:

- Continued development of the Block 2004 BMDSC2BMC system architecture and operational architecture description data to include BMDSC2BMCElement and interfaced data for each BMDSElement, and for the Objective BMDSC2BMCElement. Block 2004 shall consist of five (5) software spirals (4.1 through 4.5) and will feature improvements to the BMDSC2 system. Spiral 4.5 (Element GTOM) is planned for FY2005. Work on the Objective Architectures shall be accomplished as required.

UNCLASSIFIED

MDA Exhibit R -2 ARDT&E Project Justification	Date February 2003
--	------------------------------

APPROPRIATION/BUDGET ACTIVITY 4. Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603889C Ballistic Missile Defense Products
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-Develop a new stand-alone C2BMC suite prototype to provide a BMDSC2BMC capability; and weapons system/sensors system BMC2CHW/SW that performs as components of the C2BMC element.

-Continue to operate and upgrade the C2BMC -Experimental (C2BMC -X) environment at the JNIC to perform/support demonstrations, experiments (including technology insertion), exercises, war games, and user assessments.

-Continue to operate and upgrade the two Development and Testing (D&T) laboratories and the three Integration and Testing (I&T) laboratories at Huntsville, AL, and Colorado Springs, CO., for BMDSC2BMC Test Bed prototype development. One of the C2BMC I&T Suites will double as the BMDSC2BMC Suite at the JNIC.

-Continue to perform analysis of current deployment capabilities and logistics requirements of the C2BMC composite element and impact analysis for deploying the C2BMC element for an initial defensive operations capability and the production version of the deployable system.

	FY2002	FY2003	FY2004	FY2005
BMDSC2BMC Products			50075	32020
RDT&E Articles (Quantity)				

BMDSC2BMC Products funds non -MDNTB(I) activities in support of Block 2004 BMDSC2BMC development and validation.

FY2004:

-To achieve this effort, the Block 2004 BMDSC2BMC elements shall provide C2 capability for planning, situational awareness, and control, BMC capability for track correlation and execution of preplanned responses, and communications among C2 nodes, BM nodes, Block 2004 sensors and Block 2004 weapons systems. It shall include an initial capability to leverage and incorporate the data from multiple sensors (sensor netting) to improve track correlation quality and target discrimination.

-Enhance system level tracking and discrimination capability to include Improved/Precision Cueing for Aegis BMD to GMD.

-Design and integrate Sensor Netting and Early Warning capabilities into the Block 2004 C2BMC. This effort shall also incorporate, as appropriate, products developed by Project Hercules. Perform Sensor Netting work including coding and productizing Hercules algorithms for the BMDSTest Bed; Discrimination Fusion, track fusion, sensor registration and advanced Sensor Netting engineering validation. Continue Benchmark project management.

-Establish Global Command & Control System -Missile Defense (GCCS -MD) integration efforts with DISA, and develop and field GCCS -MD mission applications. Continued development and integration of Joint Data Planner into GCCS. Continue Early Warning project focusing on technical data package (functional specifications) and finalizing the Early Warning Master implementation Plan.

-Design and integrate JRE capability for Aegis BMD (Block 2004). Funds Navy non -BMDS program to support BMDS needs.

-Embed the JRE capability into BMDS, and continue to update the JRE Application Protocol (JREAP). Initiated development of JRE capability for Aegis BMD.

-Complete JRE standard development and testing (Block 2004) in order to enhance BMDS situational awareness by extending Link 16 information between the Services' major C2 nodes beyond line of sight.

UNCLASSIFIED

MDA Exhibit R -2 ARDT&E Project Justification	Date February 2003
--	------------------------------

APPROPRIATION/BUDGET ACTIVITY 4. Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603889C Ballistic Missile Defense Products
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-Develop and test the communications integration of other elements and test environment of the BMC2 C2 Test Bed to ensure high availability of communications for the system.

FY2005:
 -Continue solicitation for C2 BMC new technology experiments in the C2 BMC -X laboratory.
 -Continue work on BMDS Information Technology Migration study to support independent technology insertions. Continue cooperative analysis on NATO (BMC2) functions required to integrate NATO Air Command and Control System integration into BMDS. Continue TMD and Strategic Missile Defense Data Interoperability Assessment program. Continue GE (EAD) Annex C program to jointly develop BMC3 functions required to integrate German AFTMD capabilities into BMDS. Continue Joint Technical Architecture (JTA) efforts to develop standard interface profiles for the Objective BMDS.
 -Continue ISC2 program integration engineering analysis.
 -Continue to develop long -haul communications requirement for the BMDS. Support DISA efforts to implement a global communication capability, interconnecting the theaters, Combatant Commanders, GMD and the national level BM/C2/Ce element node at the JNIC.
 -Continue BMDS Information Assurance/Computer Network Defense (IA/CND) efforts begun in FY02. Update IA/CND Implementation plan and threat/risk assessment. Perform IA/CND Architecture Design. Evaluate BMDS component compliance with architecture.

	FY2002	FY2003	FY2004	FY2005
FFRDC and SETA Support			6628	4651
RDT&E Articles (Quantity)				

FY2004:
 -Funding represents support of 15 Staff Technical Equivalent (STE) FFRDC and 15 SETA personnel.

FY2005:
 -Funding represents support of 11 STE FFRDC and personnel and 10 SETA personnel.

UNCLASSIFIED

MDAExhibitR -2ARDT&EProjectJustification	Date February2003
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APPROPRIATION/BUDGETACTIVITY 4.Advanced ComponentDevelopmentandPrototypes(ACD&P)	R-INOMENCLATURE 0603889CBallisticMissileDefenseProducts
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C.OtherProgramFundingSummary										
	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009	To Complete	Total Cost
PE0603175CBallisticMissileDefense Technology	145021	151130	240820	205791	200956	247990	287864	306472		
PE0603869CMeadsConcepts -Dem/Val	0	114781	0	0	0	0	0	0		
PE0603879CAdvancedConcepts, EvaluationsandSystems	0	0	151696	216778	166308	193949	241947	234484		
PE0603880CBallisticMissileDefense SystemSegment	790535	1046652	0	0	0	0	0	0		
PE0603881 CBallisticMissileDefense TerminalDefenseSegment	195800	136399	810440	924356	985514	805785	558071	371649		
PE0603882CBallisticMissileDefense MidcourseDefenseSegment	3655089	3103844	3613266	3841412	2078522	1908511	1482389	1437923		
PE0603883CB allisticMissileDefenseBoost DefenseSegment	583463	718036	626264	653612	755163	665772	477109	354346		
PE0603884CBallisticMissileDefense Sensors	312973	350436	438242	562752	706514	1043454	1152740	1261906		
PE0603886CBallisticMissileDefense SystemInterceptors	0	0	301052	541178	1127180	1729613	2558327	2904096		
PE0603890CBallisticMissileDefense SystemEngineeringandIntegration	0	0	483996	522458	604445	628594	703055	706501		
PE0603888CBallisticMissileDefenseTest andTargets	0	0	611522	711181	661416	643302	639839	672396		
PE0604865CPatriotPAC -3TheaterMissile DefenseAcquisition -EMD	130630	176155	0	0	0	0	0	0		
PE0604867CNavyAreaTheaterMissile Defense -EMD	96121	0	0	0	0	0	0	0		
PE0605502CSmallBusinessInnovative Research -MDA	145102	0	0	0	0	0	0	0		
PE0901585CPentagonReservation	6381	7432	14481	13384	12758	12850	13158	13476		
PE0901598CManagementHeadquarters - MDA	30191	25365	93441	101373	114107	121743	128972	133499		
PE0604861CTheaterHigh -AltitudeArea DefenseSystem -TMD -EMD	818632	888323	0	0	0	0	0	0		

UNCLASSIFIED

MDA Exhibit R -2 ARDT & E Project Justification	Date February 2003
---	-----------------------

APPROPRIATION/BUDGET ACTIVITY 4. Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603889C Ballistic Missile Defense Products
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D. Acquisition Strategy

Command, Control, Battle Management and Communications (C2BMC) will continue to follow the MDA's capability-based acquisition strategy that emphasizes assessment, spiral development testing and evolutionary acquisition through the definition of two-year capability blocks.

The design and development of a BMDS Command, Control, Battle Management and Communication Architecture and System Specifications is a collaborative effort. The strategy to require the Missile Defense National Team BM/C2/C (MDNTB(I)) to perform the engineering and delivery of an executable C2BMC Test Bed, C2BMC Block capability specifications, design specifications and interface control documents for the BMDS. The MDNT will be composed of two industry teams (MDNTB(I) & MDNTS(I)), major defense contractors, engineers from Federally Funded Research and Development Centers (FFRDC), University Affiliated Research Centers (UARC) and System Engineering and Technical Assistance (SETA) defense contractors, and the government.

The intent is to develop a fully capable BMDS Test Bed while retaining development capability that can be used for initial defensive operations. BMDS C2BMC capability can be transitioned into further operational force structure via coordination with the Services and their acquisition community so they can plan, budget and procure necessary HW/SW for operational deployed and sustained forces.

UNCLASSIFIED

MDAExhibitR -3RDT&EProjectCostAnalysis									Date February2003			
APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDevelopmentandPrototypes(ACD&P)					R-1NOMENCLATURE 0603889CBallisticMissileDefenseProduct s							
I.ProductDevelopmentCost(\$inThousands)												
CostCategories:	Contract Method &Type	Performing Activity& Location	Total PYs Cost	FY2003 Cost	FY2003 Award Date	FY2004 Cost	FY2004 Award Date	FY2005 Cost	FY2005 Award Date	Costto Complete	Total Cost	Target Valueof Contract
MissileDefenseNa tionalTeam BMC2/C(MDNTB(I))												
MDNTB(I)	SS/CPAF	MDNTB(I)/Gaith`burg,MD;Arl,VA				57769	1/2Q	42635	1/2Q	TBD	100404	TBD
BMDSC2BMCPProducts												
C2/BM/CProducts	Various	Various/Various				50075	1/4Q	32020	1/4Q	TBD	82095	TBD
SubtotalProductDevelopment			0	0		107844		74655			182499	
Remarks												
II.SupportCostsCost(\$inThousands)												
CostCategories:	Contract Method &Type	Performing Activity& Location	Total PYs Cost	FY2003 Cost	FY2003 Award Date	FY2004 Cost	FY2004 Award Date	FY2005 Cost	FY2005 Award Date	Costto Complete	Total Cost	Target Valueof Contract
FFRDCandSETASupport												
FFRDC	Various	Mitre,others/MDA HQ/Arlington,VA				3628	1/2Q	2651	1/2Q	TBD	6279	TBD
SETA	Various	Sparta/CSC/MDA HQ/Arlington,VA				3000	1/2Q	2000	1/2Q	TBD	5000	TBD
SubtotalSupportCosts			0	0		6628		4651			11279	
Remarks												
Above represents FFRDC and SETA contractors support provided at MDAHQ.												

UNCLASSIFIED

MDAExhibitR -3RDT&EProjectCostAnalysis										Date February2003		
APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDevelopmentandPrototypes(ACD&P)					R-1NOMENCLATURE 0603889CBallisticMissileDefenseProduct s							
III.TestandEvaluationCost(\$inThousands)												
CostCategories:	Contract Method &Type	Performing Activity& Location	Total PYs Cost	FY2003 Cost	FY2003 Award Date	FY2004 Cost	FY2004 Award Date	FY2005 Cost	FY2005 Award Date	Costto Complete	Total Cost	Target Valueof Contract
SubtotalTestandEvaluation												
Remarks												
IV.ManagementServicesCost(\$inThousands)												
CostCategories:	Contract Method &Type	Performing Activity& Location	Total PYs Cost	FY2003 Cost	FY2003 Award Date	FY2004 Cost	FY2004 Award Date	FY2005 Cost	FY2005 Award Date	Costto Complete	Total Cost	Target Valueof Contract
SubtotalManagementServices												
Remarks												
ProjectTotalCost			0	0		114472		79306			193778	
Remarks												

UNCLASSIFIED

MDAExhibitR -4ScheduleProfile	Date February2003
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APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDevelopmentandPrototypes(ACD&P)	R-1NOMENCLATURE 0603889CBallisticMissileDefenseProducts
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FiscalYear	2002				2003				2004				2005				2006				2007				2008				2009							
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
Deliveries																																				
Spiral4.1Software							▲																													
Spiral4.2Software								▲																												
Spiral4.3Software											▲																									
Spiral4.4Software												▲																								
Spiral4.5Software															▲																					
Block2004																																				
BMDSC2BMCMModeling&Simulation																																				
Block2004BMDSC2/BM/CElement DesignReview					▲																															
Deployment&LogisticsSupptPlanning																																				
Spiral4.1Development,Testing& Integration																																				
Spiral4.2Development,Testing& Integration																																				
Spiral4.3Development,Testing& Integration																																				
Spiral4.4Development,Testing& Integration																																				
Spiral4.5Development,Testing& Integration																																				

UNCLASSIFIED

MDAExhibitR -4AScheduleDetail						Date February2003		
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APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDevelopmentandPrototypes(ACD&P)				R-1NOMENCLATURE 0603889CBallisticMissileDefenseProducts				
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ScheduleProfile	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
Deliveries								
Spiral4.1Software		3Q						
Spiral4.2Software			1Q					
Spiral4.3Software			3Q					
Spiral4.4Software				1Q				
Spiral4.5Software				3Q				
Block2004								
BMDSC2BMCModeling&Simulation		3Q-4Q	1Q-4Q	1Q-4Q				
Block2004BMDSC2/BM/CElementDesign Review		1Q						
Deployment&LogisticsSupptPlanning		1Q-4Q	1Q-4Q	1Q-4Q				
Spiral4.1Development,Testing&Integration		1Q-3Q						
Spiral4.2Development,Testing&Integration		2Q-4Q						
Spiral4.3Development,Testing&Integration		4Q	1Q-2Q					
Spiral4.4Development,Testing&Integration			2Q-4Q					
Spiral4.5Development,Testing&Integration			4Q	1Q-2Q				

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UNCLASSIFIED

MDA Exhibit R -2 ARDT&E Project Justification	Date February 2003
--	------------------------------

APPROPRIATION/BUDGET ACTIVITY 4. Advanced Component Development and Prototypes (ACD&P)	R-INOMENCLATURE 0603889C Ballistic Missile Defense Products
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COST (\$ in Thousands)	FY2002	FY2003	FY2004	FY2005	FY 2006	FY2007	FY2008	FY2009
0801 Command and Control, Battle Management and Communications (C2BMC) Block 2006	0	0	53247	104481	115707	0	0	0
RDT&E Articles Qty	0	0	0	2	2	0	0	0

A. Mission Description and Budget Item Justification

The Block 2006 BMDSC2 will build on the previously achieved Block 2004 BMDSC2 architecture and capabilities. Block 2006 C2 capabilities will feature Distributed and Collaborative Planning Tools and evolve from Block 2004 Stand -Alone Planning tools. Specific capabilities may change as a result of annual Block capability reviews.

The Block 2006 BMDSC2 will also build on previously achieved Block 2004 capabilities. Planned improvements in Sensor Netting will take Block 2004 Track Correlation capabilities and evolve them into true Radar and Dissimilar Sensor Fusion for improved discrimination capability.

Similarly, Block 2006 BMDSC2 communication efforts will build on and expand on existing Block 2004 Communications networks and capabilities. Specifically, a dedicated BMDSC2 discrimination Network will emerge as well as real -time BMDSC2 network monitoring. Finally, communications networks of friends and allies will begin to be connected to the BMDSC2 communications grid.

Communication efforts with the Joint Range Extension (JRE) long -haul communications capability will continue. The Communication network(s) will connect BMDSC2 assets and link them with other applicable DoD and non -DoD networks and assets as required.

More specific desired Block 2006 capabilities are as follows:

-C2: Automated Coordination of Collateral Missions; Automated Dynamic BMDSC2 Replanning in Minutes; Automated Aids for Weapons Release and Control.

-BM: Post -Commit GTOM to GMD, THAAD & SM -3KVs; Data Fusion from Multiple RF Sensors for Improved Discrimination; Bidding Scheme for Engagement Coordination, and Launch on Remote.

-Comms: BMDSC2 Discrimination Network in -place; Real -time BMDSC2 Network Monitoring; Quality of Service (QoS) Implemented.

B. Accomplishments/Planned Program

	FY2002	FY2003	FY2004	FY2005
Missile Defense National Team BMC2/C			34562	39560
RDT&E Articles (Quantity)				2

RDT&E Articles: BMDSC2 BMCElement Spirals 6.1 software delivery; and the creation of another BMDSC2 BMCSuite.

The Missile Defense National Team for BMC2/C (MDN TB(I)) will accelerate Block 2006 BMDSC2 BMCElement planning, and spiral development. Four major activities shall be completed: 1) define the BMDSC2 BMCElement Capabilities and the evolutionary plan for achieving those capabilities; 2) develop, integrate and test as supportable Test Bed System Level C2 BMC capability that could also be deployed in the event of initial defensive operations; 3) support demonstrations and experiments; 4) define the approach to support initial defensive operations deployable capability and define the components and attributes of the necessary acquisition package for transitioning the BMDSC2 BMC to full -scaled development and deployment.

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MDA Exhibit R -2 ARDT & E Project Justification	Date February 2003
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APPROPRIATION/BUDGET ACTIVITY 4. Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603889C Ballistic Missile Defense Products
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FY2004:
 -To achieve the above objectives, the MDNTB shall develop and provide C2BMC system architecture and operational architecture description data to include C2BMC element and interface data for each BMD element. Work on Block 2006 will accelerate with the development of Block 2006 Advance Study Notices (ASNs) and Advance Change Notices (ACNs) to support BMD elements integration. Initial ASNs and ACNs will focus on the planned production of initial Spiral 6.1 (FY2005) and Spiral 6.2 (FY2006) software deliveries. Work on the Objective Architectures shall be accomplished as necessary.

-Support will begin on Advance Change Notice (ASN) development for initial integration of allied missile defense systems. This may change due to annual Block capability reviews.

-Support will be ongoing for the C2BMC Integration Test Center and C2BMC -X Battle lab in accordance with MDNTB directed updates, interfaces and connectivity requirements and software purchases and licenses. Hardware and software modernization program will be ongoing for the above mentioned labs as well as for the Huntsville, AL, and Colorado Springs, CO, software Development, Testing and Integration laboratories.

FY2005:
 -Continue to develop and refine the Block 2006 BMDSC2BMC system architecture and operational architecture description data to include C2BMC element and interface data for each BMD element. Work on Block 2006 continues to accelerate with the initial development and testing of Spiral 6.1 software products and preliminary spiral content trades for Spiral 6.2. Work on the Objective Architectures shall be accomplished as necessary.

-Continue effort on Advance Change Notice (ASN) development for initial integration of allied missile defense systems. This may change due to annual Block capability reviews.

-Continue support for the C2BMC Integration Test Center and C2BMC -X Battle lab in accordance with MDNTB directed updates, interfaces and connectivity requirements and software purchases and licenses. Hardware and software modernization program will be ongoing for the above mentioned labs as well as for the Huntsville, AL, and Colorado Springs, CO, software Development, Testing and Integration laboratories.

	FY2002	FY2003	FY2004	FY2005
BMDSC2BMC Products				31335
RDT&E Articles (Quantity)				

BMDSC2BMC Products funds BMDSC complimentary efforts of MDNTB (I) elements and agencies to support and/or integrate with BMDSC and C2BMC.

The Block 2006 C2BMC elements shall provide C2 capability for planning, situational awareness, and control, BM capability for track correlation and execution of preplanned responses, and communications among C2 nodes, BM nodes, Block 2006 sensors and Block 2006 weapons systems. It will continue to leverage and incorporate the data from multiple sensors (sensor netting) to improve track correlation quality and target discrimination.

-Develop dissimilar source fusion capability focusing on track fusion and discrimination fusion.

-Continue integration of Sensor Netting and Early Warning capabilities into the Block 2006 BMDSC2BMC. This effort shall also incorporate, as appropriate, products developed by Project Hercules. Perform Sensor Netting work including coding and productizing Hercules algorithms for the BMDSC Test Bed; Discrimination Fusion, track fusion, sensor registration and advanced Sensor Netting engineering validation.

UNCLASSIFIED

MDA Exhibit R -2 ARDT&E Project Justification	Date February 2003
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APPROPRIATION/BUDGET ACTIVITY 4. Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603889C Ballistic Missile Defense Products
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-Continue work on BMDS Information Technology Migration study to support independent technology insertions. Continue cooperative analysis on NATO (BMC2) functions required to integrate NATO Air Command and Control System integration into BMDS. Continue TMD and Strategic Missile Defense Data Interoperability Assessment program. Continue GE (EAD) Annex C program to jointly develop BMC3 functions required to integrate German AFTMD capabilities into BMDS. Continue Joint Technical Architecture (JTA) effort to develop standard interface profiles for the Objective BMDS.

-Extend development of the BMC2C Test Bed to support operational exercises/initial defensive operations at JNIC for the Block.

-Develop and/or Procure HW/SW systems required to support the communications segment.

-Conduct studies and initiate development of Beyond Line of Sight capability in Joint Tactical Radio System.

-Continue to develop long-haul communications for the BMDS and the Global Command System. Support DISA effort to implement DISNA as part of the GIG and to interconnect the BMDS elements and the Combatant Commanders at the JNIC to support the Block.

-Continue BMDS Information Assurance/Computer Network Defense effort and initiate effort to develop a CNA capability to enhance BMDS hard kill capabilities.

-Continue solicitation for C2 BMC new technology experiments in the C2 BMC Laboratory.

-Continue ISC2 program integration engineering analysis and implementation.

	FY2002	FY2003	FY2004	FY2005
Algorithm Engineering & Validation			16279	29376
RDT&E Articles (Quantity)				

This funding will be used for engineering and validation of Sensor Netting and Integrated Fire Control/Battle Management algorithms and concepts to develop capabilities for the BMDS C2BM Suites. These requirements and changes needed in other elements will drive Advance Change Notices (ACNs) and Engineering Change Proposals (ECPs) to the elements. Specific activities to be funded include:

-Combined National Team research and development work with Project Hercules to adapt algorithms for C2BM Cuse.

-Experimentation and data analysis in a live Test Bed scenario utilizing IFT and other shots as appropriate and including multiple sensor elements utilizing the Project Hercules sidecars as well as the C2BM Test Bed node and capabilities from the GMDElement. These tests are complementary to and build upon Project Hercules work and will extend the Project Hercules tests into a realistic BMDS environment including both simulated and live data. Relative test complexity will grow significantly from 2004 to 2005, and the number of algorithms to be tested will double in that timeframe.

-Appropriation of these results into BMDS requirements for C2BM C Suites spirals and ACNs and ECPs for sensor element updates.

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MDA Exhibit R - 2 ARDT & E Project Justification							Date February 2003			
APPROPRIATION/BUDGET ACTIVITY 4. Advanced Component Development and Prototypes (ACD&P)				R-1 NOMENCLATURE 0603889C Ballistic Missile Defense Products						
	FY2002	FY2003	FY2004	FY2005						
FFRDC								1522		2252
RDT&E Articles (Quantity)										
Represents FFRDDC technical assistance provided to MDAHQ in support of Block 2006 efforts. Support shift towards Block 2006 as effort intensifies.										
	FY2002	FY2003	FY2004	FY2005						
SETA								884		1958
RDT&E Articles (Quantity)										
Represents SETA assistance provided to MDAHQ in support of Block 2006 efforts. Level of support increases as Block 2006 efforts ramp up.										
C. Other Program Funding Summary										
	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009	To Complete	Total Cost
PE0901598C Management Headquarters - MDA	30191	25365	93441	101373	114107	121743	128972	133499		
PE0603881C Ballistic Missile Defense Terminal Defense Segment	195800	136399	810440	924356	985514	805785	558071	371649		
PE0603882C Ballistic Missile Defense Midcourse Defense Segment	3655089	3103844	3613266	3841412	2078522	1908511	1482389	1437923		
PE0603883C Ballistic Missile Defense Boost Defense Segment	583463	718036	626264	653612	755163	665772	477109	354346		
PE0603884C Ballistic Missile Defense Sensors	312973	350436	438242	562752	706514	1043454	1152740	1261906		
PE0603886C Ballistic Missile Defense System Interceptors	0	0	301052	541178	1127180	1729613	2558327	2904096		
PE0603890C Ballistic Missile Defense System Engineering and Integration	0	0	483996	522458	604445	628594	703055	706501		
PE0603888C Ballistic Missile Defense Test and Targets	0	0	611522	711181	661416	643302	639839	672396		
PE0604861C Theater High -Altitude Area Defense System -TMD -EMD	818632	888323	0	0	0	0	0	0		

UNCLASSIFIED

MDA Exhibit R -2 ARDT&E Project Justification	Date February 2003
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APPROPRIATION/BUDGET ACTIVITY 4. Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603889C Ballistic Missile Defense Products
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PE0604865C Patriot PAC -3 Theater Missile Defense Acquisition -EMD	130630	176155	0	0	0	0	0	0	0		
PE0604867C Navy Area Theater Missile Defense -EMD	96121	0	0	0	0	0	0	0	0		
PE 0605502C Small Business Innovative Research -MDA	145102	0	0	0	0	0	0	0	0		
PE0901585C Pentagon Reservation	6381	7432	14481	13384	12758	12850	13158	13476			
PE0603869C Meads Concepts -Dem/Val	0	114781	0	0	0	0	0	0			
PE0603175C Ballistic Missile Defense Technology	145021	151130	240820	205791	200956	247990	287864	306472			
PE0603879C Advanced Concepts, Evaluations and Systems	0	0	151696	216778	166308	193949	241947	234484			
PE0603880C Ballistic Missile Defense System Segment	790535	1046652	0	0	0	0	0	0			

D. Acquisition Strategy

Command & Control, Battle Management and Communications (C2/BM/C) will continue to follow the MDA's capability -based acquisition strategy that emphasizes assessment, spiral -development testing and evolutionary acquisition through the definition of two -year capability blocks.

The design and development of a BMDSC Command and Control, Battle Management and Communication Architecture and System Specifications is a collaborative effort. The strategy requires the Missile Defense National Team BM/C2/C (MDNTB(I)) to perform the engineering and delivery of an executable C2/BM/C Test Bed, C2/BM/C Block capability specifications, design specifications and interface control documents for the BMDSC. The MDNT will be composed of two industry teams (MDNTB(I) & MDNTS(I)), major defense contractors, engineers from Federally Funded Research and Development Centers (FFRDC), University Affiliated Research Centers (UARC) and System Engineering and Technical Assistance (SETA) defense contractors, and the government.

The intent is to develop a fully capable BMDSC Test Bed while retaining development capability that can be used for initial defensive operations. BMDSC2/BM/C capability can be transitioned into further operational force structure via coordination with the Services and their acquisition community so they can plan, budget and procure necessary HW/SW for operational deployed and sustained forces.

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MDA Exhibit R - 3RDT & E Project Cost Analysis										Date February 2003		
APPROPRIATION/BUDGET ACTIVITY 4. Advanced Component Development and Prototypes (ACD&P)					R-1 NOMENCLATURE 0603889C Ballistic Missile Defense Products							
I. Product Development Cost (\$ in Thousands)												
Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY2003 Cost	FY2003 Award Date	FY2004 Cost	FY2004 Award Date	FY2005 Cost	FY2005 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Missile Defense National Team BMC2/C												
MDNTB(I)	SS/CPAF	LLMC/Arl, VA				34562	1/2Q	39560	1/2Q	TBD	74122	TBD
BMDSC2BMC Products												
C2BMC	Various	HQ/Arl, VA						31335	1/4Q	CONT.	31335	CONT.
Algorithm Engineering & Validation												
Algorithm Eng. & Validation	Various	Various/MDA HQ/MDNTB(I)/Arlington, VA				16279	1/2Q	29376	1/3Q	TBD	45655	TBD
Subtotal Product Development			0	0		50841		100271			151112	
Remarks												
II. Support Costs Cost (\$ in Thousands)												
Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY2003 Cost	FY2003 Award Date	FY2004 Cost	FY2004 Award Date	FY2005 Cost	FY2005 Award Date	Cost to Complete	Total Cost	Target Value of Contract
FFRDC												
FFRDC	Other	Various/MDA HQ, Arlington, VA				1522	1/2Q	2252	1/2Q		3774	
SETA												
SETA	Various	Sparta, CSC/MDA HQ, Arlington, VA				884	1/2Q	1958	1/2Q		2842	
Subtotal Support Costs			0	0		2406		4210			6616	
Remarks												

UNCLASSIFIED

MDAExhibitR -3RDT&EProjectCostAnalysis										Date February2003		
APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDevelopmenta ndPrototypes(ACD&P)					R-1NOMENCLATURE 0603889CBallisticMissileDefenseProducts							
III.TestandEvaluationCost(\$inThousands)												
CostCategories:	Contract Method &Type	Performing Activity& Location	Total PYs Cost	FY2003 Cost	FY2003 Award Date	FY2004 Cost	FY2004 Award Date	FY2005 Cost	FY2005 Award Date	Costto Complete	Total Cost	Target Valueof Contract
SubtotalTestandEvaluation												
Remarks												
IV.ManagementServices Cost(\$inThousands)												
CostCategories:	Contract Method &Type	Performing Activity& Location	Total PYs Cost	FY2003 Cost	FY2003 Award Date	FY2004 Cost	FY2004 Award Date	FY2005 Cost	FY2005 Award Date	Costto Complete	Total Cost	Target Valueof Contract
SubtotalManagementServices												
Remarks												
ProjectTotalCost			0	0		53247		104481			157728	
Remarks												

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MDAExhibitR -4AScheduleDetail	Date February2003
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APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDevelopmentandPrototypes(ACD&P)	R-1NOMENCLATURE 0603889CBallisticMissileDefenseProducts
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ScheduleProfile	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
Deliveries								
Spiral6.1Software				4Q				
Spiral6.2Software					2Q			
Spiral6.3Software					4Q			
Spiral6.4Software						2Q		
Spiral6.5Software						4Q		
Block2006								
BMDSC2BMCModeling&Simulation				1Q-4Q	1Q-4Q	1Q-4Q		
BlockDesignReview				2Q,3Q				
Deployment,LogisticsSupportPlanning			3Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q		
Spiral6.1Development,Testing&Integration				1Q-3Q				
Spiral6.2Development,Testing&Integration				3Q-4Q	1Q			
Spiral6.3Development,Testing&Integration				4Q	1Q-2Q			
Spiral6.4Development,Testing&Integration					3Q-4Q	1Q		
Spiral6.5Development,Testing&Integration						1Q-3Q		

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UNCLASSIFIED

MDA Exhibit R -2 ARDT&E Project Justification	Date February 2003
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APPROPRIATION/BUDGET ACTIVITY 4. Advanced Component Development and Prototypes (ACD&P)	R-INOMENCLATURE 0603889C Ballistic Missile Defense Products
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COST (\$ in Thousands)	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
0901 Command and Control, Battle Management and Communications (C2BMC) Block 2008	0	0	736	11662	27070	144464	144988	146638
RDT&E Articles Qty	0	0	0	0	0	0	0	0

A. Mission Description and Budget Item Justification

The Block 2008 BMDS C2 will build on the previously achieved Block 2006 BMDS C2 architecture and capabilities. Block 2008 C2 will feature Dynamic Re-Planning and evolves from the Block 2006 Distributed and Collaborative Planning capabilities. Specific capabilities may change as a result of annual Block capability reviews.

The Block 2008 BMDS BM will also build on previously achieved Block 2006 capabilities. Planned improvements in Sensor Netting will take Block 2006 Dissimilar Sensor Fusion and add Multi-spectral Data Fusion for improved discrimination capability, and add Engage-On-Remote to the warfighter's toolkit.

Similarly, Block 2008 BMDS Communication efforts will build on and expand on existing Block 2006 Communications networks and capabilities. Specifically, a Global Reach BMDS with Broadband SATCOM will be added to the existing BMDS Discrimination Network. Efforts will continue to connect allies and friends to the BMDS net.

Current desired Block 2008 capabilities are as follows:

-C2: Simultaneous Current and Future Planning; Automated Dynamic BMDS Replanning in Seconds; and Automated Logistics, Communications and Intelligence feeds for planning.

-BM: Multi-spectral Data Fusion; Engage On Remote; Kill Assessment.

-Comms: Global Reach BMDS with Broadband SATCOM; End-to-End Quality-of-Service (QoS) requirements met; RT Network Management & Control; and Dynamic QoS Negotiations.

B. Accomplishments/Planned Program

	FY2002	FY2003	FY2004	FY2005
Missile Defense National Team BMC2/C				10683
RDT&E Articles (Quantity)				

The Missile Defense National Team for BMC2/C (MDNTB) will initiate BMDS C2 BMC element definition, system design, planning for the Block 2008 content. Block 2008 activities planned include: commence initial Block 2008 BMDS C2 BMC element capabilities description and draft a revolutionary plan for achieving those capabilities; support Block 2008 BMDS C2 BMC preliminary demonstrations and experiments; and develop draft approach to support an initial defensive operations capability.

To achieve the above objectives, the MDNTB shall initiate development of a draft Block 2008 BMDS C2 BMC system architecture and operational architecture description data to include C2 BMC element and interface data for each BMD element, and for the Objective C2 BMC element. Work on the Objective Architecture shall be accomplished as requirements are defined.

UNCLASSIFIED

MDA Exhibit R -2 ARDT&E Project Justification	Date February 2003
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APPROPRIATION/BUDGET ACTIVITY 4. Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603889C Ballistic Missile Defense Products
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Support will be ongoing for the C2BMC Integration Test Center and C2BMC -XBattlelab in accordance with MDNTB directed updates, interfaces and connectivity requirements and software purchases and licenses.

Continue analysis of current deployment capabilities and logistics requirements of the C2BMC element and impact analysis for deploying the C2BMC element for an initial defensive operations capability and the production version of the deployable system.

	FY2002	FY2003	FY2004	FY2005
FFRDC			736	979
RDT&E Articles (Quantity)				

Represents FFRDC support provided to MDAHQ in support of Block 2008 and beyond efforts.

C. Other Program Funding Summary

	FY2002	FY2003	FY2004	FY2005	FY 2006	FY2007	FY2008	FY2009	To Complete	Total Cost
PE0603869C Meads Concepts -Dem/Val	0	114781	0	0	0	0	0	0		
PE0603175C Ballistic Missile Defense Technology	145021	151130	240820	205791	200956	247990	287864	306472		
PE0603880C Ballistic Missile Defense System Segment	790535	1046652	0	0	0	0	0	0		
PE0603881C Ballistic Missile Defense Terminal Defense Segment	195800	136399	810440	924356	985514	805785	558071	371649		
PE0603882C Ballistic Missile Defense Midcourse Defense Segment	3655089	3103844	3613266	3841412	2078522	1908511	1482389	1437923		
PE0603883C Ballistic Missile Defense Boost Defense Segment	583463	718036	626264	653612	755163	665772	477109	354346		
PE0603884C Ballistic Missile Defense Sensors	312973	350436	438242	562752	706514	1043454	1152740	1261906		
PE0603886C Ballistic Missile Defense System Interceptors	0	0	301052	541178	1127180	1729613	2558327	2904096		
PE0603890C Ballistic Missile Defense System Engineering and Integration	0	0	483996	522458	604445	628594	703055	706501		
PE0603888C Ballistic Missile Defense Test and Targets	0	0	611522	711181	661416	643302	639839	672396		

UNCLASSIFIED

MDA Exhibit R -2 ARDT&E Project Justification	Date February 2003
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APPROPRIATION/BUDGET ACTIVITY 4. Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603889C Ballistic Missile Defense Products
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PE0604861C Theater High -Altitude Area Defense System -TMD -EMD	818632	888323	0	0	0	0	0	0	0
PE0604865CPatriot PAC -3Theater Missile Defense Acquisition -EMD	130630	176155	0	0	0	0	0	0	0
PE0604867CNavy Area Theater Missile Defense -EMD	96121	0	0	0	0	0	0	0	0
PE0603879CAAdvanced Concepts, Evaluations and Systems	0	0	151696	216778	166308	193949	241947	234484	
PE0901585CPentagon Reservation	6381	7432	14481	13384	12758	12850	13158	13476	
PE0901598CManagement Headquarters - MDA	30191	25365	93441	101373	114107	121743	128972	133499	
PE0605502C Small Business Innovative Research -MDA	145102	0	0	0	0	0	0	0	

D. Acquisition Strategy

Command & Control, Battle Management and Communications (C2/BM/C) will continue to follow the MDA's capability -based acquisition strategy that emphasizes assessment, spiral -development testing and evolutionary acquisition through the definition of two -year capability blocks.

The design and development of a BMDSC Command and Control, Battle Management and Communication Architecture and System Specifications is a collaborative effort. The strategy requires the Missile Defense National Team BM/C2/C (MDNTB(I)) to perform the engineering and delivery of an executable C2/BM/C Test Bed, C2/BM/C Block capability specifications, design specifications and interface control documents for the BMDSC. The MDNT will be composed of two industry teams (MDNTB(I) & MDNTS(I)), major defense contractors, engineers from Federally Funded Research and Development Centers (FFRDC), University Affiliated Research Centers (UARC) and System Engineering and Technical Assistance (SETA) defense contractors, and the government.

The intent is to develop a fully capable BMDSC Test Bed while retaining development capability that can be used for initial defensive operations. BMDSC2/BM/C capability can be transitioned into further operational force structure via coordination with the Services and their acquisition community so they can plan, budget and procure necessary HW/SW for operational deployed and sustained forces.

UNCLASSIFIED

MDAExhibitR -3RDT&EProjectCostAnalysis										Date February2003		
APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDevelopmentandPrototypes(ACD&P)					R-INOMENCLATURE 0603889CBallisticMissileDefenseProducts							
I.ProductDevelopmentCost(\$inThousands)												
CostCategories:	Contract Method &Type	Performing Activity& Location	Total PYs Cost	FY2003 Cost	FY2003 Award Date	FY2004 Cost	FY2004 Award Date	FY2005 Cost	FY2005 Award Date	Costto Complete	Total Cost	Target Valueof Contract
MissileDefenseNationalTeam BMC2/C												
MDNTB(I)	SS/CPAF	MDNTB(I)/Rosslyn ,VA						10683	1Q	TBD	10683	TBD
SubtotalProductDevelopment			0	0		0		10683			10683	
Remarks												
II.SupportCostsCost(\$inThousands)												
CostCategories:	Contract Method &Type	Performing Activity& Location	Total PYs Cost	FY2003 Cost	FY2003 Award Date	FY2004 Cost	FY 2004 Award Date	FY2005 Cost	FY2005 Award Date	Costto Complete	Total Cost	Target Valueof Contract
FFRDC												
FFRDC	Various	Various/MDA HQ/Arlington,VA				736	1Q	979	1Q	TBD	1715	TBD
SubtotalSupportCosts			0	0		736		979			1715	
Remarks												
III.TestandEvaluationCost(\$inThousands)												
CostCategories:	Contract Method &Type	Performing Activity& Location	Total PYs Cost	FY2003 Cost	FY2003 Award Date	FY2004 Cost	FY2004 Award Date	FY2005 Cost	FY2005 Award Date	Costto Complete	Total Cost	Target Valueof Contract
SubtotalTestandEvaluation												
Remarks												

UNCLASSIFIED

MDAExhibitR -3RDT&EProjectCostAnalysis	Date February2003
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APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDevelopmentandPrototypes(ACD&P)	R-1NOMENCLATURE 0603889CBallisticMissileDefenseProducts
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IV.ManagementServicesCost(\$inThousands)												
Contract Method &Type	Performing Activity& Location	Total PYs Cost	FY2003 Cost	FY2003 Award Date	FY2004 Cost	FY2004 Award Date	FY2005 Cost	FY2005 Award Date	Costto Complete	Total Cost	Target Valueof Contract	
CostCategories:												
SubtotalManagementServices												

Remarks

ProjectTotalCost			0	0		736		11662			12398	
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Remarks

UNCLASSIFIED

MDAExhibitR -4AScheduleDetail						Date February2003		
APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDevelopmentandPrototypes(ACD&P)				R-INOMENCLATURE 0603889CBallisticMissileDefenseProducts				
ScheduleProfile	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
Deliveries								
Spiral8.1Software							1Q	
Spiral8.2Software							3Q	
Spiral8.3Software								1Q
Studies&Analyses								
Block2008BMDSC2BMC				4Q	1Q-4Q	1Q-2Q		
Block2008								
Spiral8.1Development,Testing&Integration						3Q-4Q	1Q	
Spiral8.2Development,Testing&Integration							1Q-3Q	
Spiral8.3Development,Testing&Integration							3Q-4Q	1Q

UNCLASSIFIED

MDA Exhibit R -2 ARDT&E Project Justification	Date February 2003
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APPROPRIATION/BUDGET ACTIVITY 4. Advanced Component Development and Prototypes (ACD&P)	R-INOMENCLATURE 0603889C Ballistic Missile Defense Products
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COST (\$ in Thousands)	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
0702 Hercules Block 2004	0	0	18161	27427	0	0	0	0
RDT&E Articles Qty	0	0	4	4	0	0	0	0

A. Mission Description and Budget Item Justification

Project Hercules is a national effort to develop robust detection, tracking, and discrimination algorithms to counter off-nominal and evolving missile threats. Hercules is also developing a physics-based Decision Architecture, which applies advanced decision theory to future BMDs command, control, and battle management (C2/BM) concepts. In addition to a general program to develop algorithms useful against targets in all phases of flight, Hercules has specific projects for developing algorithms for forward based sensors, the Decision Architecture, and mitigating countermeasures. Hercules develops algorithms to enhance BMDs element capabilities in Block 04, 06, 08 and beyond and will provide these algorithms to the BMDs elements for insertion into their respective programs.

This project was created as part of an approved program restructure starting in FY2004. FY2003 and prior funding was captured under PE0603880C Project 1053.

B. Accomplishments/Planned Program

	FY2002	FY2003	FY2004	FY2005
Algorithm Productization and Test			8539	7843
RDT&E Articles (Quantity)				

Beginning in FY2004, funding has been set aside to allow Algorithm Productization and Testing for integration into the Elements. The effort will involve the fielding of discrimination algorithms and advanced decision support systems to track objects, discriminate decoys from reentry vehicles in uncertain environments, and to fuse multi-source information.

	FY2002	FY2003	FY2004	FY2005
Project Hercules			9622	19584
RDT&E Articles (Quantity)			4	4

Project Hercules' Planned Accomplishments for FY2004 and FY2005 include:

- 1) three mid-course radar discrimination algorithms
- 2) three algorithms for Forward Based Radar discrimination
- 3) two algorithms for radar-to-radar and radar-to-kill vehicle handover and track association using feature data

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MDA Exhibit R -2 ARDT&E Project Justification							Date February 2003			
APPROPRIATION/BUDGET ACTIVITY 4. Advanced Component Development and Prototypes (ACD&P)					R-INOMENCLATURE 0603889C Ballistic Missile Defense Products					
C. Other Program Funding Summary										
	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009	To Complete	Total Cost
PE0603888C Ballistic Missile Defense Test and Targets	0	0	611522	711181	661416	643302	639839	672396		
PE0604861C Theater High -Altitude Area Defense System -TMD -EMD	818632	888323	0	0	0	0	0	0		
PE0604865C Patriot PAC -3 Theater Missile Defense Acquisition -EMD	130630	176155	0	0	0	0	0	0		
PE0604867C Navy Area Theater Missile Defense -EMD	96121	0	0	0	0	0	0	0		
PE 0605502C Small Business Innovative Research -MDA	145102	0	0	0	0	0	0	0		
PE0901585C Pentagon Reservation	6381	7432	14481	13384	12758	12850	13158	13476		
PE0901598C Management Headquarters - MDA	30191	25365	93441	101373	114107	121743	128972	133499		
PE0603879C Advanced Concepts, Evaluations and Systems	0	0	151696	216778	166308	193949	241947	234484		
PE0603880C Ballistic Missile Defense System Segment	790535	1046652	0	0	0	0	0	0		
PE0603881C Ballistic Missile Defense Terminal Defense Segment	195800	136399	810440	924356	985514	805785	558071	371649		
PE0603882C Ballistic Missile Defense Midcourse Defense Segment	3655089	3103844	3613266	3841412	2078522	1908511	1482389	1437923		
PE0603883C Ballistic Missile Defense Boost Defense Segment	583463	718036	626264	653612	755163	665772	477109	354346		
PE0603884C Ballistic Missile Defense Sensors	312973	350436	438242	562752	706514	1043454	1152740	1261906		
PE0603886C Ballistic Missile Defense System Interceptors	0	0	301052	541178	1127180	1729613	2558327	2904096		
PE0603890C Ballistic Missile Defense System Engineering and Integration	0	0	483996	522458	604445	628594	703055	706501		
PE0603869C Meads Concepts -Dem/Val	0	114781	0	0	0	0	0	0		
PE0603175C Ballistic Missile Defense Technology	145021	151130	240820	205791	200956	247990	287864	306472		

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MDA Exhibit R -2 ARDT&E Project Justification	Date February 2003
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APPROPRIATION/BUDGET ACTIVITY 4. Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603889C Ballistic Missile Defense Products
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D. Acquisition Strategy

Project Hercules follows MDA's capability -based acquisition strategy. This emphasizes assessment, spiral -development testing and evolutionary acquisition through the definition of two -year capability blocks.

Project Hercules activities are performed by subject matter experts composed of Government, Federally Funded Research and Development Centers (FFRDC), University Affiliated Research Centers (UARC), private industry including major defense contractors, Government laboratories, and System Engineering and Technical Assistance (SETA) contractors.

Capabilities can be transitioned into further operational force structure via coordination with the Services and their acquisition community so they can plan, budget and procure necessary HW/SW for operational deployed and sustained forces.

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MDAExhibitR -3RDT&EProjectCostAnalysis	Date February2003
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APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDevelopmentandPrototypes(ACD&P)	R-1NOMENCLATURE 0603889CBallisticMissileDefenseProducts
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I.ProductDevelopmentCost(\$inThousands)												
CostCategories:	Contract Method &Type	Performing Activity& Location	Total PYs Cost	FY2003 Cost	FY2003 Award Date	FY2004 Cost	FY2004 Award Date	FY2005 Cost	FY2005 Award Date	Costto Complete	Total Cost	Target Valueof Contract
AlgorithmProductizationand Test												
Hercules	Various	HQ/Arl,VA				2406	1Q	2353	1Q	CONT.	4759	CONT.
ProjectHercules												
ArmySMDC	Various	Army/Huntsville, AL				6488	1Q	16629	1Q	CONT.	23117	CONT.
Hercules	CPFF	Raytheon/Boston, MA				1000	1Q	1000	1Q		2000	
SubtotalProductDevelopment			0	0		9894		19982			29876	

Remarks

II.SupportCostsCost(\$in Thousands)												
CostCategories:	Contract Method &Type	Performing Activity& Location	Total PYs Cost	FY2003 Cost	FY2003 Award Date	FY2004 Cost	FY2004 Award Date	FY2005 Cost	FY2005 Award Date	Costto Complete	Total Cost	Target Valueof Contract
SubtotalSupportCosts												

Remarks

III.TestandEvaluationCost(\$inThousands)												
CostCategories:	Contract Method &Type	Performing Activity& Location	Total PYs Cost	FY2003 Cost	FY2003 Award Date	FY2004 Cost	FY2004 Award Date	FY2005 Cost	FY2005 Award Date	Costto Complete	Total Cost	Target Valueof Contract
AlgorithmProductizationand Test												
Hercules	Various	HQ/Arl,VA				6133	1Q	5490	1Q	CONT.	11623	CONT.
ProjectHercules												

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MDAExhibitR -3RDT&EProjectCostAnalysis										Date February2003		
APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDevelopmentandPrototypes(ACD&P)					R-INOMENCLATURE 0603889CBallisticMissileDefenseProducts							
ArmySMDC	Various	Army/Huntsville, AL				2134	1Q	1955	1Q	CONT.	4089	CONT.
SubtotalTestandEvaluation			0	0		8267		7445			15712	
Remarks												
IV.ManagementServicesCost(\$inThousands)												
CostCategories:	Contract Method &Type	Performing Activity& Location	Total PYs Cost	FY2003 Cost	FY2003 Award Date	FY2004 Cost	FY2004 Award Date	FY2005 Cost	FY2005 Award Date	Costto Complete	Total Cost	Target Valueof Contract
SubtotalManagementServices												
Remarks												
ProjectTotalCost			0	0		18161		27427			45588	
Remarks												

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MDAExhibitR -4ScheduleProfile	Date February2003
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APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDevelopmentandPrototypes(ACD&P)	R-INOMENCLATURE 0603889CBallisticMissileDefenseProducts
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FiscalYear	2002				2003				2004				2005				2006				2007				2008				2009							
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
Hercules																																				
AlgorithmstoTest																																				
DecisionArchitecturePrototype																																				
PostFlightTestDataAnalysis																																				

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MDAExhibitR -4AScheduleDetail						Date February2003		
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APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDevelopmentandPrototypes(ACD&P)				R-INOMENCLATURE 0603889CBallisticMissile DefenseProducts				
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ScheduleProfile	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
Hercules								
AlgorithmstoTest			1Q-4Q	1Q-4Q				
DecisionArchitecturePrototype			1Q-4Q	1Q-4Q				
PostFlightTestDataAnalysis			1Q-4Q	1Q-4Q				

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MDA Exhibit R -2 ARDT&E Project Justification	Date February 2003
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APPROPRIATION/BUDGET ACTIVITY 4. Advanced Component Development and Prototypes (ACD&P)	R-INOMENCLATURE 0603889C Ballistic Missile Defense Products
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COST (\$ in Thousands)	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
0802 Hercules Block 2006	0	0	19481	17893	44729	44669	0	0
RDT&E Articles Qty	0	0	0	0	0	0	0	0

A. Mission Description and Budget Item Justification

Project Hercules is a national effort to develop robust detection, tracking, and discriminational algorithms to counter off nominal and evolving missile threats. Hercules is also developing a physics based Decision Architecture, which applies advanced decision theory to future BMD command, control, and battle management (C2/BM) concepts. In addition to a general program to develop algorithms useful against targets in all phases of flight, Hercules has specific projects for developing algorithms for forward based sensors, the Decision Architecture, and mitigating countermeasures. Hercules develops algorithms to enhance BMD element capabilities in Block 04, 06, 08 and beyond and will provide these algorithms to the BMD elements for insertion into their respective programs.

This project was created as part of an approved program restructure starting in FY2004. FY2003 and prior funding was captured under PE0603880C Project 1053.

B. Accomplishments/Planned Program

	FY2002	FY2003	FY2004	FY2005
Project Hercules			19481	17893
RDT&E Articles (Quantity)				

In FY2004 and FY2005, Project Hercules will continue the development of detection, tracking, and discriminational algorithms for use in all phases of flight for use by forward based sensors, the Decision Architecture, and difficult threat complexes.

Specific Block 06 goals for these developments include:

- 1) Forward Based Sensor capabilities are to be enhanced with expanded algorithm suites for forward based radars and forward based passive optical sensors,
- 2) to introduce the first algorithms for clutter mitigation

As requested by the MDANational Team, Decision Architecture emphasis in Block 06 will be on the first deployment of the Decision Architecture System Model, a discrimination fusion engine providing an enhanced capability to fuse multiple phenomenology data across sensors, interceptors and phases of missile flight. Hercules productization and test funds are focused on this initial DA integration.

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MDA Exhibit R -2 ARDT&E Project Justification								Date February 2003		
APPROPRIATION/BUDGET ACTIVITY 4. Advanced Component Development and Prototypes (ACD&P)					R-INOMENCLATURE 0603889C Ballistic Missile Defense Products					
C. Other Program Funding Summary										
	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009	To Complete	Total Cost
PE0604865C Patriot PAC -3 Theater Missile Defense Acquisition -EMD	130630	176155	0	0	0	0	0	0		
PE0604867C Navy Area Theater Missile Defense -EMD	96121	0	0	0	0	0	0	0		
PE 0605502C Small Business Innovative Research -MDA	145102	0	0	0	0	0	0	0		
PE0901585C Pentagon Reservation	6381	7432	14481	13384	12758	12850	13158	13476		
PE0901598C Management Headquarters - MDA	30191	25365	93441	101373	114107	121743	128972	133499		
PE0604861C Theater High -Altitude Area Defense System -TMD -EMD	818632	888323	0	0	0	0	0	0		
PE0603175C Ballistic Missile Defense Technology	145021	151130	240820	205791	200956	247990	287864	306472		
PE0603869C Meads Concepts -Dem/Val	0	114781	0	0	0	0	0	0		
PE0603879C Advanced Concepts, Evaluations and Systems	0	0	151696	216778	166308	193949	241947	234484		
PE0603880C Ballistic Missile Defense System Segment	790535	1046652	0	0	0	0	0	0		
PE0603881C Ballistic Missile Defense Terminal Defense Segment	195800	136399	810440	924356	985514	805785	558071	371649		
PE0603882C Ballistic Missile Defense Midcourse Defense Segment	3655089	3103844	3613266	3841412	2078522	1908511	1482389	1437923		
PE0603883C Ballistic Missile Defense Boost Defense Segment	583463	718036	626264	653612	755163	665772	477109	354346		
PE0603884C Ballistic Missile Defense Sensors	312973	350436	438242	562752	706514	1043454	1152740	1261906		
PE0603886C Ballistic Missile Defense System Interceptors	0	0	301052	541178	1127180	1729613	2558327	2904096		
PE0603890C Ballistic Missile Defense System Engineering and Integration	0	0	483996	522458	604445	628594	703055	706501		
PE0603888C Ballistic Missile Defense Test and Targets	0	0	611522	711181	661416	643302	639839	672396		

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MDA Exhibit R -2 ARDT&E Project Justification	Date February 2003
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APPROPRIATION/BUDGET ACTIVITY 4. Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603889C Ballistic Missile Defense Products
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D. Acquisition Strategy

Project Hercules follows MDA's capability -based acquisition strategy. This emphasizes assessment, spiral -development testing and evolutionary acquisition through the definition of two -year capability blocks.

Project Hercules activities are performed by subject matter experts composed of Government, Federally Funded Research and Development Centers (FFRDC), University Affiliated Research Centers (UARC), private industry including major defense contractors, Government laboratories, and System Engineering and Technical Assistance (SETA) contractors.

Capabilities can be transitioned into further operational force structure via coordination with the Services and their acquisition community so they can plan, budget and procure necessary HW/SW for operational deployed and sustained forces.

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MDAExhibitR -3RDT&EProjectCostAnalysis										Date February2003		
APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDevelopmentandPrototypes (ACD&P)					R-INOMENCLATURE 0603889CBallisticMissileDefenseProducts							
I.ProductDevelopmentCost(\$inThousands)												
CostCategories:	Contract Method &Type	Performing Activity& Location	Total PYs Cost	FY2003 Cost	FY2003 Award Date	FY2004 Cost	FY2004 Award Date	FY2005 Cost	FY2005 Award Date	Costto Complete	Total Cost	Target Valueof Contract
ProjectHercules												
ArmySMDC	Various	Army/Huntsville, AL				13611	1Q	12426	1Q	CONT.	26037	CONT.
Hercules	CPFF	Raytheon/Boston, MA				1000	1Q	1000	1Q	CONT.	2000	CONT.
SubtotalProductDevelopment			0	0		14611		13426			28037	
Remarks												
II.SupportCostsCost(\$inThousands)												
CostCategories:	Contract Method &Type	Performing Activity& Location	Total PYs Cost	FY2003 Cost	FY2003 Award Date	FY2004 Cost	FY2004 Award Date	FY2005 Cost	FY2005 Award Date	Costto Complete	Total Cost	Target Valueof Contract
ProjectHercules												
SubtotalSupportCosts			0	0		0		0			0	
Remarks												
III.TestandEvaluationCost(\$inThousands)												
CostCategories:	Contract Method &Type	Performing Activity& Location	Total PYs Cost	FY2003 Cost	FY2003 Award Date	FY2004 Cost	FY2004 Award Date	FY2005 Cost	FY2005 Award Date	Costto Complete	Total Cost	Target Valueof Contract
ProjectHercules												
ArmySMDC	Various	Army/Huntsville, AL				4870	1Q	4467	1Q	CONT.	9337	CONT.
SubtotalTestandEvaluation			0	0		4870		4467			9337	
Remarks												

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MDAExhibitR -3RDT&EProjectCostAnalysis										Date February2003		
APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDevelopmentandPrototypes (ACD&P)					R-1NOMENCLATURE 0603889CBallisticMissileDefenseProducts							
IV.ManagementServicesCost(\$inThousands)												
CostCategories:	Contract Method &Type	Performing Activity& Location	Total PYs Cost	FY2003 Cost	FY2003 Award Date	FY2004 Cost	FY2004 Award Date	FY2005 Cost	FY2005 Award Date	Costto Complete	Total Cost	Target Valueof Contract
ProjectHercules												
SubtotalManagementServices			0	0		0		0			0	
Remarks												
ProjectTotalC ost			0	0		19481		17893			37374	
Remarks												

UNCLASSIFIED

MDAExhibitR -4AScheduleDetail						Date February2003		
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APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDevelopmentandPrototypes(ACD&P)				R-1NOMENCLATURE 0603889CBallisticMissileDefenseProducts				
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ScheduleProfile	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
Hercules								
AlgorithmstoTest				1Q-4Q	1Q-4Q			
DecisionArchitecturePrototype				1Q-4Q	1Q-4Q			
Post -FlightTestDataAnalysis(biannual)				1Q-4Q	1Q-4Q			

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MDA Exhibit R -2 ARDT&E Project Justification	Date February 2003
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APPROPRIATION/BUDGET ACTIVITY 4. Advanced Component Development and Prototypes (ACD&P)	R-INOMENCLATURE 0603889C Ballistic Missile Defense Products
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COST (\$ in Thousands)	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
0902 Hercules Block 2008	0	0	18810	17276	16905	16883	62342	60255
RDT&E Articles Qty	0	0	0	0	0	0	0	0

A. Mission Description and Budget Item Justification

Project Hercules is a national effort to develop robust detection, tracking, and discrimination algorithms to counter off-nominal and evolving missile threats. Hercules is also developing a physics-based Decision Architecture, which applies advanced decision theory to future BMDS command, control, and battle management (C2/BM) concepts. In addition to a general program to develop algorithms useful against targets in all phases of flight, Hercules has specific projects for developing algorithms for forward based sensors, the Decision Architecture, and mitigating countermeasures. Hercules develops algorithms to enhance BMD element capabilities in Block 04, 06, 08 and beyond and will provide these algorithms to the BMD elements for insertion into their respective programs.

This project was created as part of an approved program restructure starting in FY2004. FY2003 and prior funding was captured under PE0603880C Project 1053.

B. Accomplishments/Planned Program

	FY2002	FY2003	FY2004	FY2005
Project Hercules			18810	17276
RDT&E Articles (Quantity)				

In FY2004 and FY2005, Project Hercules will continue the development of detection, tracking, and discrimination algorithms for use in all phases of flight for use by forward based sensors, the Decision Architecture, and difficult threat complexes.

Specific Block 08 goals for these developments include:

- 1) Forward Based Sensor capabilities are to be enhanced with expanded algorithms for forward based radars, and forward based optical sensors
- 2) Forward Based Sensor Fusion algorithms will be introduced
- 3) an expanded algorithms suite for mitigating countermeasures

As requested by the MDANational Team, Decision Architecture element in Block 08 will be on the enhancement of the System Model, a discrimination fusion engine providing an enhanced capability to fuse multiple phenomenology data across sensors, interceptors and phases of missile flight. Hercules will also provide the initial fielding of the Decision Architecture Global Planner, a BMDS level tools for enhancing command and control and battle management (C2/BM) capabilities across all nodes within the BMDS. Hercules productization and test funds are focused on DA integration with the current BMDS C2/BM element.

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MDA Exhibit R -2 ARDT&E Project Justification							Date February 2003			
APPROPRIATION/BUDGET ACTIVITY 4. Advanced Component Development and Prototypes (ACD&P)					R-1 NOMENCLATURE 0603889C Ballistic Missile Defense Products					
C. Other Program Funding Summary										
	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009	To Complete	Total Cost
PE0603886C Ballistic Missile Defense System Interceptors	0	0	301052	541178	1127180	1729613	2558327	2904096		
PE0603890C Ballistic Missile Defense System Engineering and Integration	0	0	483996	522458	604445	628594	703055	706501		
PE0603888C Ballistic Missile Defense Test and Targets	0	0	611522	711181	661416	643302	639839	672396		
PE06 04861C Theater High -Altitude Area Defense System -TMD -EMD	818632	888323	0	0	0	0	0	0		
PE0604865C Patriot PAC -3 Theater Missile Defense Acquisition -EMD	130630	176155	0	0	0	0	0	0		
PE0604867C Navy Area Theater Missile Defense -EMD	96121	0	0	0	0	0	0	0		
PE0605502C Small Business Innovative Research -MDA	145102	0	0	0	0	0	0	0		
PE0901585C Pentagon Reservation	6381	7432	14481	13384	12758	12850	13158	13476		
PE0901598C Management Headquarters - MDA	30191	25365	93441	101373	114107	121743	128972	133499		
PE0603175C Ballistic Missile Defense Technology	145021	151130	240820	205791	200956	247990	287864	306472		
PE0603869C Meads Concepts -Dem/Val	0	114781	0	0	0	0	0	0		
PE0603879C Advanced Concepts, Evaluations and Systems	0	0	151696	216778	166308	193949	241947	234484		
PE0603880C Ballistic Missile Defense System Segment	790535	1046652	0	0	0	0	0	0		
PE0603881C Ballistic Missile Defense Terminal Defense Segment	195800	136399	810440	924356	985514	805785	558071	371649		
PE0603882C Ballistic Missile Defense Midcourse Defense Segment	3655089	3103844	3613266	3841412	2078522	1908511	1482389	1437923		
PE0603883C Ballistic Missile Defense Boost Defense Segment	583463	718036	626264	653612	755163	665772	477109	354346		
PE0603884C Ballistic Missile Defense Sensors	312973	350436	438242	562752	706514	1043454	1152740	1261906		

UNCLASSIFIED

MDA Exhibit R -2 ARDT&E Project Justification	Date February 2003
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APPROPRIATION/BUDGET ACTIVITY 4. Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603889C Ballistic Missile Defense Products
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D. Acquisition Strategy

Project Hercules follows MDA's capability -based acquisition strategy. This emphasizes assessment, spiral -development testing and evolutionary acquisition through the definition of two -year capability blocks.

Project Hercules activities are performed by subject matter experts composed of Government, Federally Funded Research and Development Centers (FFRDC), University Affiliated Research Centers (UARC), private industry including major defense contractors, Government laboratories, and System Engineering and Technical Assistance (SETA) contractors.

Capabilities can be transitioned into further operational force structure via coordination with the Services and their acquisition community so they can plan, budget and procure necessary HW/SW for operational deployed and sustained forces.

UNCLASSIFIED

MDAExhibitR -3RDT&EProjectCostAnalysis										Date February2003		
APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDevelopmentandPrototypes(ACD&P)					R-INOMENCLATURE 0603889CBallisticMissileDefenseProducts							
I.ProductDevelopmentCost(\$inThousands)												
CostCategories:	Contract Method &Type	Performing Activity& Location	Total PYs Cost	FY2003 Cost	FY2003 Award Date	FY2004 Cost	FY2004 Award Date	FY2005 Cost	FY2005 Award Date	Costto Complete	Total Cost	Target Valueof Contract
ProjectHercules												
ArmySMDC	Various	Army/Huntsville, AL				13108	1Q	11962	1Q	CONT.	25070	CONT.
Hercules	CPFF	Raytheon/Boston, MA				1000	1Q	1000	1Q	CONT.	2000	CONT.
SubtotalProductDevelopment			0	0		14108		12962			27070	
Remarks												
II.SupportCostsCost(\$inThousands)												
CostCategories:	Contract Method &Type	Performing Activity& Location	Total PYs Cost	FY2003 Cost	FY2003 Award Date	FY2004 Cost	FY2004 Award Date	FY2005 Cost	FY2005 Award Date	Costto Complete	Total Cost	Target Valueof Contract
ProjectHercules												
SubtotalSupportCosts			0	0		0		0			0	
Remarks												
III.TestandEvaluationCost(\$inThousands)												
CostCategories:	Contract Method &Type	Performing Activity& Location	Total PYs Cost	FY2003 Cost	FY2003 Award Date	FY2004 Cost	FY2004 Award Date	FY2005 Cost	FY2005 Award Date	Costto Complete	Total Cost	Target Valueof Contract
ProjectHercules												
ArmySMDC	Various	Army/Huntsville, AL				4702	1Q	4314	1Q	CONT.	9016	CONT.
SubtotalTestandEvaluation			0	0		4702		4314			9016	
Remarks												

UNCLASSIFIED

MDAExhibitR -3RDT&EProjectCostAnalysis	Date February2003
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APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDevelopmentandPrototypes(ACD&P)	R-1NOMENCLATURE 0603889CBallisticMissileDefenseProducts
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IV.ManagementServicesCost(\$inThousan ds)												
CostCategories:	Contract Method &Type	Performing Activity& Location	Total PYs Cost	FY2003 Cost	FY2003 Award Date	FY2004 Cost	FY2004 Award Date	FY2005 Cost	FY2005 Award Date	Costto Complete	Total Cost	Target Valueof Contract
ProjectHercul es												
SubtotalManagementServices			0	0		0		0			0	

Remarks

ProjectTotalCost			0	0		18810		17276			36086	
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Remarks

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MDAExhibitR -4ScheduleProfile	Date February2003
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APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDevelopmentandPrototypes(ACD&P)	R-INOMENCLATURE 0603889CBallisticMissileDefenseProducts
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FiscalYear	2002				2003				2004				2005				2006				2007				2008				2009							
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
Block2008																																				
BlockDesignReview																																				
BlockPlanning&CapabilityAssessment																																				
ElementTIMs																																				
Spiral8.XDevelopment																																				

UNCLASSIFIED

MDAExhibitR -4AScheduleDetail						Date February2003
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APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDevelopmentandPrototypes(ACD&P)	R-1NOMENCLATURE 0603889CBallisticMissileDefenseProducts
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ScheduleProfile	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
Block2008								
BlockDesignReview					1Q			
BlockPlanning&CapabilityAssessment				1Q-4Q	1Q-2Q			
ElementTIMs					1Q-4Q	1Q-2Q		
Spiral8.XDevelopment					1Q-4Q	1Q-4Q		

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MDA Exhibit R -2 ARDT&E Project Justification	Date February 2003
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APPROPRIATION/BUDGET ACTIVITY 4. Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603889C Ballistic Missile Defense Products
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COST (\$ in Thousands)	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
0703 Joint Warfighter Support Block 2004	0	0	24139	12861	0	0	0	0
RDT&E Articles Qty	0	0	0	0	0	0	0	0

A. Mission Description and Budget Item Justification

Beginning in FY2004, funding for this effort will transition from BMD Systems Program Element (PE) (0603880C -Project 1055) to the new Ballistic Missile Defense Products PE (0603889C -Project 0703).

The Joint Warfighter Support program ensures that warfighter operational perspectives and concerns are reflected in the development of Ballistic Missile Defense (BMD) capabilities. The Deputy for Force Structure Integration and Deployment (TR) works with the Combatant Commanders, Services and Joint Staff through seminars, wargames, and exercises to achieve this goal. Through interaction, areas of improvement in BMD capability are identified for action. This program also supports planning for initial defensive operations, integration of SPACECOM/NORTHCOM in required wargames, tabletops, experiments, and System Integrated Tests and Hardware in the Loop Tests required for enhanced use of JNIC in support of operational concept development. TR will work with the Services and Combatant Commanders to develop a BMD Support Structure to provide support for fielded capabilities.

B. Accomplishments/Planned Program

	FY2002	FY2003	FY2004	FY2005
Joint Warfighter Support			15602	7595
RDT&E Articles (Quantity)				

FY2004:
Funding for the Joint Warfighter Project transitions from Project 1055 to Project 0703 beginning in FY2004

-Develop Tactics, Techniques & Procedures (TTP) and Rules of Engagement (ROE) to integrate BMD Elements into Operational Community for Block 04 BMDs.

-Refine BMDs and BMC2 concepts/options through studies, seminars, Senior Warfighters Forums (SWARFS), workshops, tabletops, wargames and exercises using the JNIC as the hub. These activities provide the basis for the assessment, development and improvement of BMD capabilities.

FY2005:
-Continue to refine TTP and ROE to integrate BMD Elements into Operational Community for Block 04 BMDs.

-Continue refining BMDs and BMC2 concepts/options through studies, seminars, SWARFS, workshops, tabletops, wargames and exercises using the JNIC as the hub. These activities provide the basis for the assessment, development and improvement of BMD capabilities.

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MDA Exhibit R -2 ARDT&E Project Justification			Date February 2003	
APPROPRIATION/BUDGET ACTIVITY 4. Advanced Component Development and Prototypes (ACD&P)		R-INOMENCLATURE 0603889C Ballistic Missile Defense Products		
	FY2002	FY2003	FY2004	FY2005
Joint Staff & Service Liaison			7801	3797
RDT&E Articles (Quantity)				
<p>FY2004:</p> <ul style="list-style-type: none"> - Develop preliminary Integrated Missile Defense (IMD) Concept of Operations (CONOPS) for the Block 04 BMDS. - Interface and coordinate BMDS issues with Services, Joint Staff and Allied Forces to develop understanding of each other's doctrine and common CONOPS, and to determine equipment compatibility and interoperability. - Manage Services Boards of Directors' (BOD) curriculum to build knowledge base with Combatant Commanders' senior warfighters. These BODs involve the senior leadership of MDA and the Army, Navy, and Air Force and are coordinated/supported through the Service Liaison teams (Army, Navy, Air Force). - Develop and coordinate deployment of BMDS initial defensive operations capabilities with the Joint Staff, the Services and the Combatant Commanders. - Develop a BMDS Support Structure for transitioned capabilities, train/assist training the Force, provide logistic support for fielded capabilities. <p>FY2005:</p> <ul style="list-style-type: none"> - Continue developing preliminary Integrated Missile Defense (IMD) Concept of Operations (CONOPS) for the Block 04 BMDS - Continue to interface and coordinate BMDS issues with Services, Joint Staff and Allied Forces to develop understanding of each other's doctrine and common CONOPS, and to determine equipment compatibility and interoperability. - Continue to manage Services Boards of Directors' (BOD) curriculum to build knowledge base with Combatant Commanders' senior warfighters. These BODs involve the senior leadership of MDA and the Army, Navy, and Air Force and are coordinated/supported through the Service Liaison teams (Army, Navy, Air Force). - Continue to develop and coordinate deployment of BMDS initial defensive operations capabilities with the Joint Staff, the Services and the Combatant Commanders. - Continue to develop a BMDS Support Structure for transitioned capabilities, train/assist training the Force, provide logistic support for fielded capabilities 				
	FY2002	FY2003	FY2004	FY2005
SETA			736	1469
RDT&E Articles (Quantity)				
<p>Scientific, Engineering, Technical and Assistance support provided to MDA HQ in support of Block 2004 efforts.</p>				

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MDAExhibitR -2ARDT&EProjectJustification							Date February2003			
APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDevelopmentandPr ototypes(ACD&P)					R-INOMENCLATURE 0603889CBallisticMissileDefenseProducts					
C.OtherProgramFundingSummary										
	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009	To Complete	Total Cost
PE0604867CNavyAreaTheaterMissile Defense -EMD	96121	0	0	0	0	0	0	0		
PE0605502CSmallBusinessInnovative Research -MDA	145102	0	0	0	0	0	0	0		
PE0901585CPentagonRes ervation	6381	7432	14481	13384	12758	12850	13158	13476		
PE0901598CManagementHeadquarters - MDA	30191	25365	93441	101373	114107	121743	128972	133499		
PE0604865CPatriotPAC -3TheaterMissile DefenseAcquisition -EMD	130630	176155	0	0	0	0	0	0		
PE 0603175CBallisticMissileDefense Technology	145021	151130	240820	205791	200956	247990	287864	306472		
PE0603869CMeadsConcepts -Dem/Val	0	114781	0	0	0	0	0	0		
PE0603879CAAdvancedConcepts, EvaluationsandSystems	0	0	151696	216778	166308	193949	241947	234484		
PE0603880CBallisticMissileDefense SystemSegment	790535	1046652	0	0	0	0	0	0		
PE0603881CBallisticMissileDefense TerminalDefenseSegment	195800	136399	810440	924356	985514	805785	558071	371649		
PE0603882CBallisticMissileDefense MidcourseDefenseSegment	3655089	3103844	3613266	3841412	2078522	1908511	1482389	1437923		
PE0603883CBallisticMissileDefenseBoost DefenseSegment	583463	718036	626264	653612	755163	665772	477109	354346		
PE0603884CBallisticMissileDefense Sensors	312973	350436	438242	562752	706514	1043454	1152740	1261906		
PE0603886CBallisticMissileDefense SystemInterceptors	0	0	301052	541178	1127180	1729613	2558327	2904096		
PE0603890CBallisticMissileDefense SystemEngineeringandIntegration	0	0	483996	522458	604445	628594	703055	706501		
PE0603888CBallisticMissileDefenseTest andTargets	0	0	611522	711181	661416	643302	639839	672396		
PE0604861CTheaterHigh -AltitudeArea DefenseSystem -TMD -EMD	818632	888323	0	0	0	0	0	0		

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MDA Exhibit R -2 ARDT&E Project Justification	Date February 2003
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APPROPRIATION/BUDGET ACTIVITY 4. Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603889C Ballistic Missile Defense Products
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D. Acquisition Strategy

Joint Warfighter Support will continue to follow the MDA's capability -based acquisition strategy that emphasizes assessment, spiral -development testing and evolutionary acquisition through the definition of two -year capability blocks. TR will accomplish this through development and vetting of Operational Concepts through JTAMDO, the Combatant Commanders and the Services utilizing seminars, workshops, tabletops, wargames and exercises, which also support Military Utility Assessment.

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MDAExhibitR -3RDT&EProjectCostAnalysis										Date February2003		
APPROPRIATION/BUDGETACTIVITY					R-INOMENCLATURE							
4.AdvancedComponentDevelopmentandPrototypes(ACD&P)					0603889CBallisticMissileDefenseProducts							
I.Produ ctDevelopmentCost(\$inThousands)												
CostCategories:	Contract Method &Type	Performing Activity& Location	Total PYs Cost	FY2003 Cost	FY2003 Award Date	FY2004 Cost	FY2004 Award Date	FY2005 Cost	FY2005 Award Date	Costto Complete	Total Cost	Target Valueof Contract
SubtotalProductDevelopment												
Remarks												
II.SupportCostsCost(\$inThousands)												
CostCategories:	Contract Method &Type	Performing Activity& Location	Total PYs Cost	FY2003 Cost	FY2003 Award Date	FY2004 Cost	FY2004 Award Date	FY2005 Cost	FY2005 Award Date	Costto Complete	Total Cost	Target Valueof Contract
SETA												
SETA	Various	Various/MDA HQ/Arlington,VA				736	1Q	1469	1Q		2205	
SubtotalSupportCosts												
Remarks												
III.Testan dEvaluationCost(\$inThousands)												
CostCategories:	Contract Method &Type	Performing Activity& Location	Total PYs Cost	FY2003 Cost	FY2003 Award Date	FY2004 Cost	FY2004 Award Date	FY2005 Cost	FY2005 Award Date	Costto Complete	Total Cost	Target Valueof Contract
JointWarfighterSupport												
JointWarfighterSupport	Other	Combatant Commanders/Variou s				15602	1/4Q	7595	1/4Q	CONT.	23197	CONT.
SubtotalTestandEvaluation												
Remarks												

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MDAExhibitR -3RDT&EProjectCostAnalysis	Date February2003
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APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDevelopmentandPrototypes(ACD&P)	R-1NOMENCLATURE 0603889CBallisticMissileDefenseProducts
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IV.ManagementServicesCost(\$inThousands)												
CostCategories:	Contract Method &Type	Performing Activity& Location	Total PYs Cost	FY2003 Cost	FY2003 Award Date	FY2004 Cost	FY2004 Award Date	FY2005 Cost	FY2005 Award Date	Costto Complete	Total Cost	Target Valueof Contract
JointStaff&ServiceLiaison												
JointStaff&ServiceLiaison	Various	Various/Various				7801	1/4Q	3797	1/4Q	TBD	11598	TBD
SubtotalManagementServices			0	0		7801		3797			11598	

Remarks

ProjectTotalCost			0	0		24139		12861			37000	
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Remarks

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MDAExhibitR -4ScheduleProfile	Date February2003
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APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDevelopmentandPrototypes(ACD&P)	R-1NOMENCLATURE 0603889CBallisticMissileDefenseProducts
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FiscalYear	2002				2003				2004				2005				2006				2007				2008				2009							
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
Block2004																																				
JointWarfighterSupport																																				

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MDAExhibitR -4AScheduleDetail						Date February2003		
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APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDevelopmentandPrototypes(ACD&P)				R-1NOMENCLATURE 0603889CBallisticMissileDefenseProdu cts				
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ScheduleProfile	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
Block2004								
JointWarfighterSupport			1Q-4Q	1Q-4Q	1Q-4Q			

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MDA Exhibit R -2 ARDT&E Project Justification	Date February 2003
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APPROPRIATION/BUDGET ACTIVITY 4. Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603889C Ballistic Missile Defense Products
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COST (\$ in Thousands)	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
0803 Joint Warfighter Support Block 2006	0	0	0	11784	23644	12292	0	0
RDT&E Articles Qty	0	0	0	0	0	0	0	0

A. Mission Description and Budget Item Justification

The Joint Warfighter Support program ensures that warfighter operational perspectives and concerns are reflected in the development of Ballistic Missile Defense (BMD) capabilities. The Deputy for Force Structure Integration and Deployment (TR) works with the Combatant Commanders, Services and Joint Staff through seminars, wargames, and exercises to achieve this goal. Through interaction, areas of improvement in BMD capability are identified for action. This program also supports planning for initial defensive operations, integration of SPACECOM/NORTHCOM in required wargames, tabletops, experiments, and System Integrated Tests and Hardware in the Loop Tests required for enhanced use of JNIC in support of operational concept development.

B. Accomplishments/Planned Program

	FY2002	FY2003	FY2004	FY2005
Joint War fighter Support				7595
RDT&E Articles (Quantity)				

- FY2006:
- Develop preliminary CONOPS, TTP and ROE and integrate broad offense/defense with the Operational Community for Block 06 BMDS.
 - Construct BMD experiments, wargames and seminars with the Joint Staff, Services and Combatant Commanders. These activities provide the basis for the assessment, development and improvement of BMD capabilities.
 - Build initial defensive operations plan to protect against ballistic missile threats to the U.S., U.S. deployed forces and our allies and friends.
 - Coordinate BMD element transition planning to include Doctrine, Organization, Training, Material, Leadership, Personnel and Facilities (DOTMLPF).
 - Develop BMD operational concepts and associated operational architecture that will enable rapid integration of the BMD elements into the Combatant Commanders Warfighting capability.
 - Provide Service context to the BMD Technical Objectives and Goals (TOG) and associated analysis.
 - Coordinate/Support the Service Liaison teams (Army, Navy, and Air Force).

- FY2007:
- Continue to refine preliminary CONOPS, TTP and ROE and integrate broad offense/defense with the Operational Community.
 - Construct BMD experiments, wargames and seminars with the Joint Staff, Services and Combatant Commanders. These activities provide the basis for the assessment, development and improvement of BMD capabilities.

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MDA Exhibit R -2 ARDT&E Project Justification	Date February 2003
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APPROPRIATION/BUDGET ACTIVITY 4. Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603889C Ballistic Missile Defense Products
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-Build initial defensive operations plan to protect against ballistic missile threats to the U.S., U.S. deployed forces and our allies and friends.

-Continue to develop BMD operational concepts and associated operational architecture that will enable rapid integration of the BMD elements into the Combatant Commanders Warfighting capability.

-Provide Service context to the BMDSTechnical Objectives and Goals (TOG) and associated analysis.

-Coordinate/Support the Service Liaison teams (Army, Navy, and Air Force).

	FY2002	FY2003	FY2004	FY2005
Joint Staff and Service Liaison				3797
RDT&E Articles (Quantity)				

FY2006:
-Develop and coordinate deployment of BMDSTechnical Objectives and Goals (TOG) and associated analysis.

FY2007:
-Continue to develop and coordinate deployment of BMDSTechnical Objectives and Goals (TOG) and associated analysis.

	FY2002	FY2003	FY2004	FY2005
SETA				392
RDT&E Articles (Quantity)				

Represents Scientific, Engineering, Technical and Assistance support provided to MDAHQ in support of Block 2006 efforts.

C. Other Program Funding Summary	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009	To Complete	Total Cost
PE0603890C Ballistic Missile Defense System Engineering and Integration	0	0	483996	522458	604445	628594	703055	706501		
PE0603888C Ballistic Missile Defense Test and Targets	0	0	611522	711181	661416	643302	639839	672396		
PE0604861C Theater High Altitude Area Defense System -TMD -EMD	818632	888323	0	0	0	0	0	0		

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MDA Exhibit R -2 ARDT&E Project Justification	Date February 2003
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APPROPRIATION/BUDGET ACTIVITY 4. Advanced Component Development and Prototypes (ACD&P)	R-INOMENCLATURE 0603889C Ballistic Missile Defense Products
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PE0604865C Patriot PAC -3 Theater Missile Defense Acquisition -EMD	130630	176155	0	0	0	0	0	0	0	
PE0604867C Navy Area Theater Missile Defense -EMD	96121	0	0	0	0	0	0	0	0	
PE0605502C Small Business Innovative Research -MDA	145102	0	0	0	0	0	0	0	0	
PE0901585C Pentagon Reservation	6381	7432	14481	13384	12758	12850	13158	13476		
PE0901598C Management Headquarters - MDA	30191	25365	93441	101373	114107	121743	128972	133499		
PE0603880C Ballistic Missile Defense System Segment	790535	1046652	0	0	0	0	0	0		
PE0603881C Ballistic Missile Defense Terminal Defense Segment	195800	136399	810440	924356	985514	805785	558071	371649		
PE0603882C Ballistic Missile Defense Midcourse Defense Segment	3655089	3103844	3613266	3841412	2078522	1908511	1482389	1437923		
PE0603883C Ballistic Missile Defense Boost Defense Segment	583463	718036	626264	653612	755163	665772	477109	354346		
PE0603884C Ballistic Missile Defense Sensors	312973	350436	438242	562752	706514	1043454	1152740	1261906		
PE0603879C Advanced Concepts, Evaluations and Systems	0	0	151696	216778	166308	193949	241947	234484		
PE0603886C Ballistic Missile Defense System Interceptors	0	0	301052	541178	1127180	1729613	2558327	2904096		
PE0603175C Ballistic Missile Defense Technology	145021	151130	240820	205791	200956	247990	287864	306472		
PE0603869C Meads Concepts -Dem/Val	0	114781	0	0	0	0	0	0		

D. Acquisition Strategy

Joint Warfighter Support will continue to follow the MDA's capability-based acquisition strategy that emphasizes assessment, spiral development, testing and evolutionary acquisition through the definition of two-year capability blocks. TR will accomplish this through development and vetting of Operational Concepts through JTAMDO, the Combatant Commanders and the Services utilizing seminars, workshops, tabletops, wargames and exercises, which also support Military Utility Assessment.

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MDA Exhibit R -3 RDT&E Project Cost Analysis										Date February 2003		
APPROPRIATION/BUDGET ACTIVITY 4. Advanced Component Development and Prototypes (ACD&P)					R-1 NOMENCLATURE 0603889C Ballistic Missile Defense Products							
I. Product Development Cost (\$in Thousands)												
Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY2003 Cost	FY2003 Award Date	FY2004 Cost	FY2004 Award Date	FY2005 Cost	FY2005 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Subtotal Product Development												
Remarks												
II. Support Costs Cost (\$in Thousands)												
Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY2003 Cost	FY2003 Award Date	FY2004 Cost	FY2004 Award Date	FY2005 Cost	FY2005 Award Date	Cost to Complete	Total Cost	Target Value of Contract
SETA												
SETA	Various	Various/MDA HQ/Arlington, VA						392	1Q	TBD	392	TBD
Subtotal Support Costs			0	0		0		392			392	
Remarks												
III. Test and Evaluation Cost (\$in Thousands)												
Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY2003 Cost	FY2003 Award Date	FY2004 Cost	FY2004 Award Date	FY2005 Cost	FY2005 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Joint Warfighter Support												
Joint Warfighter Support	Various	Various/Various						7595	1/4Q	TBD	7595	TBD
Subtotal Test and Evaluation			0	0		0		7595			7595	
Remarks												

UNCLASSIFIED

MDAExhibitR -3RDT&EProjectCostAnalysis	Date February2003
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APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDevelopmentandPrototypes(ACD&P)	R-1 NOMENCLATURE 0603889CBallisticMissileDefenseProducts
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IV.ManagementServicesCost(\$inThousands)												
CostCategories:	Contract Method &Type	Performing Activity& Location	Total PYs Cost	FY2003 Cost	FY2003 Award Date	FY2004 Cost	FY2004 Award Date	FY2005 Cost	FY2005 Award Date	Costto Complete	Total Cost	Target Valueof Contract
JointStaffandServiceLiaison												
JointStaff&ServiceLiaison	Various	Various/Various						3797	1/4Q	TBD	3797	TBD
SubtotalManagementServices			0	0		0		3797			3797	

Remarks

ProjectTotalCost			0	0		0		11784			11784	
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Remarks

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MDAExhibitR -4ScheduleProfile	Date February2003
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APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDevelopmentandPrototypes(ACD&P)	R-INOMENCLATURE 0603889CBallisticMissileDefenseProducts
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FiscalYear	2002				2003				2004				2005				2006				2007				2008				2009							
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Block2006																																				
JointWarfighter																																				

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MDAExhibitR -4AScheduleDetail						Date February2003		
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APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDevelopment andPrototypes(ACD&P)				R-1NOMENCLATURE 0603889CBallisticMissileDefenseProducts				
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ScheduleProfile	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
Block2006								
JointWarfighter				1Q-4Q	1Q-4Q	1Q-4Q		

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MDA Exhibit R -2 ARDT&E Project Justification	Date February 2003
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APPROPRIATION/BUDGET ACTIVITY 4. Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603889C Ballistic Missile Defense Products
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COST (\$ in Thousands)	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
0903 Joint Warfighter Support Block 2008	0	0	0	0	0	12292	28530	30502
RDT&E Articles Qty	0	0	0	0	0	0	0	0

A. Mission Description and Budget Item Justification

The Joint Warfighter Support program ensures that warfighter operational perspectives and concerns are reflected in the development of Ballistic Missile Defense (BMD) capabilities. The Deputy for Force Structure Integration and Deployment (TR) works with the Combatant Commanders, Services and Joint Staff through seminars, wargames, and exercises to achieve this goal. Through interaction, areas of improvement in BMD capability are identified for action. This program also supports planning for initial defensive operations, integration of SPACECOM/NORTHCOM in required wargames, table top, experiments, and System Integrated Tests and Hardware in the Loop Tests required for enhanced use of JNIC in support of operational concept development.

B. Accomplishments/Planned Program

Not Applicable.

C. Other Program Funding Summary

	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009	To Complete	Total Cost
PE0603175C Ballistic Missile Defense Technology	145021	151130	240820	205791	200956	247990	287864	306472		
PE0603869C Meads Concepts -Dem/Val	0	114781	0	0	0	0	0	0		
PE0603879C Advanced Concepts, Evaluations and Systems	0	0	151696	216778	166308	193949	241947	234484		
PE0603880C Ballistic Missile Defense System Segment	790535	1046652	0	0	0	0	0	0		
PE0603881C Ballistic Missile Defense Terminal Defense Segment	195800	136399	810440	924356	985514	805785	558071	371649		
PE0603882C Ballistic Missile Defense Midcourse Defense Segment	3655089	3103844	3613266	3841412	2078522	1908511	1482389	1437923		
PE0603884C Ballistic Missile Defense Sensors	312973	350436	438242	562752	706514	1043454	1152740	1261906		
PE0603886C Ballistic Missile Defense System Interceptors	0	0	301052	541178	1127180	1729613	2558327	2904096		
PE0603890C Ballistic Missile Defense System Engineering and Integration	0	0	483996	522458	604445	628594	703055	706501		

UNCLASSIFIED

MDA Exhibit R -2 ARDT&E Project Justification	Date February 2003
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APPROPRIATION/BUDGET ACTIVITY 4. Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603889C Ballistic Missile Defense Products
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PE0603888C Ballistic Missile Defense Test and Targets	0	0	611522	711181	661416	643302	639839	672396		
PE0604861C Theater High -Altitude Area Defense System -TMD -EMD	818632	888323	0	0	0	0	0	0		
PE0604865C Patriot PAC -3 Theater Missile Defense Acquisition -EMD	130630	176155	0	0	0	0	0	0		
PE0604867C Navy Area Theater Missile Defense -EMD	96121	0	0	0	0	0	0	0		
PE0605502C Small Business Innovative Research -MDA	145102	0	0	0	0	0	0	0		
PE0901585C Pentagon Reservation	6381	7432	14481	13384	12758	12850	13158	13476		
PE0603883C Ballistic Missile Defense Boost Defense Segment	583463	718036	626264	653612	755163	665772	477109	354346		
PE0901598C Management Headquarters - MDA	30191	25365	93441	101373	114107	121743	128972	133499		

D. Acquisition Strategy

Joint Warfighter Support will continue to follow the MDA's capability -based acquisition strategy that emphasizes assessment, spiral -development testing and evolutionary acquisition through the definition of two -year capability blocks. TR will accomplish this through development and vetting of Operational Concepts through JTAMDO, the Combatant Commanders and the Services utilizing seminars, workshops, tabletops, wargames and exercises, which also support the Military Utility Assessment.

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MDAExhibitR -3RDT&EProjectCostAnalysis										Date February2003		
APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDevelopmentandPrototypes(ACD&P)					R-INOMENCLATURE 0603889CBallisticMissileDefenseProducts							
I.ProductDevelopmentCost(\$inThousands)												
CostCategories:	Contract Method &Type	Performing Activity& Location	Total PYs Cost	FY2003 Cost	FY2003 Award Date	FY2004 Cost	FY2004 Award Date	FY2005 Cost	FY2005 Award Date	Costto Complete	Total Cost	Target Valueof Contract
SubtotalProductDevelopment												
Remarks FundinginthisprojectisnotprogrammeduntilFY2007.												
II.SupportCostsCost(\$inThousands)												
CostCategories:	Contract Method &Type	Performing Activity& Location	Total PYs Cost	FY2003 Cost	FY2003 Award Date	FY2004 Cost	FY2004 Award Date	FY2005 Cost	FY2005 Award Date	Costto Complete	Total Cost	Target Valueof Contract
SubtotalSupportCosts												
Remarks Fundinginthisprojectisnotprogr mmeduntilFY2007.												
III.TestandEvaluationCost(\$inThousands)												
CostCategories:	Contract Method &Type	Performing Activity& Location	Total PYs Cost	FY2003 Cost	FY2003 Award Date	FY2004 Cost	FY2004 Award Date	FY2005 Cost	FY2005 Award Date	Costto Complete	Total Cost	Target Valueof Contract
SubtotalTestandEvaluation												
Remarks FundinginthisprojectisnotprogrammeduntilFY2007.												
IV.ManagementServicesCost(\$inThousands)												
CostCategories:	Contract Method &Type	Performing Activity& Location	Total PYs Cost	FY2003 Cost	FY2003 Award Date	FY2004 Cost	FY2004 Award Date	FY2005 Cost	FY2005 Award Date	Costto Complete	Total Cost	Target Valueof Contract
SubtotalManagementServices												
Remarks FundinginthisprojectisnotprogrammeduntilFY2007.												
ProjectTotalCost												
Remarks FundinginthisprojectisnotprogrammeduntilFY2007.												

UNCLASSIFIED

MDAExhibitR -4ScheduleProfile	Date February2003
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APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDevelopmentandPrototypes(ACD&P)	R-INOMENCLATURE 0603889CBallisticM issileDefenseProducts
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FiscalYear	2002				2003				2004				2005				2006				2007				2008				2009			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Block2008																																
ExerciseSupport																																

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MDAExhibitR -4AScheduleDetail						Date February2003		
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APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDevelopmentandPrototypes(ACD&P)				R-1NOMENCLATURE 0603889CBallisticMissileDefenseProducts				
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ScheduleProfile	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
Block2008								
JointWarfighter							1Q-4Q	1Q-4Q

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UNCLASSIFIED

MDA Exhibit R -2 ARDT&E Project Justification	Date February 2003
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APPROPRIATION/BUDGET ACTIVITY 4. Advanced Component Development and Prototypes (ACD &P)	R-INOMENCLATURE 0603889C Ballistic Missile Defense Products
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COST (\$ in Thousands)	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
0204 Joint National Integration Center (JNIC)	0	0	79122	85876	85236	92228	91283	99443
RDT&E Articles Qty	0	0	0	0	0	0	0	0

A. Mission Description and Budget Item Justification

Beginning in FY2004, funding for this effort will transition from BMD Systems Program Element (PE) (0603880C - Project 1056) to the new Ballistic Missile Defense Products PE (0603889C - Project 0204).

The mission of the JNIC is to function as the key -operating component of the BMD Test Bed. As such, the JNIC will design, implement, and maintain both integration and test environments, as well as experimentation, demonstration, and exercise laboratories. In turn, the execution of the Test Bed design will allow the JNIC to provide initial defensive operations (IDO) using both the Ground based Midcourse Missile Defense Battle Management, Command, Control, and Communications (GBMC3) and the BMD S Command and Control, Battle Management, and Communications (C2BMC).

As the key -operating element of the BMD Test Bed, the JNIC is a critical component of BMD S Block 04/06 development that:

- Serves as an operating element of the BMD Test Bed;
- Provides the common environment for essential integration and testing of the BMD S;
- Develops BMD modeling and simulation for both the developers and users of the overall BMD S and its program elements;
- Provides a dedicated facility and infrastructure that supports the full spectrum of activities involved in developing integrated missile defense concepts of operation (CONOPS) and tactics, techniques and procedures (TTP).

B. Accomplishments/Planned Program

	FY2002	FY2003	FY2004	FY2005
JNIC Development & Ops			63235	66811
RDT&E Articles (Quantity)				

Beginning in FY2004, funding for this effort will reside in the BMD Products Program Element (0603889C).

The FY04 and FY05 budget provides the foundation for the operation and staffing of the JNIC. The funding maintains a secure facility that includes the computers, communications, networks, flight, ground and simulation Test Bed environments, a wargaming complex, environmental support, and other capabilities essential for the execution of MDA programs. These efforts include JNIC support to the critical elements of the BMD Test Bed, including the Ground based Midcourse Missile Defense (GMD) element Mission Control Center (MCC) and the GBMC3 Mission Operations Center (GMO), operational support and connectivity of the Battle Management Integration and Test Center (BITC) and C2BMC Experiment Laboratory (X-Lab), and infrastructure support of the Satellite Tracking and Surveillance System (STSS) Operations Center and sensor netting Test Bed. Additional required Test Bed baselines within the JNIC, and their need for assured connectivity to external BMD S element development labs and centers, will require continued support and limited expansion. The JNIC will house and sustain a robust, scalable, and flexible integration and test environment that will provide an EDO capability for both the GBMC3 and BMD S C2BMC. In previous years, required modernization was deferred to support growing missions, resulting in a degradation of infrastructure and information management system support. This significant budget increase starting in FY04 will repair and replace obsolete technology and correct electrical,

UNCLASSIFIED

MDA Exhibit R -2 ARDT&E Project Justification	Date February 2003
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APPROPRIATION/BUDGET ACTIVITY 4. Advanced Component Development and Prototypes (ACD &P)	R-1 NOMENCLATURE 0603889C Ballistic Missile Defense Products
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mechanical, communications, and architectural code compliance deficiencies. These actions will achieve minimum reliability level to support BMDS Block 04 integration and test, and to serve as the C2BMC node for an initial defensive operations activation of the BMD Test Bed.

The budget also provides a capability to support the integration of an overarching BMDS. The funds build and retain a corporate knowledge base comprised of leading technical experts with the capability to respond quickly to customer requirements and perform technical MDA missions. Funds support the management, key subject matter experts, unique hardware, software, and licenses for the execution and technical support of operator-in-the-loop Wargames, Joint Warfighter Exercises and Experiments, the Multi-Mission Integration Cell (MMIC), Ballistic Missile Defense Interoperability (BMDI), and Integrated Missile Defense Analyses (IMDA).

	FY2002	FY2003	FY2004	FY2005
Gov. Project & Support			4203	4377
RDT&E Articles (Quantity)				

These funds provide for salaries and support to government personnel.

	FY2002	FY2003	FY2004	FY2005
C2BMC Integration, Test and Experimentation			11684	14688
RDT&E Articles (Quantity)				

Beginning in FY2004, funding for this effort will reside in the BMDS Products Program Element (0603889C).

The JNIC provides the architecture, design, facilities, infrastructure, connectivity, and support manpower for the BMDC C2BMC Block 04/06 prototype suites and C2BMC experimentation (C2BMC X) missions. Facilities support include the operation, maintenance, and upgrade of three integration and test suites of equipment, the X-Lab and modifications suite, and administrative offices and conference room that host the Missile Defense National Team C2BMC Integration and Test (MDNTB(I)) Integrated Product Team (IPT). The BITC environment also includes a presentation center and server room for rapid test article experimentation reconfiguration. Each of the four equipment suites is a replica of the prototype produced by the National Team and must be modified or upgraded to reflect development changes. Operations require the resources to configure and operate the prototypes and test support systems during Integration, Test, and Experimentation (IT&E). Infrastructure includes connectivity required for IT&E, local and master test control and network configuration management, communications means internal and external to the JNIC for block capabilities, and interfaces with other BMDS elements. Connectivity changes and upgrades are needed to reflect changes in the prototype, other missile defense elements, and modeling and simulation systems.

C. Other Program Funding Summary										
	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009	To Complete	Total Cost
PE0603869C Meads Concepts -Dem/Val	0	114781	0	0	0	0	0	0		
PE0603175C Ballistic Missile Defense Technology	145021	151130	240820	205791	200956	247990	287864	306472		

UNCLASSIFIED

MDA Exhibit R -2 ARDT&E Project Justification	Date February 2003
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APPROPRIATION/BUDGET ACTIVITY 4. Advanced Component Development and Prototypes (ACD &P)	R-1 NOMENCLATURE 0603889C Ballistic Missile Defense Products
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PE0603879C Advanced Concepts, Evaluations and Systems	0	0	151696	216778	166308	193949	241947	234484		
PE0603880C Ballistic Missile Defense System Segment	790535	1046652	0	0	0	0	0	0		
PE0603881C Ballistic Missile Defense Terminal Defense Segment	195800	136399	810440	924356	985514	805785	558071	371649		
PE0603882C Ballistic Missile Defense Midcourse Defense Segment	3655089	3103844	3613266	3841412	2078522	1908511	1482389	1437923		
PE0603884CB allistic Missile Defense Sensors	312973	350436	438242	562752	706514	1043454	1152740	1261906		
PE0603886C Ballistic Missile Defense System Interceptors	0	0	301052	541178	1127180	1729613	2558327	2904096		
PE0603890C Ballistic Missile Defense System Engineering and Integration	0	0	483996	522458	604445	628594	703055	706501		
PE0603888C Ballistic Missile Defense Test and Targets	0	0	611522	711181	661416	643302	639839	672396		
PE0604861C Theater High -Altitude Area Defense System -TMD -EMD	818632	888323	0	0	0	0	0	0		
PE0604865C Patriot PAC -3 Theater Missile Defense Acquisition -EMD	130630	176155	0	0	0	0	0	0		
PE0604867C Navy Area Theater Missile Defense -EMD	96121	0	0	0	0	0	0	0		
PE0605502C Small Business Innovative Research -MDA	145102	0	0	0	0	0	0	0		
PE0901585C Pentagon Reservation	6381	7432	14481	13384	12758	12850	13158	13476		
PE0901598C Management Headquarters - MDA	30191	25365	93441	101373	114107	121743	128972	133499		
PE0603883C Ballistic Missile Defense Boost Defense Segment	583463	718036	626264	653612	755163	665772	477109	354346		

D. Acquisition Strategy

No Acquisition Strategy required. The Joint National Integration Center (JNIC) is not an acquisition agent, but a field activity working under the auspice of the Missile Defense Agency.

UNCLASSIFIED

MDAExhibitR -3RDT&EProjectCostAnalysis										Date February2003		
APPROPRIATION/BUDGETACTIVITY					R-INOMENCLATURE							
4.AdvancedComponentDevelopmentandPrototypes(ACD&P)					0603889CBallisticMissileDefenseProducts							
I.ProductDevelopmentCost(\$inThousands)												
CostCategories:	Contract Method &Type	Performing Activity& Location	Total PYs Cost	FY2003 Cost	FY2003 Award Date	FY2004 Cost	FY2004 Award Date	FY2005 Cost	FY2005 Award Date	Costto Complete	Total Cost	Target Valueof Contract
SubtotalProductDevelopment												
Remarks												
II.SupportCostsCost(\$inThousands)												
CostCategories:	Contract Method &Type	Performing Activity& Location	Total PYs Cost	FY2003 Cost	FY2003 Award Date	FY2004 Cost	FY2004 Award Date	FY2005 Cost	FY2005 Award Date	Costto Complete	Total Cost	Target Valueof Contract
JNICDevelopment&Ops												
JNIC	MIPR	50Space Wing/Schriever AFB,CO				1037	1Q	1062	1Q	CONT.	2099	CONT.
SubtotalSupportCosts												
Remarks												
III.TestandEvaluationCost(\$inThousands)												
CostCategories:	Contract Method &Type	Performing Activity& Location	Total PYs Cost	FY2003 Cost	FY2003 Award Date	FY2004 Cost	FY2004 Award Date	FY2005 Cost	FY2005 Award Date	Costto Complete	Total Cost	Target Valueof Contract
JNICDevelopment&Ops												
JNIC	C/CPAF	NorthropGrumman MissionSys./CO				55582	2Q	60740	2Q	CONT.	116322	CONT.
C2BMCIIntegration,Testand Experimentation												
JNIC	C/CPAF	NorthropGrumman MissionSys./CO				10392	2Q	13332	2Q	CONT.	23724	CONT.
SubtotalTestandEvaluation												
Remarks												

UNCLASSIFIED

MDAExhibitR -3RDT&EProjectCostAnalysis										Date February2003		
APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDevelopmentandPrototypes(ACD&P)					R-INOMENCLATURE 0603889CBallisticMissileDefenseProducts							
IV.ManagementServicesCost(\$inThousands)												
CostCategories:	Contract Method &Type	Performing Activity& Location	Total PYs Cost	FY2003 Cost	FY2003 Award Date	FY2004 Cost	FY2004 Award Date	FY2005 Cost	FY2005 Award Date	Costto Complete	Total Cost	Target Valueof Contract
JNICDevelopment&Ops												
JNIC	C/CPAF	TBD				4792	3Q	3151	3Q	CONT.	7943	CONT.
JNIC	C/FFRDC	Various				1824	1Q	1858	1Q	CONT.	3682	CONT.
Gov.Project&Support												
JNIC	Other	JNIC/CO				3235	1/4Q	3375	1/4Q	CONT.	6610	CONT.
USN	Other	NRL/MD				968	1/4Q	1002	1/4Q	CONT.	1970	CONT.
C2BMCIIntegration,Testand Experimentation												
JNIC	C/CPAF	TBD/CO				452	3Q	474	3Q	CONT.	926	CONT.
JNIC	C/FFRDC	Various/CO				840	1Q	882	1Q	CONT.	1722	CONT.
SubtotalManagementServices			0	0		12111		10742			22853	
Remarks												
ProjectTotalCost			0	0		79122		85876			164998	
Remarks												

UNCLASSIFIED

MDAExhibitR -4ScheduleProfile	Date February2003
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APPROPRIATION/BUDGETACTIVITY 4.AdvancedC omponentDevelopmentandPrototypes(ACD&P)	R-1NOMENCLATURE 0603889CBallisticMissileDefenseProducts
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FiscalYear	2002				2003				2004				2005				2006				2007				2008				2009							
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
JNIC																																				
BMDSBattlePlanningExercises									Δ	Δ			Δ	Δ	Δ		Δ	Δ	Δ		Δ	Δ	Δ		Δ	Δ	Δ		Δ	Δ	Δ		Δ	Δ	Δ	
BMDSCommand&ControlSimulations									Δ		Δ		Δ		Δ		Δ		Δ		Δ		Δ		Δ		Δ		Δ		Δ		Δ		Δ	
BMDSSystemIntegratedFlightTests TechSuppt																																				
BMDSWargame									Δ				Δ				Δ				Δ				Δ				Δ				Δ			
Execution&TechnicalSupptof Wargames																																				
Multi-NationalConferenceWargame										Δ				Δ				Δ				Δ				Δ				Δ				Δ		
NimbleTitanWargame									Δ								Δ					Δ				Δ				Δ				Δ		

UNCLASSIFIED

MDAExhibitR -4AScheduleDetail	Date February2003
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APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDevelopmentandPrototypes(ACD&P)	R-1NOMENCLATURE 0603889CBallisticMissileDefenseProducts
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ScheduleProfile	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
JNIC								
BMDSBattlePlanningExercises			1Q,2Q,4Q	1Q,2Q,4Q	1Q,2Q,4Q	1Q,2Q,4Q,4Q	1Q,2Q,4Q	1Q,2Q,4Q
BMDSCommand&ControlSimulations			1Q,3Q	1Q,3Q	1Q,3Q	1Q,3Q	1Q,3Q	1Q,3Q
BMDSSystemIntegratedFlightTestsTechSuppt			1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q
BMDSWargame			2Q	2Q	2Q	2Q		
Execution&TechnicalSupptofWargames			1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q
Multi-NationalConferenceWargame			3Q	3Q	3Q	3Q	3Q	3Q
NimbleTitanWargame			2Q,2Q		2Q	2Q	2Q	2Q

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UNCLASSIFIED

MDA Exhibit R -2 ARDT&E Project Justification	Date February 2003
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APPROPRIATION/BUDGET ACTIVITY 4. Advanced Component Development and Prototypes (ACD&P)	R-INOMENCLATURE 0603889C Ballistic Missile Defense Products
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COST (\$ in Thousands)	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
0602 Program Operations	0	0	15476	16197	20345	20619	22192	24113
RDT&E Articles Qty	0	0	0	0	0	0	0	0

A. Mission Description and Budget Item Justification

This project covers personnel and related support costs, statutory and fiscal requirements.

Personnel covers government civilians performing program -wide oversight functions such as contracting, program integration, safety, quality and mission assurance at Missile Defense Agency (MDA), Executing Agents within the US Army Space & Missile Defense Command, US Army PEO Air and Missile Defense, US Navy PEO for Theater Surface Combatants, Office of Naval Research, and US Air Force.

Assistance required to support Missile Defense Agency program -wide management functions is also contained in this project. Typical efforts include cost estimating; audit; technology integration across MDA projects; and assessment of schedule, cost and performance, with attendant documentation of the many related programmatic issues. The requirements for this area are based on most economical and efficient utilization of contractors versus government personnel.

Fiscal Requirements include reimbursable services acquired through the Defense Working Capital Fund (DWCF) such as accounting services provided by the Defense Finance and Accounting Services (DFAS); reserves for special termination costs on designated contracts; and provisions for terminating other programs as required. MDA has additional requirements to provide for foreign currency fluctuations on its limited number of foreign contracts. Also includes funding for charges to canceled appropriations in accordance with Public Law 101 -510.

Note that these funds are allocated across multiple Program Elements in accordance with the Fiscal Year 1996 Authorization Act, which directed these funds be allocated to the programs being supported rather than managed from a single source. This structure often makes it difficult to level -fund all PEs while maintaining an orderly fiscal structure for executing the individual Program Operation efforts.

B. Accomplishments/Planned Program

	FY2002	FY2003	FY2004	FY2005
Personnel				5159
RDT&E Articles (Quantity)				5399

Provides funding for government salaries and benefits at the Missile Defense Agency that are associated with program -wide support.

UNCLASSIFIED

MDA Exhibit R -2 ARDT&E Project Justification	Date February 2003
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APPROPRIATION/BUDGET ACTIVITY 4. Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603889C Ballistic Missile Defense Products
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	FY2002	FY2003	FY2004	FY2005
Management Support			5159	5399
RDT&E Articles (Quantity)				

Funds the contract SETA support costs directly associated with Missile Defense Agency program - wide support organizations. This effort provides the funding for the Missile Defense Agency's executing agents (Army Space and Missile Defense Command, Army PEO -AMD, Air Force, and Navy) including government salaries & benefits, seta support, and various management/overhead costs.

	FY2002	FY2003	FY2004	FY2005
Fiscal Requirements			5158	5399
RDT&E Articles (Quantity)				

This effort funds various requirements at the Missile Defense Agency, to include accounting services, special termination costs for foreign currency fluctuations, and charges from cancelled appropriations.

C. Other Program Funding Summary

	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009	To Complete	Total Cost
PE0603869C Meads Concepts -Dem/Val	0	114781	0	0	0	0	0	0		
PE0603879C Advanced Concepts, Evaluations and Systems	0	0	151696	216778	166308	193949	241947	234484		
PE0603880C Ballistic Missile Defense System Segment	790535	1046652	0	0	0	0	0	0		
PE0603881C Ballistic Missile Defense Terminal Defense Segment	195800	136399	810440	924356	985514	805785	558071	371649		
PE0603882C Ballistic Missile Defense Midcourse Defense Segment	3655089	3103844	3613266	3841412	2078522	1908511	1482389	1437923		
PE0603883C Ballistic Missile Defense Boost Defense Segment	583463	718036	626264	653612	755163	665772	477109	354346		
PE0603884C Ballistic Missile Defense Sensors	312973	350436	438242	562752	706514	1043454	1152740	1261906		
PE0603175C Ballistic Missile Defense Technology	145021	151130	240820	205791	200956	247990	287864	306472		

UNCLASSIFIED

MDA Exhibit R -2 ARDT&E Project Justification	Date February 2003
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APPROPRIATION/BUDGET ACTIVITY 4. Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603889C Ballistic Missile Defense Products
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PE0603886C Ballistic Missile Defense System Interceptors	0	0	301052	541178	1127180	1729613	2558327	2904096		
PE0603890C Ballistic Missile Defense System Engineering and Integration	0	0	483996	522458	604445	628594	703055	706501		
PE0604861C Theater High -Altitude Area Defense System -TMD -EMD	818632	888323	0	0	0	0	0	0		
PE0604865C Patriot PAC -3 Theater Missile Defense Acquisition -EMD	130630	176155	0	0	0	0	0	0		
PE0604867C Navy Area Theater Missile Defense -EMD	96121	0	0	0	0	0	0	0		
PE0605502C Small Business Innovative Research -MDA	145102	0	0	0	0	0	0	0		
PE0901585C Pentagon Reservation	6381	7432	14481	13384	12758	12850	13158	13476		
PE0901598C Management Headquarters - MDA	30191	25365	93441	101373	114107	121743	128972	133499		
PE0603888C Ballistic Missile Defense Test and Targets	0	0	611522	711181	661416	643302	639839	672396		