

UNCLASSIFIED

MDAExhibitR -2RDT&EBudgetItemJustification	Date February2003
---	-----------------------------

APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDevelopmentandPrototypes(ACD&P)	R-INOMENCLATURE 0603888CBallisticMissileDefenseTestandTargets
--	--

COST(\$inThousands)	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
TotalPECost	0	0	611522	711181	661416	643302	639839	672396
0304Test&EvaluationCore	0	0	315108	303771	299195	322564	286832	303148
0704Test&EvaluationBlock2004	0	0	37401	32943	0	0	0	0
0804Test&EvaluationBlock2006	0	0	2386	9401	40645	39477	0	0
0904Test&EvaluationBlock2008	0	0	962	1028	3616	12908	85088	86585
0305Targets&CountermeasuresCore	0	0	19842	20749	20949	21358	21405	21598
0705Targets&Countermeasures -Block2004	0	0	197387	169779	0	0	0	0
0805Targets&Countermeasures -Block2006	0	0	31860	109877	212500	171624	0	0
0905Targets&Countermeasures -Block2008	0	0	0	56794	77398	67974	238821	253064
0602ProgramOperations	0	0	6576	6839	7113	7397	7693	8001

A.MissionDescriptionandBudgetItemJustification

FundingforthiseffortwaspreviouslyheldundertheBallisticMissileDefenseSystemSegmentProgramElement(PE0603880C).

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

TheflowdownofBallisticMissileDefenseSystem(BMDS)capabilitiespecificationsresultingfromMissileDefenseNationalTeamefforts inC2BMCandSystemsEngineering&Integrationwill guidetheintegrationofTargetsandCountermeasures,TestandEvaluation,andProgramOperationsSupportintotheBMDSystem,theBMDSC2BMCarchitecture,andtheBMDTestBed.

TheBallisticMissileDefenseTest&TargetsProgramElement(PE)providestheresourcetestandevaluatethemulti-layeredBMDScapability,anddevelop targetsandcountermeasuresforusein systemtestingfordefenseoftheUnitedStates,deployedforces, friends,andallies. ThisPEiscomprisedofnineprimaryprojects:Test&EvaluationCore;Targets&CountermeasuresCore; ProgramOperationstoincludePersonnel,SupportandFiscal;Test&EvaluationBlock2004,Targets&CountermeasuresBlock2004,Test&EvaluationBlock2006,Targets&Countermeasures Block2006,Test&EvaluationBlock2008,andTargets&CountermeasuresBlock2008.CorefunctionsprovidefortheimplementationofthetestandtargetscapabilityacrossmultipleBlocks; expandthecapabilitiesoftheBMDSinfutureBlocksbeyondtheFYDP;and,developcapabilitynotyetforeseenaspartofacurrentorfutureblock.Blockfunctionsfacilitatethedisciplinedand integratedmanagementofeachoftheBMDSBlocks.Successfulperformanceoftheseactivitiesisnecessaryforfieldingamulti-layered, evolutionar systemfordefenseindepthagainstthe full spectrumofballisticmissilethreats.

TheTest&Evaluation(T&E)programprovidesconsolidatedBMDS-wideT&Ecapabilitiesandresourcesrequiredtoallowforcohesivefacilitation,management,andexecutionoftestactivities. T&Eeffortsincludethe development,operation,maintenance,andmodernizationoftheT&EinfrastructuresupportingboththetestingofBMDSElementsandSystemLeveltesting.TheT&E programfundstheBMDSSystemTestandAssessmentprogramthatincludes systemtests,critical measurements,integrationtests,datacenterssupport,and supporting technology experiments. T&E activitiesassociatedwithspecificBMDSElementsarecapturedintherespectiveBMDSElement.T&Eactivitiesaregroupedinterms ofSystemTestandAssessment;TestResourcesoffacilities, ranges,sensors,andtestinstrumentation;andFacilities,Siting,andEnvironmental(FS&E)efforts.

TheTargetsandCountermeasuresprogramprovidescapability-basedballisticmissiletargetssystemsto includemissile subsystems(suchasboosters, re-entryvehicles(RV)guidanceandcontrol) payloads(sensorpackages,countermeasures),andlaunchsupportsystems.Thisactivityfundsnewtargetandcountermeasuredevelopment,riskreductionflights, subsystemcharacterization,aswell asprocuresandmaintainslongleadmaterialofmajortargetcomponents.Advancedtargetinstrumentation,anewliquidbooster,MobileLaunchPlatformTargets,Medium/LongRangeLiquidFuel

UNCLASSIFIED

MDAExhibitR -2RDT&EBudgetItemJustification	Date February2003
---	-----------------------------

APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDevelopmentandPrototypes(ACD&P)	R-1NOMENCLATURE 0603888CBallisticMissileDefenseTestandTargets
--	--

boosters,MediumRangeTargets,StrategicRangeAirLaunchTarget,LongRangeFMA(LandandSea),andLongRangeAirLaunchedTarget(LRALT)arebeingdeveloped.Inaddition,this programsupportsagingsurveillance,refurbishmentandreuseofexistinginventoriesuchasMinutemanIIandPershingIIhardwareare.TargetsandCountermeasureactivitiesassociatedwithspecific BMDSElementsarecapturedintherespectiveBMDSElement.

ProgramOperationsunderthisprojectcoverspersonnelandrelatedsupportcosts,statutoryandfiscalrequirements.Mayincludefundingforgovernmentciviliansperformingprogram-wideoversight functionsuchascontracting,programintegration,safety,qualityandmissionassuranceatMissileDefenseAgency(MDA);costestimating;audit;technologyintegrationacrossallMDAprojects; andassessmentofschedule,costandperformance,documentationofrelatedprogrammaticissuesand,foreigncurrencyfluctuationsonlimitednumberofforeigncontracts.Alsoincludesfundingfor chargesoncanceledappropriationsinaccordancewithPublicLaw101-510.

B.ProgramChangeSummary	FY2002	FY2003	FY2004	FY2005
PreviousPresident'sBudget(FY2003PB)	0	0	0	0
CurrentPresident'sBudget(FY2004PB)	0	0	611522	711181
TotalAdjustments	0	0	611522	711181
CongressionalSpecificProgramAdjustments	0	0	0	0
CongressionalUndistributedAdjustments	0	0	0	0
Reprogrammings	0	0	611522	711181
SBIR/STTRTransfer	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-INOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
---	--

COST (\$ in Thousands)	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
0304 Test & Evaluation Core	0	0	315108	303771	299195	322564	286832	303148
RDT&E Articles Qty	0	0	2	4	2	4	4	4

A. Mission Description and Budget Item Justification

Funding for these Test & Evaluation efforts was previously funded in the Ballistic Missile Defense System Segment Program Element (PE0603880C), Project 1060. The Modeling & Simulation efforts are funded in the Ballistic Missile Defense System Core Program Element (PE0603890C) in FY2004 and beyond.

The Test & Evaluation (T&E) Project consolidates all System-wide T&E resources. This allows for the more cohesive facilitation, management and execution of these test activities for a single, integrated BMDS System. This activity provides the resources needed for the test infrastructure and analytical tools needed by the Missile Defense Agency (MDA) to execute a System-wide Test Program. Specific Test & Evaluation costs are captured in the respective BMDSElement.

MDA's testing needs are quickly expanding beyond those of the individual BMDSElements. To address these needs, the System Test & Assessment Program provides for the test planning, management, and execution of the BMDSTest Program and the BMDSMeasurements Program.

The BMDSTest Program provides for a cohesive program of testing to include: System Integrated Flight Tests (SIFTs); the Missile Defense Integrated Exercises (MDIEs), and the Missile Defense Wargames. The Mission Description, Planned Program, and Funding for these tests is included in the T&E Block documentation. However, funding for SETA and SMDC support personnel is included in this documentation.

The BMDSMeasurements Program is an integrated test program defined and established to ensure a coherent, complete, cost effective, and disciplined approach to collecting data/measurements to support characterization of the BMDS mission space. Under the Measurements Program, all MDA measurement requirements which support Block Characterization, CM/CCM Characterization, Threat Characterization, M&S Validation, Phenomenology, Advanced Concepts, Lethality, Kill Assessment, and Special Tests are collected, prioritized and validated by the Measurements Program Assessment Team (MPAT). Once validated, requirements are allocated to Tests of Opportunity (either Auxiliary Sensor Participation or Piggyback Operations) or used to design the dedicated flight tests which have been designated Critical Measurements and Countermeasure (CMCM) flight tests. All Measurements Requirements will be documented in the Measurements Master Test Plan. The Lethality and Kill Assessment Test Programs leverage BMD intercept tests of opportunity to characterize post-intercept remnants. This characterization is essential to maintain and improve the core lethality models: PEELS, KIDD, and PEGEM and to identify successful intercepts, perform ground effects analysis, support systems engineering assessments, and facilitate development of real time decision tools to support tactics and engagement doctrines. To support the Measurements and BMDSTest Program development, program objectives, and performance characterization, MDA Test and Evaluation provides resources to support the Data Collection, Analysis, and Exploitation activities of the Optical Data Analysis (ODA), and Radar Data Analysis (RDA) groups. These groups perform various functions which support BMD data collection objectives (mission planning, sensor execution, data analysis), explore phenomenology to improve future BMDS systems and new mission areas, and provide characterization and assessment for Measurements and BMDSTesting. Funds also support the MDA Data Centers for Legacy Data identification and archive, as well as Disaster Recovery preparation.

The Test Resources Program provides the resources for the development, sustainment, and modernization of core corporate T&E infrastructure facilities of the BMDSTest bed to support system and element-level testing. This includes support at:

- BMD-unique ground test facilities:
- Kinetic Kill Vehicle Hardware in the Loop Simulator (KHILS) at Eglin AFB in Fort Walton Beach, FL
 - Arnold Engineering and Development Center (AEDC) Hypervelocity Wind Tunnel Number 9 (Tunnel 9) at White Oak, MD
 - Infrared and Blackbody Standards at the National Institute of Standards and Technology (NIST) in Gaithersburg, MD

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 0603888C Ballistic Missile Defense Test and Targets
---	--

- Hypervelocity Ballistic Range Light Gas Gun Von Karman Facilities (VKF) at AEDC in Tullahoma, TN
- 7V and 10V Space Chambers at AEDC, Tullahoma, TN
- National Hover Test Facility (NHTF) at Edwards AFB, CA
- Army Missile Optical Range (AMOR) at Redstone Arsenal, AL
- Aero-Optic Evaluation Center (AOEC) at Calspan -University of Buffalo Research Center (CUBRC), NY
- Holloman High Speed Test Track (HHSTT) at Holloman AFB, NM

BMD-unique range assets at various DoD test ranges:

- White Sands Missile Range (WSMR) in Las Cruces, NM including Ft. Wingate Launch Complex near Gallup, NM
- Reagan Test Site (RTS) at the United States Army Kwajalein Atoll
- Pacific Missile Range Facility (PMRF) and Kauai Test Facility (KTF) at Kauai, HI
- Wake Island Launch Complex
- Naval Air Warfare Center, Weapons Division, Pt Mugu, CA

Airborne sensors, data collection assets, and special test equipment include:

- High Altitude Observatory II (HALO -II)
- Wide-body Airborne Sensor Platform (WASP)
- Remote Area Safety Aircraft -P-3s

All of these assets provide valuable program risk reduction and test implementation capability in support of BMD activities. Individual BMD elements pay only the direct costs associated with their specific test efforts. Recommended test infrastructure improvements resulting from the FY2002 Test Bed Infrastructure Study and the on-going Target Requirements Study are also implemented through the Test Resources Program. The Test Resources effort also supports the development of target requirements and the certification that targets satisfy test objectives.

The Facilities, Siting and Environmental program provides guidance, environmental impact analyses and documentation, real property facility siting, acquisition, and facility operational support for the BMD systems. This project plans, programs, budgets, and oversees facility acquisition through the Military Construction (MILCON) and RDT&E construction programs. This project provides guidance and supports the Environmental Assessment and Environmental Impact Statement process, environmental compliance, pollution prevention, and other environmental efforts.

B. Accomplishments/Planned Program

	FY2002	FY2003	FY2004	FY2005
Test Resources			153739	140064
RDT&E Articles (Quantity)			0	0

FY2004&2005 Planned Programs

- Provide for operations, sustainment, and modernization of the core corporate test and evaluation infrastructure components of the BMD Test Bed. This includes ranges and instrumentation, airborne sensors, and ground test facilities to support element and system-level testing.
- Provide level-of-effort funding for ranges/instrumentation to maintain MDA-unique test facilities and instrumentation for MDA tests. For example, the Reagan Test Site (RTS) will maintain Meck Island for GMD testing.

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 0603888C Ballistic Missile Defense Test and Targets
---	---

-Provides sustainment funding for the next generation, state-of-the-art airborne instrumentation platforms, HALO -II and WASP that will replace the HALO -I and the Airborne Surveillance Test Bed (AST).

-Provide level-of-effort funding to maintain MDA -unique ground test facilities, including wind tunnels, space chambers, light gas guns, the high-speed test track, and the hover test facility.

-Support BMD's test range transition to a common test management and execution process as well as provide upgrades and improvements to test range hardware and software based planning and execution tools.

-Continue to improve test infrastructure in terms of capability and quantity, as recommended from continuing MDA studies. These improvements will build on the existing core test infrastructure to support element-and-system-level testing.

-Procure transportable range safety/telemetry collection systems to provide depth and flexibility for emerging flight test scenarios and support MDA testing at remote locations.

-At the RTS, improve Meck Island test infrastructure including the power grid to support GMD testing and upgrade existing ground based sensors (millimeter wave -MMW) to expand the testing envelope through an increase in range and sensitivity.

-At PMRF, upgrade telemetry capability to support long-range engagements.

-Standardize flight safety procedures, analysis tools, flight hardware, and safety officer training through three-phase programs scheduled for completion by 2Q/04.

	FY2002	FY2003	FY2004	FY2005
System Test & Assessment			155848	158645
RDT&E Articles (Quantity)			2	4

FY2004 RDT&E Articles Two (2) short and/or long range test vehicles for CMCM Flight Test Program

FY2005 RDT&E Articles Four (4) short and/or long range test vehicles for CMCM Flight Test Program

FY2004 Planned Program

-Collect, prioritize, validate, and document requirements for MDA Measurements Program.

-Conduct test planning, sensor planning, material development, range integration efforts, and design reviews in support of Tests of Opportunity (TOOs) and dedicated flight tests -CMCM -2.

-Execute dedicated flight test CMCM -1. CMCM -1 will be designed to: support Block 2004 BMD's Capability Assessment, CM/CCM characterization, M&S validation, Spiral development of Block 2006 BMD system architecture/algorithms/technologies/CONOPS, and to address MDA National Team and System Engineering CM/CCM focus areas (concepts classified).

-The Lethality Test Program will continue monitoring of the lethality Ground and Live Fire Test and Evaluation activities associated with various program elements, and designing flight test experiments leveraging BMD intercepts for the collection of lethality ground effect data to improve the System Lethality Models.

-The Kill Assessment Test Program will extend the analysis activities to examine data collected on the BMD's events, optimize sensors based on the present data and analyses, develop engineering models, exercise and evaluate data-driven modeling together with impact data in real time to test and refine Kill Assessment decision tool and begin the process of insertion of the KA decision capabilities into the BMD's Block 2006 C2 BMC suite.

-The Data Collection, Analysis, and Exploitation Groups (Optical Data Analysis (ODA) and Radar Data Analysis (RDA)) will continue to support BMD's data collection objectives (mission planning, sensor execution, data analysis), explore phenomenology to improve future BMD's systems and new mission areas, and provide characterization and assessment for Measurements and BMD's flight test programs.

-Data Centers support will consist of Legacy Data identification and archiving, Disaster Recovery preparation, Subject Matter Expertise for M&S VV&A, and Web Hosting services for M&S.

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 0603888C Ballistic Missile Defense Test and Targets
---	---

FY2005 Planned Program

- Continue to collect, prioritize, validate, and document requirements for MDA Measurements Program.
- Conduct test planning, sensor planning, material development, range integration efforts, and design reviews in support of Tests of Opportunity (TOOs).
- Execute dedicated flight test CCM -2. CCM -2 will be designed to support Block 2004 BMDSCapability Assessment, CM/CCM characterization, M&S validation, Spiral development of Block 2006 BMD system architecture/algorithms/technologies/CONOPS, and definition of Block 2008 and beyond, and to address other MDANational Team and System Engineering CM/CCM focus areas (concepts are classified and are different from CCM -1 in FY2004).
- The Lethality Test Program will continue monitoring of the lethality Ground and Live Fire Test and Evaluation activities associated with various program elements, and designing flight test experiments leveraging BMD intercepts for the collection of lethality ground effect data to improve the System Lethality Models.
- The Kill Assessment Test Program will extend the analysis activities to examine data collected on the BMD Events, optimize sensors based on the present data and analyses, develop engineering models, exercise and evaluate data driven modeling together with impact data in real time to test a draft Kill Assessment decision tool and begin the process of insertion of the KA decision capabilities into the BMD SBLOCK 2006 C2 BMC suite.
- The Data Collection, Analysis, and Exploitation Groups (Optical Data Analysis (ODA) and Radar Data Analysis (RDA)) will continue to support BMD S data collection objectives (mission planning, sensor execution, data analysis), explore phenomenology to improve future BMD S systems and new mission areas, and provide characterization and assessment for Measurement and Targeting and BMD S flight test programs.
- Data Center support will consist of Legacy Data identification and archiving, Disaster Recovery preparation, Subject Matter Expertise for M&S VV&A, and Web Services - Hosting services for M&S.

	FY2002	FY2003	FY2004	FY2005
Facilities, Siting & Environmental			5521	5062
RDT&E Articles (Quantity)			0	0

FY2004 & 2005 Planned Programs

- Provide forenvironmental program guidance, compliance, planning and NEPA support, real property facility, acquisition, facility operations, and maintenance/repairs support for the BMD S.
- Facilities & Siting efforts will focus on ensuring the MILCON, Minor MILCON, and RDT&E design and construction activities are executed in time to support BMD programs' facility requirements and ensure compliance with all applicable laws and regulations.

UNCLASSIFIED

MDAExhibitR -2ARDT&EProjectJustification							Date February2003			
APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDevelopmentandPrototypes(ACD&P)					R-INOMENCLATURE 0603888CBallisticMissileDef enseTestandTargets					
C.OtherProgramFundingSummary										
	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009	To Complete	Total Cost
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		
PE0604867CNavyAreaTheaterMissile Defense -EMD	96121	0	0	0	0	0	0	0		
PE0603882CBallisticMissileDefense MidcourseDefenseSegment	3655089	3103844	3613266	3841412	2078522	1908511	1482389	1437923		
PE0603881CBallisticMissileDefense TerminalDefenseSegment	195800	136399	810440	924356	985514	805785	558071	371649		
PE0603883CBallisticMissileDefenseBoost DefenseSegment	583463	718036	626264	653612	755163	665772	477109	354346		
PE0603884CBallisticMissileDefense Sensors	312973	350436	438242	562752	706514	1043454	1152740	1261906		
PE0603886CBallisticMissile Defense SystemInterceptors	0	0	301052	541178	1127180	1729613	2558327	2904096		
PE0603890CBallisticMissileDefense SystemEngineeringandIntegration	0	0	483996	522458	604445	628594	703055	706501		
PE0603889CBallisticMissileDefense Products	0	0	343644	384763	333636	343447	349335	360951		
PE0604861CTheaterHigh -AltitudeArea DefenseSystem -TMD -EMD	818632	888323	0	0	0	0	0	0		
PE0604865CPatriotPAC -3TheaterMissile DefenseAcquisition -EMD	130630	176155	0	0	0	0	0	0		
PE0603175CBallistic MissileDefense 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		
PE0 603880CBallisticMissileDefense SystemSegment	790535	1046652	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 0603888C Ballistic Missile Defense Test and Targets
--	--

D. Acquisition Strategy

The core Test & Evaluation Program will support the Missile Defense Agency's capability-based acquisition strategy that emphasizes testing, spiral development, and evolutionary acquisition through the use of two-year capability blocks.

Test and Infrastructure programs will be executed utilizing a diverse acquisition strategy to take advantage of private industry competitive forces and existing DoD agencies, FFRDCs, and international coalition partner capabilities. Examples of participants in this acquisition strategy include the U.S. Army Space and Missile Defense Command, Air Force Space and Missile Command, and the U.S. Navy Research Lab.

Test programs will be executed utilizing a consolidated targets development, test resource, facilities, siting and environmental, and system-wide test program strategy. BMD management requirements will be met through MDA and other DoD agency personnel. BMD technical and program management services will be competitively procured from industry to provide the required infrastructure, engineering, programmatic, test and evaluation, and systems specific expertise required to develop BMDS programs.

UNCLASSIFIED

MDAExhibitR -3RDT&EProjectCostAnalysis										Date February2003		
APPROPRIATION/BUDGETACTIVITY					R-INOMENCLATURE							
4.AdvancedComponentDevelopmentandPrototypes(ACD&P)					0603888CBallisticMissileDefenseTestandTargets							
I.ProductDevelopmentCost(\$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:												
SubtotalProductDevelopment												
Remarks												
II.SupportCostsCost(\$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:												
SubtotalSupportCosts												
Remarks												
III.TestandEvaluationCost(\$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:												
SystemTest&Assessment												
MeasurementsFlightTests	Various				30295	1Q	24192	1Q	CONT.	54487		
SpecialProgramTests	Various				9898	1Q	10087	1Q	CONT.	19985		
CM/CCM	Various				73500	1Q	81282	1Q	CONT.	154782		
OpticalDataAnalysis	Various				14631	1Q	15052	1Q	CONT.	29683		
RCSDDataAnalysis	Various				6840	1Q	6938	1Q	CONT.	13778		
Lethality	Various				2940	1Q	2938	1Q	CONT.	5878		
KillAssessment	Various				3190	1Q	3437	1Q	CONT.	6627		
InternationalPrograms	Various				1048	1Q	775	1Q	CONT.	1823		
DataCenters	Various				3195	1Q	3188	1Q	CONT.	6383		

UNCLASSIFIED

MDAExhibitR -3RDT&EProjectCostAna lysis	Date February2003
--	-----------------------------

APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDevelopmentandPrototypes(ACD&P)	R-INOMENCLATURE 0603888CBallisticMissileDefenseTestandTargets
--	--

Facilities,Siting& Environmental												
Facilities&Siting	Various	Various				232	1Q	241	1Q	CONT.	473	
EnvironmentalCompliance	Various	Various				992	1Q	306	1Q	CONT.	1298	
TestResources												
GroundTestFacilities	Various	Army,Air Force/NY,AL,FL, MD,TN,CA,N M				19722	1Q	20272	1Q	CONT.	39994	
RangesandImplementation	Various	Various/HI,NM, MarshallIsetal				53495	1Q	41401	1Q	CONT.	94896	
AirborneSensors	C/Various	Raytheon,Aeromet, Boeing/CA,OK, WA				27135	1Q	22465	1Q	CONT.	49600	
TargetsCert&Re qt's	Various	USASMDC, POET/Huntsville AL,WashDC				1359	1Q	1389	1Q	CONT.	2748	
TBIAlternatives	Various	Various				34844	1Q	37081	1Q	CONT.	71925	
SubtotalTestandEvaluation			0	0		283316		271044			554360	

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
SystemTest&Assessment												
Gov'tProjectPersonnel	Various	USASMDC/Huntsv ille,AL				2333	1Q	2389	1Q	CONT.	4722	
SupportContracts	C/Various	Various/Arlington, VA				7457	1Q	7835	1Q	CONT.	15292	
T&ETravel	Other					521	1Q	532	1Q	CONT.	1053	
Facilities,Siting& Environmental												
SupportContracts	C/Various	Various/Arlington, VA				4297	1Q	4515	1Q	CONT.	8812	

UNCLASSIFIED

MDAExhibitR -3RDT&EProjectCostAnalysis										Date February2003		
APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDevelopmentandPrototypes(ACD&P)					R-1NOMENCLATURE 0603888CBallisticMissileDefenseTestandTargets							
TestResources												
SMDCSupport	Other	USASMDC/Huntsville,AL				2505	1Q	2465	1Q	CONT.	4970	
SupportContracts	C/Various	Various/Arlington,VA				8522	1Q	8699	1Q	CONT.	17221	
PoetSupport	SS/MIPR	POET/Arlington,VA				1579	1Q	1583	1Q	CONT.	3162	
TestResources	Other	WHS/Washington,DC				4578	1Q	4709	1Q	CONT.	9287	
SubtotalManagementServices				0	0	31792		32727			64519	
Remarks												
ProjectTotalCost												
				0	0	315108		303771			618879	
Remarks												
TheTest&EvaluationprogramdistributesthemajorityofitsfundingtoExecutingAgents(i.e.theAirForce,Army,Navy,JointNationalIntegrationCenter(JNIC),andDTRA)for dissemination.TheseExecutingAgentswilluseMilitaryInterdepartmentalPurchaseRequests(MIPRs)and/orin-housevehiclestoaccomplishthetasksspecified. further												

UNCLASSIFIED

MDAExhibitR -4AScheduleDetail						Date February2003		
--------------------------------------	--	--	--	--	--	-----------------------------	--	--

APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDevelopmentandPrototypes(ACD&P)				R-1NOMENCLATURE 0603888CBallisticMissileDefenseTestandTargets				
--	--	--	--	--	--	--	--	--

ScheduleProfile	FY2002	FY2003	FY2004	FY2005	FY200 6	FY2007	FY2008	FY2009
TestingMilestones								
BMDSWargaming			3Q-4Q	3Q-4Q				
CriticalMeasurementFlightTest			3Q	2Q,3Q	2Q	2Q	2Q,3Q	2Q,3Q
MDIE			1Q-4Q	1Q-4Q				
MeasurementPrograms			1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q
TestAssetU pgrades								
RangeSafetyStandardizationProgram			1Q-2Q					

--	--	--	--	--	--	--	--	--

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 0603888C Ballistic Missile Defense Test and Targets
---	--

COST (\$ in Thousands)	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
0704 Test & Evaluation Block 2004	0	0	37401	32943	0	0	0	0
RDT&E Articles Qty	0	0	0	0	0	0	0	0

A. Mission Description and Budget Item Justification

Funding for this effort was previously held in the Test & Evaluation portion of the BMD System Segment Program Element (PE0603880C).

The BMD System Test Block 2004 program provides a cohesive program of testing to include: System Integration Flight Tests (SIFTs); Missile Defense Integrated Exercises (MDIEs), and Missile Defense Wargames. The BMD System Test Program provides characterization of BMD System performance as input to block assessments. Program objectives are accomplished through dedicated test events or through overlays on other test exercises. SIFTs are designed to: measure BMD System interoperability, assess BMD System capabilities, and provide truth data and validation data for models and simulations. MDIE utilizes the Missile Defense System Exerciser (MDSE) Hardware-in-the-loop (HWIL) to perform system capability assessments, measure interoperability, provide verification of element interfaces, and provide initial integration and test of block upgrades. The Missile Defense Wargame Analysis Resource (MDWAR - formerly Wargame 2000) is an Operator-in-the-Loop test tool which supports assessment of BMD System capability and development of BMD System operating concepts. To support the BMD System Test Program development, program objectives, and performance characterization, MDA Test and Evaluation provides resources to support the activities of the Radar Data Exploitation (RDE), Test Planning, and Corporate Data Collection groups. These groups perform various functions which support BMD System data collection objectives (mission planning, sensor execution, data analysis).

B. Accomplishments/Planned Program

	FY2002	FY2003	FY2004	FY2005
Flight Tests			21236	20164
RDT&E Articles (Quantity)			0	0

FY2004 Planned Program

-Conduct System Integration Flight Tests (SIFTs) to provide highest degree of realism to measure BMD System integration, support system capability assessments and provide validation data for models and simulations. SIFT overlay BMD System test objectives on planned element flight tests.

Two major SIFTs planned in FY2004:

- SIFT 1 is first large scale Block 2004 integration event and tests C2 BMC during multiple element flight test.
- SIFT 2 (2 -1 & 2 -2) provides interim Block 2004 progress reports.

FY2005 Planned Program

-Conduct System Integration Flight Tests (SIFTs) to provide highest degree of realism to measure BMD System integration, support system capability assessments and provide validation data for models and simulations. SIFT overlay BMD System test objectives on planned element flight tests.

- Continue SIFT 2 (2 -3 & 2 -4).
- Begin SIFT 3 consisting of (3 -1 & 3 -2). This is the culminating Block 2004 test event.

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 0603888C Ballistic Missile Defense Test and Targets
---	--

	FY2002	FY2003	FY2004	FY2005
Ground Tests			16165	12779
RDT&E Articles (Quantity)			0	0

FY2004 Planned Program

- Conduct one Missile Defense Integration Exercise to measure BMDS interoperability and initial integration.
- Conduct one BMDS Wargame per year to develop CONOPs and Tactics, Techniques and Procedures.
- Conduct one Integrated Ground Test per year to provide BMDS System readiness testing, measure integration, and support system capability assessments.

FY2005 Planned Program

- Conduct one Missile Defense Integration Exercise per year to measure BMDS interoperability and initial integration.
- Conduct one BMDS Wargame per year to develop CONOPs and Tactics, Techniques and Procedures.
- Conduct one Integrated Ground Test per year to provide BMDS System readiness testing, measure integration, and support system capability assessments.

C. Other Program Funding Summary

	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009	To Complete	Total Cost
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		
PE0604867C Navy Area Theater Missile Defense -EMD	96121	0	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		

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 0603888C Ballistic Missile Defense Test and Targets
---	---

PE0603890C Ballistic Missile Defense System Engineering and Integration	0	0	483996	522458	604445	628594	703055	706501		
PE0603889C Ballistic Missile Defense Products	0	0	343644	384763	333636	343447	349335	360951		
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		
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

The Test & Evaluation Block 2004 Program will support the Missile Defense Agency's capability -based acquisition strategy that emphasizes testing, spiral development, and evolutionary acquisition through the use of two-year capability blocks.

Test programs will be executed utilizing a diverse acquisition strategy to take advantage of private industry competitive forces and existing DoD agency, FFRDCs, and international coalition partner capabilities. Examples of participants in this acquisition strategy include the U.S. Army Space and Missile Defense Command, Air Force Space and Missile Command, and the U.S. Navy Research Lab.

Test programs will be executed utilizing a consolidated targets development, test resource , facilities, siting and environmental, and system -wide test program strategy.

UNCLASSIFIED

MDA Exhibit R -3RDT&E Project Cost Analysis									Date February 2003			
APPROPRIATION/BUDGET ACTIVITY 4. Advanced Component Development and Prototypes (ACD&P)					R-INOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets							
I. Product Development Cost (\$in Thousands)												
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)												
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 Support Costs												
Remarks												
III. Test and Evaluation Cost (\$in Thousands)												
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	
Flight Tests												
System Wide Tests	Various				11203	1Q	9655	1Q	CONT.	20858		
Test Planning	Various				701	1Q	662	1Q	CONT.	1363		
Radar Exploitation	Various				2695	1Q	2742	1Q	CONT.	5437		
Corp Data Coll & Analysis	Various				6647	1Q	7105	1Q	CONT.	13752		
Ground Tests												
Program Wide Interop Ground	Various				11157	1Q	7540	1Q	CONT.	18697		
Arrow TMDSE	Various				3038	1Q	3180	1Q	CONT.	6218		
BMD SW games	Various				1960	1Q	2059	1Q	CONT.	4019		
Subtotal Test and Evaluation		0	0		37401		32943			70344		
Remarks												

UNCLASSIFIED

MDAExhibitR -3RDT&EProjectCostAnalysis	Date February2003
---	-----------------------------

APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDevelopmentandPrototypes(ACD&P)	R-1NOMENCLATURE 0603888CBall isticMissileDefenseTestandTargets
--	---

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		37401		32943			70344	
------------------	--	--	---	---	--	-------	--	-------	--	--	-------	--

Remarks
 TheTest&EvaluationprogramdistributesthemajorityofitsfundingtoExecutingAgents(i.e.theAirForce,Army,Navy,JointNationalIntegrationCenter(JNIC),andDTRA)forfurther dissemination.TheseExecutingAgentswilluseMilitaryInterdepartmentalPurchaseRequests(MIPRs)and/orin-housevehiclestoaccomplish thetasksspecified.

UNCLASSIFIED

MDAExhibitR -4ScheduleProfile	Date February2003
--------------------------------------	-----------------------------

APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDevelopmentandPrototypes(ACD&P)	R-1NOMENCLATURE 0603888CBallisticMissileDefenseTestandTargets
---	---

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				
TestingMilestones																																				
SystemIntegratedFlightTests(SIFT)																																				

UNCLASSIFIED

MDAExhibitR -4AScheduleDetail						Date February2003
--------------------------------------	--	--	--	--	--	-----------------------------

APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDevelopmentandProto types(ACD&P)	R-INOMENCLATURE 0603888CBallisticMissileDefenseTestandTargets
--	---

ScheduleProfile	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
TestingMilestones								
SystemIntegratedFlightTests(SIFT)			4Q	4Q				

--	--	--	--	--	--	--	--	--

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 0603888C Ballistic Missile Defense Test and Targets
---	---

COST (\$ in Thousands)	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
0804 Test & Evaluation Block 2006	0	0	2386	9401	40645	39477	0	0
RDT&E Articles Qty	0	0	0	0	0	0	0	0

A. Mission Description and Budget Item Justification

Funding for this effort was previously held in the Test & Evaluation portion of the BMDS System Segment Program Element (PE0603880C).

The BMDS Test Block 2006 program provides a cohesive program of testing to include: System Integration Flight Tests (SIFTs); Missile Defense Integrated Exercises (MDIEs), and Missile Defense Wargames. The BMDS Test Program provides characterization of BMDS performance as input to block assessments. Program objectives are accomplished through dedicated test events or through overlay on other test exercises. SIFTs are designed to: measure BMDS interoperability, assess BMDS capabilities, provide truth data and validation data for models and simulations. MDIE utilizes the Missile Defense System Exerciser (MDSE) Hardware-in-the-loop (HWIL) to perform system capability assessments, measure interoperability, provide verification of element interfaces, and provide initial integration and test of block upgrades. The Missile Defense Wargame Analysis Resource (MDWAR - formerly Wargame 2000) is an Operator-in-the-Loop test tool which supports assessment of BMDS capability and development of BMDS operating concepts. To support the BMDS Test Program development, program objectives, and performance characterization, MDA Test and Evaluation provides resources to support the activities of the Radar Data Exploitation (RDE), Test Planning, and Corporate Data Collection groups. These groups perform various functions which support BMDS data collection objectives (mission planning, sensor execution, data analysis).

B. Accomplishments/Planned Program

	FY2002	FY2003	FY2004	FY2005
Flight Tests			1424	4260
RDT&E Articles (Quantity)			0	0

FY2004 -2005 Planned Program

-Conduct System Integration Flight Tests (SIFTs) to provide highest degree of realism to measure BMDS integration, support system capability assessments and provide validation data for models and simulations. SIFT overlay BMDS system test objectives on planned element flight tests.

	FY2002	FY2003	FY2004	FY2005
Ground Tests			962	5141
RDT&E Articles (Quantity)			0	0

FY2004 -2005 Planned Program

- Conduct one Missile Defense Integration Exercise to measure BMDS interoperability and initial integration.
- Conduct one BMDS Wargame per year to develop CONOPs and Tactics, Techniques and Procedures.
- Conduct one Integrated Ground Test per year to provide BMDS system readiness testing, measure integration, and support system capability assessments.

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 0603888C Ballistic Missile Defense Test and Targets					
C. Other Program Funding Summary										
	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009	To Complete	Total Cost
PE06 03889C Ballistic Missile Defense Products	0	0	343644	384763	333636	343447	349335	360951		
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		
PE0603890C Ballistic Missile Defense System Engineering and Integration	0	0	483996	522458	604445	628594	703055	706501		
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		

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 0603888C Ballistic Missile Defense Test and Targets
--	--

D. Acquisition Strategy

The Test & Evaluation Block 2006 Program will support the Missile Defense Agency's capability-based acquisition strategy that emphasizes testing, spiral development, and evolutionary acquisition through the use of two-year capability blocks.

Test programs will be executed utilizing a diverse acquisition strategy to take advantage of private industry competitive forces and existing DoD agency, FFRDCs, and international coalition partner capabilities. Examples of participants in this acquisition strategy include the U.S. Army Space and Missile Defense Command, Air Force Space and Missile Command, and the U.S. Navy Research Lab.

Test programs will be executed utilizing a consolidated targets development, test resource, facilities, siting and environmental, and system-wide test program strategy.

UNCLASSIFIED

MDAExhibitR -3RDT&EProjectCostAnalysis									Date February2003			
APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDevelopmentandPrototypes(ACD&P)					R-INOMENCLATURE 0603888CBallisticMissileDefenseTestandTargets							
I.ProductDevelopmentCost(\$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	
SubtotalProductDevelopment												
Remarks												
II.SupportCostsCost(\$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	
SubtotalSupportCosts												
Remarks												
III.TestandEvaluationCost(\$inThousands)												
Contract Method &Type	Performing Activity& Location	Total PYs Cost	FY 2003 Cost	FY2003 Award Date	FY2004 Cost	FY2004 Award Date	FY2005 Cost	FY2005 Award Date	Costto Complete	Total Cost	Target Valueof Contract	
FlightTests												
SystemWideTests	Various				1424	1Q	4260	1Q	CONT.	5684		
GroundTests												
ProgWideInteropGround	Various						4113	1Q	CONT.	4113		
BMDSWargames	Various				962	1Q	1028	1Q	CONT.	1990		
SubtotalTestandEvaluation												
0 0 2386 9401 11787												
Remarks												

UNCLASSIFIED

MDAExhibitR -3RDT&EProjectCostAnalysis	Date February2003
---	-----------------------------

APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDevelopmentandPrototypes(ACD&P)	R-1NOMENCLATURE 0603888CBallisticMissileDefenseTestandTargets
--	--

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	Cost to Complete	Total Cost	Target Value of Contract	
Cost Categories:												
Subtotal Management Services												

Remarks

Project Total Cost			0	0		2386		9401		11787	
--------------------	--	--	---	---	--	------	--	------	--	-------	--

Remarks

The Test & Evaluation program distributes the majority of its funding to Executing Agents (i.e. the Air Force, Army, Navy, Joint National Integration Center (JNIC), and DTRA) for further dissemination. These Executing Agents will use Military Interdepartmental Purchase Requests (MIPRs) and/or in-house vehicles to accomplish the tasks specified.

UNCLASSIFIED

MDAExhibitR -4AScheduleDetail						Date February2003
--------------------------------------	--	--	--	--	--	-----------------------------

APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDevelopmentandPrototypes(ACD&P)	R-INOMENCLATURE 0603888CBallisticMissileDefenseTestandTargets
---	---

ScheduleProfile	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
IntegratedFlightTest								
SIFT					3Q	1Q,4Q		

--	--	--	--	--	--	--	--	--

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 0603888C Ballistic Missile Defense Test and Targets
---	--

COST (\$ in Thousands)	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
0904 Test & Evaluation Block 2008	0	0	962	1028	3616	12908	85088	86585
RDT&E Articles Qty	0	0	0	0	0	0	0	0

A. Mission Description and Budget Item Justification

Funding for this effort was previously held in the Test & Evaluation portion of the BMD System Segment Program Element (PE0603880C).

The BMD Test Block 2008 program provides a cohesive program of testing to include: System Integration Flight Tests (SIFTs); Missile Defense Integrated Exercises (MDIEs), and Missile Defense Wargames. The BMD Test Program provides characterization of BMD performance as input to block assessments. Program objectives are accomplished through dedicated test events or through overlays on other test exercises. SIFTs are designed to: measure BMD interoperability, assess BMD capabilities, provide truth data and validation data for models and simulations. MDIE utilizes the Missile Defense System Exerciser (MDSE) Hardware-in-the-loop (HWIL) to perform system capability assessments, measure interoperability, provide verification of element interfaces, and provide initial integration and test of block upgrades. The Missile Defense Wargame Analysis Resource (MDWAR - formerly Wargame 2000) is an Operator-in-the-Loop test tool which supports assessment of BMD capability and development of BMD operating concepts. To support the BMD Test Program development, program objectives, and performance characterization, MDA Test and Evaluation provides resources to support the activities of the Radar Data Exploitation (RDE), Test Planning, and Corporate Data Collection groups. These groups perform various functions which support BMD data collection objectives (mission planning, sensor execution, data analysis).

B. Accomplishments/Planned Program

	FY2002	FY2003	FY2004	FY2005
Ground Tests			962	1028
RDT&E Articles (Quantity)			0	0

FY2004 -2005 Planned Program

- Conduct one Missile Defense Integration Exercise to measure BMD interoperability and initial integration.
- Conduct one BMD Wargame per year to develop CONOPs and Tactics, Techniques and Procedures.
- Conduct one Integrated Ground Test per year to provide BMD System readiness testing, measure integration, and support system capability assessments.

C. Other Program Funding Summary

	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009	To Complete	Total Cost
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
--	------------------------------

APPROPRIATION/BUDGET ACTIVITY 4. Advanced Component Development and Prototypes (ACD&P)	R-INOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
---	--

PE0603889C Ballistic Missile Defense Products	0	0	343644	384763	333636	343447	349335	360951		
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		
PE0603883C Ballistic Missile Defense Boost Defense Segment	583463	718036	626264	653612	755163	665772	477109	354346		
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		
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		
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		

D. Acquisition Strategy

The Test & Evaluation Block 2008 Program will support the Missile Defense Agency's capability -based acquisition strategy that emphasizes testing, spiral development, and evolutionary acquisition through the use of two -year capability blocks.

Test programs will be executed utilizing a diverse acquisition strategy to take advantage of private industry competitive forces and existing DoD agency, FFRDCs, and international coalition partner capabilities. Examples of participants in this acquisition strategy include the U.S. Army Space and Missile Defense Command, Air Force Space and Missile Command, and the U.S. Navy Research Lab.

Test programs will be executed utilizing a consolidated targets development, test resource, facilities, siting and environmental, and system -wide test program strategy.

UNCLASSIFIED

MDAExhibitR -3RDT&EProjectCostAnalysis									Date February2003			
APPROPRIATION/BUDGETACTIVITY					R-INOMENCLATURE							
4.AdvancedComponentDevelopmentandPrototypes(ACD&P)					0603888CBallisticMissileDefenseTestand Targets							
I.ProductDevelopmentCost(\$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:												
SubtotalProductDevelopment												
Remarks												
II.SupportCostsCost(\$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:												
SubtotalSupportCosts												
Remarks												
III.TestandEvaluationCost(\$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:												
GroundTests												
BMDSWargames	Various	Various			962	1Q	1028	1Q	CONT.	1990		
SubtotalTestandEvaluation			0	0	962		1028			1990		
Remarks												

UNCLASSIFIED

MDAExhibitR -3RDT&EProjectCostAnalysis	Date February2003
---	-----------------------------

APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDevelopmentandPrototypes(ACD&P)	R-1NOMENCLATURE 0603888CBallisticMissileDefenseTestand Targets
--	---

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		962		1028		1990	
------------------	--	--	---	---	--	-----	--	------	--	------	--

Remarks

The Test & Evaluation program distributes the majority of its funding to Executing Agents (i.e. the Air Force, Army, Navy, Joint National Integration Center (JNIC), and DTRA) for further dissemination. These Executing Agents will use Military Interdepartmental Purchase Requests (MIPRs) and/or in-house vehicles to accomplish the tasks specified.

UNCLASSIFIED

MDAExhibitR -4AScheduleDetail						Date February2003		
APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDevelopmentandPrototypes(ACD&P)				R-INOMENCLATURE 0603888CBallisticMissileDefenseTestandTargets				
ScheduleProfile	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
IntegratedFlightTest								
SIFT							3Q	1Q,4Q

UNCLASSIFIED

MDA ExhibitR -2ARDT&EProjectJustification	Date February2003
--	-----------------------------

APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDevelopmentandPrototypes(ACD&P)	R-INOMENCLATURE 0603888CBallisticMissileDefenseTestandTargets
--	--

COST(\$inThousands)	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
0305Targets&CountermeasuresCore	0	0	19842	20749	20949	21358	21405	21598
RDT&EArticlesQty	0	0	0	0	0	0	0	0

A.MissionDescriptionandBudgetItemJustification

FundingforthiseffortwaspreviouslyheldundertheBallisticMissileDefenseSystem(BMDS)ProgramElement(PE0603880C,Project1030).

Targets&CountermeasuresCoreSupportincludesprimarycoresupport,missionsupportandfieldactivitysupportforthemangementofdesign,prototyping,development,acquisition,certification,productimprovement,andqualificationtestingofasuiteoftargetsandpayloadstotestthecapabilityoftheBMDS.

B.Accomplishments/PlannedProgram

	FY2002	FY2003	FY2004	FY2005
TargetsSupport	0	0	10344	10807
RDT&EArticles(Quantity)			0	0

FY2004Planned Accomplishments:

-Supportprogrammanagementandmissionandcoresupportforon-sitefieldactivitypersonnel.

FY2005PlannedAccomplishments:

-Continuestosupportprogrammanagementandmissionandcoresupportforon-sitefieldactivitypersonnel.

	FY2002	FY2003	FY2004	FY2005
PersonnelSupport	0	0	9498	9942
RDT&EArticles(Quantity)			0	0

FY2004PlannedAccomplishments:

-Thiseffortfundsgovernmentpersonnelsalariesforprogrammanagement,projectsupport,projectcosts,andtravel.

FY2005PlannedAccomplishments:

-Continuestofundgovernmentpersonnelsalariesforprogrammanagement,projectsupport,projectcosts,andtravel.

UNCLASSIFIED

MDAE exhibitR -2ARDT&EProjectJustification	Date February2003
---	-----------------------------

APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDevelopmentandPrototypes(ACD&P)	R-1NOMENCLATURE 0603888CBallisticMissileDefenseTestandTargets
--	--

C.OtherProgramFundingSummary										
	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009	To Complete	Total Cost
PE0603869CMeadsConcepts -Dem/Val	0	114781	0	0	0	0	0	0		
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		
PE0603889CBallisticMissileDefense Products	0	0	343644	384763	333636	343447	349335	360951		
PE0604861CTheaterHigh -AltitudeArea DefenseSystem -TMD -EMD	818632	888323	0	0	0	0	0	0		
PE0604865CPatriotPAC -3TheaterMissile DefenseAcquisition -EMD	130630	176155	0	0	0	0	0	0		
PE0604867CNavyAreaTheaterMissile Defense -EMD	96121	0	0	0	0	0	0	0		

D.AcquisitionStrategy

TargetsandCount ermeasureswillfollowtheMissileDefenseAgency'scapability -basedacquisitionstrategythatemphasizestesting,spiraldevelopment,andeolutionaryacquisitionthroughtheuse oftwo -yearcapabilityblocks.Theprogramdevelopscapability -basedtarget systemsutilizingboththeexistingGFEandnewtargetsystemsthatmeettargetspecificationsdetailedinBMDsystemand technicalrequirementsdocuments.BMDStargetsystemswillbedevelopedandacquireutilizingatargetsprimecontractforallfuturetarget boosterdevelopmentactivities,BMDsdesignand developmentofpayloadsandcountermeasures,andalladvancedtargetdevelopment.Theprimecontractorwillalsoprovidesystemlevelmanagementandperformsystemsengineeringacrossthe portfolioofBM DSTargets.Thegovernmentwillmaintainsystemresponsibilityandwillensure successfulmanagementofBMDStargetsexecution.Current,on -goingtargetdevelopmentcontracts willeitherbecompletedunderthecurrentcontractstructure,orwillbetransit ionedtotheprimecontractor,dependingonthestatusofthecontractandmaturityofthetargetsystembeingdeveloped.

PrimeContractcostsarecapturedunderTargetSupportinthefollowingProjects:Project0705forBlock2004,Project0805forBlock 2006andProject0905forBlock2008.

UNCLASSIFIED

MDAExhibitR -3RDT&EProjectCostAnalysis										Date February2003		
APPROPRIATION/BUDGETACTIVITY					R-INOMENCLATURE							
4.A dvancedComponentDevelopmentandPrototypes(ACD&P)					0603888CBallisticMissileDefenseTestandTargets							
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	FY 2005 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
TargetsSupport												
FieldActivitySupport	C/Various	Various/Kirtland, NM	0	0		300		300			600	
FieldActivitySupport	C/Various	Various/Huntsville, AL	0	0		7664		7794			15458	
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
SubtotalTestandEvaluation												
Remarks												

UNCLASSIFIED

MDAExhibitR -3RDT&EProjectCostAnalysis	Date February2003
---	-----------------------------

APPROPRIATION/BUDGETACTIVITY 4.A dvancedComponentDevelopmentandPrototypes(ACD&P)	R-INOMENCLATURE 0603888CBallisticMissileDefenseTestandTargets
---	--

IV.ManagementServices Cost(\$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	
PersonnelSupport												
GovtProjPer&Support	Other	Govt Agency/Huntsville, AL	0	0	6097		6464			12561		
GovernmentTravel	C/Various	Various/Wash.DC	0	0	200		200			400		
TargetManagementSupport	C/Various	Various/Various	0	0	2380		2713			5093		
SubtotalManagementServices	C/Various	Various/Wash.DC	0	0	3201		3278			6479		
SubtotalManagementServices			0	0	11878		12655			24533		

Remarks

ProjectTotalCost			0	0	19842		20749			40591	
------------------	--	--	---	---	-------	--	-------	--	--	-------	--

Remarks

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 0603888C Ballistic Missile Defense Test and Targets
---	---

COST (\$ in Thousands)	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
0705 Targets & Countermeasures -Block 2004	0	0	197387	169779	0	0	0	0
RDT&E Articles Qty	0	0	9	7	0	0	0	0

A. Mission Description and Budget Item Justification

Funding for this effort was previously held under the Ballistic Missile Defense System (BMDS) Program Element (PE0603880C, Project 1030).

The Targets and Countermeasures program funds the design, prototyping, development, acquisition, certification, product improvement, and qualification testing of a suite of targets and payloads to test the capability of the BMDS. Specifically, this program provides capability based ballistic missile full up targets system to include targets sub-systems such as boosters, payloads (re-entry vehicles, sensor packages, countermeasures, and on-board instrumentation), and launch support systems in support of the BMDS Block strategy. New target and payload development, risk reduction flights, sub-system characterization, and the acquisition and maintenance of long lead material of major target components will be accomplished. This program funds the development of key targets systems for use in BMDS testing; all elements (e.g., Ground Based Midcourse, AEGIS Ballistic Missile Defense (BMD), Theater High Altitude Area Defense (THAAD), etc.) fund the acquisition and use of targets required for BMDS testing. The following new developments are planned to meet the following Block 2004 testing:

- Continues the development of Short Range Air Launch Targets (SRALT) to support Arrow, Patriot (PAC -3), and THAAD.
- Continues and completes the development of Short Range Liquid Fuel Target Boosters to support Airborne Laser (ABL), Arrow, THAAD, and AEGIS Ballistic Missile Defense (BMD).
- Continues and completes the modification of Foreign Material Acquisition (FMA) target launched from a Mobile Launch Platform to support Arrow and THAAD.
- Initiates the development of multi-mode Medium Range Targets to support Aegis BMD and THAAD.
- Completes payload suite design and development for 1 advanced concepts flight test and 5 Critical Measurements and Countermeasures (CMCM) tests.
- Purchases long lead material asset and asset management items for short and medium range target components.
- Continues the maintenance, aging surveillance, refurbishment, and routine testing of existing Government Furnished Equipment (GFE) boosters.

Central to the development and acquisition of new targets system to support the BMDS Block testing schedule is the utilization of a prime contractor. The Targets and Countermeasures Directorate will have awarded a prime contract who will be responsible for: 1) providing systems engineering across the targets portfolio, including managing and executing Block target requirements; 2) developing future target booster development activities; 3) designing and developing BMDS payloads and countermeasures; 4) developing advanced targets; and, 5) Long Lead Material and Asset Management.

B. Accomplishments/Planned Program

	FY2002	FY2003	FY2004	FY2005
Target Support			66129	89144
RDT&E Articles (Quantity)			0	0

FY2004 Planned Accomplishments:

-This effort funds the Targets and Countermeasures Acquisition Strategy prime contract currently scheduled for award in 4Q/03. This includes all core contract costs, such as program management, systems engineering and incentive fee. Funding will also utilize new target support efforts required for full up BMDS testing across the entire spectrum of target launch trajectories and early concept support for the prototyping of advanced systems or sub-systems for BMD targets. Other funded efforts providing unique target support requirements, certification and instrumentation analyses will be conducted by Federally Funded Research and Development Centers (FFRDCs).

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 0603888CBallistic Missile Defense Test and Targets
---	--

FY2005 Planned Accomplishments:
 -Continue to fund the Targets and Countermeasures Acquisition Strategy prime contract currently scheduled for award in 4Q/03. This includes all core contract costs, such as program management, systems engineering and incentive fee. Funding will also utilize new target support efforts required for full -up BMD Stesting across the entire spectrum of target launch trajectories and early concept support for the prototyping of advanced systems or sub -systems for BMD Targets. Other funded efforts providing unique target support requirements, certification and instrumentation analyses will be conducted by Federally Funded Research and Development Centers (FFRDCs).

	FY2002	FY2003	FY2004	FY2005
Target Development			44176	17606
RDT&E Articles (Quantity)			6	2

This effort provides for: 1) new target development efforts required for full -up BMD Stesting across the entire spectrum of target launch trajectories; and, 2) early concept development and prototyping of advanced systems or sub -systems for BMD Targets. Current, on -going target development efforts such as the Short Range Air Launch Target (SRALT), Short Range Liquid Fuel Target Booster (LFTB), the FMA launch from a Mobile Launch Platform, and the Medium Range Target will be completed.

FY2004 Planned Accomplishments:
 -RDT&E Test Articles: 5 SRALTs; 1 FMA for launch off of Mobile Launch Platform
 -Complete SRALT development and conduct Risk Reduction Flight (RRF)
 -Continue Short Range Liquid Fuel Booster development
 -Complete FMA/Mobile Launch Platform preparations and conduct RRF
 -Continue MRT development

FY2005 Planned Accomplishments:
 -RDT&E Test Articles: 1 Medium Range Target; 1 Short Range Liquid Fuel Target Booster
 -Complete MRT development and conduct RRF
 -Complete the Short Range Liquid Fuel Target Booster development and conduct RRF

	FY2002	FY2003	FY2004	FY2005
Payload Development			48330	12984
RDT&E Articles (Quantity)			3	5

This effort develops capability -based payloads (re -entry vehicles, countermeasures, instrumentation) in support of Critical Measurements and Countermeasures (CMCM) flight tests. These flight tests collect and assess critical phenomenology data in order to develop realistic payloads for targets used in BMD flight tests. This effort also initiates the development of the Small Low Observable (SLO) payloads to support Ground -based Midcourse Defense (GMD), and also completes a next generation Fly Along Sensor Package (FASP), which will provide critical visible and infrared imagery for missile defense seeker performance risk reduction, algorithm evaluation, and target payload characterization.

FY2004 Planned Accomplishments:
 -RDT&E Test Articles: 2 payload suites for CMCM -1a and 1 bin 4Q/04 tests; 1 FASP

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 0603888C Ballistic Missile Defense Test and Targets
---	---

-Begin development of a SLO payload suite (RV, instrumentation, associated objects, payload interface) to support Ground-based Midcourse Defense (GMD) to support RCF -2, IFT -21 and IFT -22.
 -Completed development of FASP
 -Completed development of 2 payload suites for CMCM -1a and 1b tests in 4Q/04
 -Continue payload design and development for two CMCM -2a and -2b tests. Initiate payload design and development for the two CMCM -3a and 3 -b flight tests in 3Q/05

FY2005 Planned Accomplishments:

-RDT&E Test Articles: 1 GMD payload suite; 4 payload suites for CMCM -2a/b and 3a/b
 -Complete payload design and development for the two CMCM -2a and 2 -b flight tests in 3Q/05
 -Complete payload design and development for the two CMCM -3a and 3 -b flight tests in 4Q/05
 -Completed development of a SLO payload suite (RV, instrumentation, associated objects, payload interface) to support Ground-based Midcourse Defense (GMD) to support RCF -2, IFT -21 and IFT -22.

Note: Payload suites include countermeasures, re-entry vehicles, instrumentation, adaptor sections, and deployment mechanisms.

	FY2002	FY2003	FY2004	FY2005
Asset Management			38752	50045
RDT&E Articles (Quantity)			0	0

FY2004 Planned Accomplishments:

-This effort continues a risk reduction initiative designed to ensure the availability of capability-based targets for BMDS flight tests. Additionally, this effort provides limited long-lead target modules that will be procured in economic quantities and stored for use in BMDS flight tests. The modules include components of capability-based RV's, inter-stages, and related hardware. Upon definition and approval of a BMD target requirement, the modules will be provided to a target integrator who will perform integration, flight readiness, and launch support. This effort also includes maintenance, aging surveillance, refurbishment, and routine testing of existing GFE boosters. GFE boosters include Minuteman, Peacekeeper, Lance, and Pershing assets, FMA assets and the Strategic Target System (STARS).

FY2005 Planned Accomplishments:

-Continue a risk reduction initiative designed to ensure the availability of capability-based targets for BMDS flight tests. Additionally, this effort provides limited long-lead target modules that will be procured in economic quantities and stored for use in BMDS flight tests. The modules include components of capability-based RV's, inter-stages, and related hardware. Upon definition and approval of a BMD target requirement, the modules will be provided to a target integrator who will perform integration, flight readiness, and launch support. This effort also includes maintenance, aging surveillance, refurbishment, and routine testing of existing GFE boosters. GFE boosters include Minuteman, Peacekeeper, Lance, and Pershing assets, FMA assets and the STARS.

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 0603888C Ballistic Missile Defense Test and Targets
---	---

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		
PE0603889 C Ballistic Missile Defense Products	0	0	343644	384763	333636	343447	349335	360951		
PE0604861 C Theater High -Altitude Area Defense System -TMD -EMD	818632	888323	0	0	0	0	0	0		
PE0604865 C Patriot PAC -3 Theater Missile Defense Acquisition -EMD	130630	176155	0	0	0	0	0	0		
PE0604867 C Navy Area Theater Missile Defense -EMD	96121	0	0	0	0	0	0	0		
PE0603869 C Meads Concepts -Dem/Val	0	114781	0	0	0	0	0	0		
PE0603880 C Ballistic Missile Defense System Segment	790535	1046652	0	0	0	0	0	0		
PE0603881 C Ballistic Missile Defense Terminal Defense Segment	195800	136399	810440	924356	985514	805785	558071	371649		
PE0603882 C Ballistic Missile Defense Midcourse Defense Segment	3655089	3103844	3613266	3841412	2078522	1908511	1482389	1437923		
PE0603883 C Ballistic Missile Defense Boost Defense Segment	583463	718036	626264	653612	755163	665772	477109	354346		
PE0603884 C Ballistic Missile Defense Sensors	312973	350436	438242	562752	706514	1043454	1152740	1261906		
PE0603886 C Ballistic Missile Defense System In terceptors	0	0	301052	541178	1127180	1729613	2558327	2904096		

D. Acquisition Strategy

Targets and Countermeasures will follow the Missile Defense Agency's capability -based acquisition strategy that emphasizes testing, spiral development, and evolutionary acquisition through the use of two -year capability blocks. The program develops capability -based target systems utilizing both the existing GFE and new target systems that meet target specifications detailed in BMD system and technical requirements documents. BMD target systems will be developed and acquired utilizing a target prime contract for all future target booster development activities, BMD design and development of payloads and countermeasures, and all advanced target development. The prime contractor will also provide systems level management and perform systems engineering across the portfolio of BMD target systems. The government will maintain system responsibility and will ensure successful management of BMD target system execution. Current, on -going target development contracts will either be completed under the current contract structure, or will be transitioned to the prime contractor, depending on the status of the contract and maturity of the target system being developed.

UNCLASSIFIED

MDAExhibitR -3RDT&EProject CostAnalysis										Date February2003		
APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDevelopmentandPrototypes(ACD&P)					R-INOMENCLATURE 0603888CBallisticMissileDefenseTestandTargets							
I.ProductDevelopment 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
TargetDevelopment												
SRALT	C/CPFF	OrbitalSciences Corp./Chandler,AZ	0	0		7620		0			7620	
ShortRangeLiquidFuel	C/CPFF	TRW/Orbital Sciences Corp./CA/AZ	0	0		10800		8350			19150	
FMA/MobileLaunchPlatform	C/CPFF	Lockheed Martin/Huntsville, AL	0	0		200		0			200	
MediumRangeTarget	C/Various	TBD	0	0		19520		3480			23000	
NewTargetDevelopment	C/Various	TBD	0	0		0		0				
AdvancedDevelopment	C/Various	TBD	0	0		6036		5776			11812	
PayloadDevelopment												
FlyAlongSensorP ackage	C/FFRDC	MIT/LL/Boston, MA	0	0		2600		0			2600	
HARDFAC	C/CPFF	AFRL/Alburqueque ,NM	0	0		1255		1260			2515	
SLODevelopment	C/Various	TBD	0	0		14000		6000			20000	
CMDesignDevelop, Characterize	C/Various	Various	0	0		5000		0			5000	
PayloadSui teforCMCM -1			0	0		3500		0			3500	
PayloadSuiteforCMCM -2			0	0		12975		4474			17449	
PayloadSuiteforCMCM -3			0	0		9000		1250			10250	
SubtotalProductDevelopment			0	0		92506		30590			123096	
Remarks												

UNCLASSIFIED

MDAExhibitR -3RDT&EProject CostAnalysis									Date February2003			
APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDevelopmentandPrototypes(ACD&P)					R-1NOMENCLATURE 0603888CBallisticMissileDefenseTestandTargets							
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
TargetSupport ort												
SystemEngineering	C/Other	JHU/APL/Laurel, MD	0	0		1285		1000			2285	
TargetsPrimeAcq.Contract	C/Various	TBD	0	0		64844		88144			152988	
SubtotalSupportCosts			0	0		66129		89144			155273	
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
AssetManagement												
Short/MedRangeTargets	Various	Various	0	0		4075		9488			13563	
LongRangeTargets	Various	Various	0	0		10159		8150			18309	
VariousBoosterManagement	Various	Various	0	0		24518		32407			56925	
SubtotalTestandEvaluation			0	0		38752		50045			88797	
Remarks												
IV.ManagementServicesCost(\$inThousands)												
CostCategories:	Contract Method &Type	Performing Activity& Location	Total PYs Cost	FY2003 Cost	FY2003 Award Date	FY2004 Cost	FY20 04 Award Date	FY2005 Cost	FY2005 Award Date	Costto Complete	Total Cost	Target Valueof Contract
SubtotalManagementServices												
Remarks												
ProjectTotalCost			0	0		197387		169779			367166	
Remarks												

UNCLASSIFIED

MDAExhibitR -4AScheduleDetail	Date February2003
--------------------------------------	-----------------------------

APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDevelopmentandPrototypes(ACD&P)	R-1NOMENCLATURE 0603888CBallisticMissileDefenseTestandTargets
--	--

ScheduleProfile	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
TestingMilestones								
CMCM -1Test			4Q					
CMCM -2Test				3Q				
CMCM -3Test				4Q				
FMARRFfromMobileLaunchPlatform			1Q					
MediumRangeTarget -RRFAir				2Q				
MediumRangeTarget -RRFGround/Sea			1Q					
ShortRangeAirLaunchTarget -RRF			2Q					
ShortRangeLiquidFuelBooster -RRF				2Q				
ProductionMilestones								
FMAMobileLaunchPlatform -Development			1Q					
MediumRangeTarget			1Q-3Q					
PayloadSuiteforCMCM -1			1Q-4Q					
PayloadSuiteforCMCM -2			1Q-4Q	1Q-3Q				
PayloadSuiteforCMCM -3			1Q-4Q	1Q-4Q				

--	--	--	--	--	--	--	--	--

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 0603888C Ballistic Missile Defense Test and Targets
---	--

COST (\$ in Thousands)	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
0805 Targets & Countermeasures - Block 2006	0	0	31860	109877	212500	171624	0	0
RDT&E Articles Qty	0	0	0	0	6	6	0	0

A. Mission Description and Budget Item Justification

Funding for this effort was previously held under the Ballistic Missile Defense System Segment Program Element (PE0603880C, Project 1030).

The Targets & Countermeasures Block 2006 program funds the design, prototyping, development, acquisition, certification, product improvement, and qualification testing of a suite of targets and payload to test the capability of the Ballistic Missile Defense System (BMDS). Specifically, this program provides capability-based ballistic missile full up target system to include target subsystems such as boosters, payloads (re-entry vehicles, sensor packages, countermeasures, and on-board instrumentation), and launch support systems in support of the BMDS Block strategy. New target and payload development, risk reduction flights, subsystem characterization, and the acquisition and maintenance of long lead material of major target components will be accomplished. This program funds the development of key target systems for use in BMDS testing; all elements (e.g., Ground Based Midcourse, AEGIS Ballistic Missile Defense (BMD), THAAD, etc.) fund the acquisition and use of target systems required for BMDS testing. The following efforts are planned to support Block 2006 testing:

- Continue the Targets Prime contract.
- Initiate the development, completion, and risk reduction testing of the Enhanced Target Delivery System (ETDS) to support the Ground Based Midcourse Defense (GMD) and Aegis Ballistic Missile Defense (Aegis BMD) programs.
- Initiate the development and risk reduction testing of a Long Range Foreign Material Acquisition (FMA) to support the Airborne Laser (ABL), Kinetic Interceptor (KI) and GMD programs.
- Complete payload suite design and development for 10 Critical Measurements & Countermeasures (CMCM) tests.
- Purchase long lead material asset and asset management items for short, medium, and long range target components.
- Continue the maintenance, aging surveillance, refurbishment, and routine testing of existing GFE boosters.

Central to the development and acquisition of new target systems to support the BMDS block testing schedule is the utilization of a prime target contractor. The Targets and Countermeasures Directorate will award a prime contract in FY2004 that will: 1) provide systems engineering across the target portfolio, including managing and executing Block target requirements; 2) develop future target booster development activities; 3) design and develop BMDS payloads and countermeasures; 4) develop advanced targets; and, 5) Long Lead Material and Asset Management.

B. Accomplishments/Planned Program

	FY2002	FY2003	FY2004	FY2005
Target Support			2614	6815
RDT&E Articles (Quantity)			0	0

FY2004 Planned Accomplishments:
This effort funds the Targets and Countermeasures Acquisition Strategy prime contract to include core contract costs, such as program management and systems engineering.

FY2005 Planned Accomplishments:
This effort continues to fund the Targets and Countermeasures Acquisition Strategy prime contract to include core contract costs, such as program management and systems engineering.

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 0603888C Ballistic Missile Defense Test and Targets		
	FY2002	FY2003	FY2004	FY2005
Target Development			23246	56794
RDT&E Articles (Quantity)			0	0
<p>This effort funds the development of new target efforts required for full -up BMD testing across the entire spectrum of target launch trajectories, and early concept development and prototyping of advanced systems or subsystems for BMD targets. RDT&E articles described below are scheduled to be completed in FY2006.</p> <p>FY2004 Planned Accomplishments: -Begin development or acquire a Long Range FMA to support ABL, KI, and GMD flight tests.</p> <p>FY2005 Planned Accomplishments: -Initiated development of the ETDS to support GMD. -Continued development or acquire a Long Range FMA to support ABL, KI, and GMD flight tests.</p>				
	FY2002	FY2003	FY2004	FY2005
Payload Development			6000	46268
RDT&E Articles (Quantity)			0	0
<p>This effort develops capability -based payloads (re-entry vehicles, countermeasures, instrumentation) in support of CMCM flight tests. Additionally, this effort includes design, development, and characterization of payloads used in CMCM flight tests. These flight tests collect and assess critical phenomenology data in order to develop realistic payloads for targets used in BMD flight tests. RDT&E articles described below are scheduled to be completed in FY2006 and FY2007.</p> <p>FY2004 Planned Accomplishments: -Initiate and develop 3 payload suites for the Long Range CMCM -4 flight test. -Initiate and develop 2 countermeasure articles for the Sounding Rocket CMCM -4 flight test.</p> <p>FY2005 Planned Accomplishments: -Initiate and develop payload instrumentation for the Sounding Rocket CMCM -4 flight test. -Initiate and develop 3 payload suites for Long Range CMCM -5 flight test. -Initiate and develop 2 countermeasure articles for the Sounding Rocket CMCM -6 flight test. -Continued development of 3 payload suites for the Long Range CMCM -4 flight test. -Continued development of 2 countermeasure articles for the Sounding Rocket CMCM -4 flight test.</p> <p>Note: Payload suites include countermeasures, re-entry vehicles, instrumentation, adapter sections, and deployment mechanisms.</p>				

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 0603888C Ballistic Missile Defense Test and Targets
---	---

	FY2002	FY2003	FY2004	FY2005
Asset Management				
RDT&E Articles (Quantity)			0	0

FY2004 Planned Accomplishments:

-This effort continues a risk reduction initiative designed to ensure the availability of capability-based targets for BMDS flight tests. Additionally, this effort provides limited long-lead target modules that will be procured in economic quantities and stored for use in BMDS flight tests. The modules include components of capability-based RV's, inter-stages, and related hardware. Upon definition and approval of a BMD target requirement, the modules will be provided to a target integrator who will perform integration, flight readiness, and launch support. This effort also includes maintenance, aging surveillance, refurbishment, and routine testing of existing GFE boosters. GFE boosters include Minuteman, Peacekeeper, Lance, and Pershing assets; Foreign Material Acquisition (FMA) assets; and the Strategic Target System (STARS). Funding to support this Block 06 effort is in FY2006 and FY2007.

FY2005 Planned Accomplishments:

-Continues a risk reduction initiative designed to ensure the availability of capability-based targets for BMDS flight tests. Additionally, this effort provides limited long-lead target modules that will be procured in economic quantities and stored for use in BMDS flight tests. The modules include components of capability-based RV's, inter-stages, and related hardware. Upon definition and approval of a BMD target requirement, the modules will be provided to a target integrator who will perform integration, flight readiness, and launch support. This effort also includes maintenance, aging surveillance, refurbishment, and routine testing of existing GFE boosters. GFE boosters include Minuteman, Peacekeeper, Lance, and Pershing assets; FMA assets; and the STARS. Funding to support this Block 06 effort is in FY2006 and FY2007.

C. Other Program Funding Summary

	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009	To Complete	Total Cost
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		
PE0603889C Ballistic Missile Defense Products	0	0	343644	384763	333636	343447	349335	360951		
PE0604861C Theater High -Altitude Area Defense System -TMD -EM D	818632	888323	0	0	0	0	0	0		

UNCLASSIFIED

MDAExhibitR -2ARDT&EProjectJustification	Date February2003
---	-----------------------------

APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDevelopmentandPrototypes(ACD&P)	R-INOMENCLATURE 0603888CBallisticMissileDefenseTestandTargets
--	--

PE0604865CPatriotPAC -3TheaterMissile DefenseAcquisition -EMD	130630	176155	0	0	0	0	0	0	0		
PE0604867CNavyAreaTheaterMissile Defense -EMD	96121	0	0	0	0	0	0	0	0		
PE0603881CBallisticMissileDefense TerminalDefens eSegment	195800	136399	810440	924356	985514	805785	558071	371649			
PE0603869CMeadsConcepts -Dem/Val	0	114781	0	0	0	0	0	0			
PE0603880CBallisticMissileDefense SystemSegment	790535	1046652	0	0	0	0	0	0			

D.AcquisitionStrategy

TargetsandCount ermeasureswillfollowtheMissileDefenseAgency'scapability -basedacquisitionstrategythatemphasizestesting,spiraldevelopment,andevolutionaryacquisitionthroughtheuse oftwo -yearcapabilityblocks.Theprogramdevelopscapability -basedtarget systemsutilizingbotheexistingGFEandnewtargetssystemsthatmeettargetspecificationsdetailedinBMDsystemand technicalrequirementsdocuments.BMDStargetssystemswillbedevelopedandacquireutilizingatargetsprimecontractforallfuturet argetboosterdevelopmentactivities,BMDSdesignand developmentofpayloadsandcountermeasures,andalladvancedtargetdevelopment.Theprimecontractorwillalsoprovidesystemlevelmanagementandperformsystemsengineeringacrossthe portfolioof BMDStargets.ThegovernmentwillmaintainsystemresponsibilityandwillensuresuccessfulmanagementofBMDStargetsexecution.Newtargetdevelopmenteffortsareplannedto transitiontotheprimecontractor.

UNCLASSIFIED

MDAExhibitR -3RDT&EProjectCostAnalysis	Date February2003
---	-----------------------------

APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDevelopmentandPrototypes(ACD&P)	R-1NOMENCLATURE 0603888CBallisticMissileDefenseTestandTargets
--	--

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
TargetDevelopment												
EnhancedTargetDeliverySys		TBD						28000	1Q		28000	
LongRangeFMA		TBD	0			23246		28794			52040	
PayloadDevelopment												
PayloadSuiteforCMCM -4			0	0		6000		34268			40268	
PayloadSuiteforCMCM -5			0	0		0		11000			11000	
PayloadSuiteforCMCM -6			0	0		0		1000			1000	
SubtotalProductDevelopment			0	0		29246		103062			132308	

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
TargetSupport												
TargetsPrimeContract	C	TBD	0	0		2614		6815			9429	
SubtotalSupportCo sts			0	0		2614		6815			9429	

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
---	-----------------------------

APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDevelopmentandPrototypes(ACD&P)	R-1NOMENCLATURE 0603888CBallisticMissileDefenseTestandTargets
--	--

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		31860		109877			141737	
------------------	--	--	---	---	--	-------	--	--------	--	--	--------	--

Remarks

UNCLASSIFIED

MDAExhibitR -4AScheduleDetail						Date February2003		
APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDevelopmentandPrototypes(ACD&P)				R-1NOMENCLATURE 0603888CBallisticMissileDefenseTestandTargets				
ScheduleProfile	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
TestingMilestones								
CMCM -4Test					2Q			
CMCM -5Test						2Q		
CMCM -6Test						3Q		
ETDSRiskReductionFlight					2Q			
LongRangeFMARRF					4Q			
DevelopmentMilestones								
ETDSDevelopment				1Q-4Q	1Q			
LongRangeFMADevelopment			3Q-4Q	1Q-4Q	1Q-3Q			
PayloadSuiteforCMCM -4			2Q-4Q	1Q-4Q	1Q			
PayloadSuiteforCMCM -5				2Q-4Q	1Q-4Q	1Q		
PayloadSuiteforCMCM -6				3Q-4Q	1Q-4Q	1Q-2Q		

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 0603888C Ballistic Missile Defense Test and Targets
---	--

COST (\$ in Thousands)	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
0905 Targets & Countermeasures -Block 2008	0	0	0	56794	77398	67974	238821	253064
RDT&E Articles Qty	0	0	0	0	0	1	5	7

A. Mission Description and Budget Item Justification

Funding for this effort was previously held under the Ballistic Missile Defense System (BMDS) Program Element (PE0603880C, Project 1030).

The Targets & Countermeasures Block 2008 program funds the design, prototyping, development, acquisition, certification, product improvement, and qualification testing of a suite of targets and payload to test the capability of the BMDS. Specifically, this program provides capability-based ballistic missile full target systems to include target sub-systems such as boosters, payloads (entry vehicles, sensor packages, countermeasures, and on-board instrumentation), and launch support systems in support of the BMDS Block strategy. New target and payload development, risk reduction flights, sub-system characterization, and the acquisition and maintenance of long lead material of major target components will be accomplished. This program funds the development of key target systems for use in BMDS testing; all elements (e.g., Ground Based Midcourse, AEGIS Ballistic Missile Defense (BMD), Theater High Altitude Area Defense (THAAD), etc.) fund the acquisition and use of targets required for BMDS testing. The following efforts are planned to support Block 2008 testing:

- Continue the Targets Prime contract.
- Initiate development of the Medium and Long Range Liquid Fuel Boosters to support the Airborne Laser (ABL) program, Aegis BMD, THAAD, and Ground-based Midcourse Defense (GMD) flight tests.
- Initiate development of the Strategic Range Air Launch Target.
- Complete payload suite design and development for 10 Critical Measurements & Countermeasures (CMCM) tests.
- Purchase long lead material asset and asset management items for short, medium, and long range target components.
- Continue the maintenance, aging surveillance, refurbishment, and routine testing of existing Government Furnished Equipment (GFE) boosters.

Central to the development and acquisition of new target systems to support the BMD Block testing schedule is the utilization of a prime target contractor. The Targets and Countermeasures Directorate will award a prime contract in FY2004 that will: 1) provide systems engineering across the target portfolio, including managing and executing Block target requirements; 2) develop future target booster development activities; 3) design and develop BMDS payloads and countermeasures; 4) develop advanced targets; and, 5) Long Lead Material and Asset Management.

B. Accomplishments/Planned Program

	FY2002	FY2003	FY2004	FY2005
Target Support			0	0
RDT&E Articles (Quantity)			0	0

FY2004 Planned Accomplishments:

-This effort funds the Targets and Countermeasures Acquisition Strategy prime contract to include core contract costs, such as program management and systems engineering. Funding for this effort to support the Block 2008 capability is programmed for FY2006 -FY2009.

UNCLASSIFIED

MDAExhibitR -2ARDT&EProjectJustification			Date February2003	
APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDevelopmentandPrototypes(ACD&P)		R-INOMENCLATURE 0603888CBallisticMissileDefenseTestandTargets		
<p>FY2005PlannedAccomplishments: -ThiseffortcontinuestofundtheTargetsandCountermeasuresAcquisitio nStrategyprimecontracttoincludecorecontractcosts,suchasprogrammanagementandsystemsengineering.Funding forthisefforttosupporttheBlock2008capabilityisprogrammedforFY2006 -FY2009.</p>				
	FY2002	FY2003	FY2004	FY2005
TargetDevel opment			0	56794
RDT&EArticles(Quantity)			0	0
<p>Thiseffortfundsthedevelopmentofnewtargeteffortsrequiredforfull -upBMDSstestingacrosstheentirespectrumoftargetlaunchtrajectories,andearlyconceptdevelopmentandprototypingof advancedsystemsorsub -systemsforBMDSstargets.RDT&EarticlesdescribedbelowarescheduledtobecompletedinFY2007.</p> <p>FY2004PlannedAccomplishments: N/A.</p> <p>FY2005PlannedAccomplishments: -InitiateddevelopmentoftheStrategicRangeAirLaunchTargetto supportGMDflighttests. -InitiateddevelopmentoftheMediumandLongRangeLiquidFuelboostertosupportABL,AegisBMD,THAAD,andGMD.</p>				
	FY2002	FY2003	FY2004	FY2005
PayloadDevelopment			0	0
RDT&EArticles(Quantity)			0	0
<p>Thiseffortdevelo pscapability -basedpayloads(re -entryvehicles,countermeasures,instrumentation)insupportofCMCMflighttests.Additionally,thiseffortincludesdesign,development,and characterizationofpayloadsusedinCMCMflighttests.Theseflighttestsco llectandassesscriticalphenomenologydatainordertodeveloprealisticpayloadsfortargetsusedinBMDSflighttests. FundingforthisefforttosupportBlock2008capabilitytestingstartsinfY2007.RDT&Earticlesdescribedbelowarescheduledto becompletedinFY2008andFY2009.</p> <p>FY2004PlannedAccomplishments: -N/A:PayloadsuitesforCMCM7 -10willbedevelopedstartinginfY2006andFY2007.</p> <p>FY2005PlannedAccomplishments: -N/A:PayloadsuitesforCMCM7 -10willbedevelopedstarting infY2006andFY2007.</p> <p>Note:Payloadsuitesincludecountermeasures,re -entryvehicles,instrumentation,adaptersections,anddeploymentmechanisms.</p>				

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 0603888C Ballistic Missile Defense Test and Targets
---	--

	FY2002	FY2003	FY2004	FY2005
Asset Management			0	0
RDT&E Articles (Quantity)			0	0

FY2004 Planned Accomplishments:

-This effort continues a risk reduction initiative designed to ensure the availability of capability-based targets for BMDS flight tests. Additionally, this effort provides limited long-lead target modules that will be procured in economic quantities and stored for use in BMDS flight tests. The modules include components of capability-based RV's, inter-stages, and related hardware. Upon definition and approval of a BMD target requirement, the modules will be provided to a target integrator who will perform integration, flight readiness, and launch support. This effort also includes maintenance, aging surveillance, refurbishment, and routine testing of existing GFE boosters. GFE boosters include Minuteman, Peacekeeper, Lance, and Pershing assets; Foreign Material Acquisition (FMA) assets; and the Strategic Target System (STARS). Funding for this effort to support the Block 2008 capability is programmed for FY2008 -FY2009.

FY2005 Planned Accomplishments:

-This effort continues a risk reduction initiative designed to ensure the availability of capability-based targets for BMDS flight tests. Additionally, this effort provides limited long-lead target modules that will be procured in economic quantities and stored for use in BMDS flight tests. The modules include components of capability-based RV's, inter-stages, and related hardware. Upon definition and approval of a BMD target requirement, the modules will be provided to a target integrator who will perform integration, flight readiness, and launch support. This effort also includes maintenance, aging surveillance, refurbishment, and routine testing of existing GFE boosters. GFE boosters include Minuteman, Peacekeeper, Lance, and Pershing assets; FMA assets; and the STARS. Funding for this effort to support the Block 2008 capability is programmed for FY2008 -FY2009.

C. Other Program Funding Summary

	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009	To Complete	Total Cost
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		
PE0603889C Ballistic Missile Defense Products	0	0	343644	384763	333636	343447	349335	360951		
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		

UNCLASSIFIED

MDAExhibitR -2ARDT&EProjectJustification	Date February2003
---	-----------------------------

APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDevelopmentandPrototypes(ACD&P)	R-INOMENCLATURE 0603888CBallisticMissileDefenseTestandTargets
--	--

PE0604867CNavyAreaTheaterMissile Defense -EMD	96121	0	0	0	0	0	0	0		
PE0603882CBallisticMissileDefense MidcourseDefenseSegment	3655089	3103844	3613266	3841412	2078522	1908511	1482389	1437923		
PE0603869CMeadsConcepts -Dem/Val	0	114781	0	0	0	0	0	0		
PE0603880CBallisticMissileDefense SystemSegment	790535	1046652	0	0	0	0	0	0		
PE0603881CBallisticMissileDefense TerminalDefenseSegment	195800	136399	810440	924356	985514	805785	558071	371649		

D.AcquisitionStrategy

TargetsandCountermeasureswillfollowtheMissileDefenseAgency'scapability -basedacquisitionstrategythatemphasizestesting,spiraldevelopment,andevolutionaryacquisitionthroughtheuse oftwo -yearcapabilityblocks.Theprogramdevelopscapability -basedtargetsystemsutilizingbothexistingGFEandnewtargetsystemstha tmeettargetspecificationsdetailedinBMDsystemand technicalrequirementsdocuments.BMDStargetsystemswillbedevelopedandacquireutilizingatargetprimecontractforallfuturetargetboosterdevelopmentactivities,BMDSdesignand developmentofpayloadsandcountermeasures,andalladvancedtargetdevelopment.Theprimecontractorwillalsoprovidesystemlevelmanagementandperformsystemsengineeringacrossthe portfolioofBMDStargets.Thegovernmentwillmaintainsystemresponsibil ityandwillensuresuccessfulmanagementofBMDStargetsexecution.Newtargetdevelopmenteffortsareplannedto transitiontotheprimecontractor.

UNCLASSIFIED

MDAExhibitR -3RDT&EProjectCostAnalysis										Date February20 03		
APPROPRIATION/BUDGETACTIVITY					R-INOMENCLATURE							
4.AdvancedComponentDevelopmentandPrototypes(ACD&P)					0603888CBallisticMissileDefenseTestandTargets							
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
TargetDevelopment												
SRALT	Other	TBD	0	0		0		18000	1/4Q		18000	
Med/LongRangeLFB	Other	TBD	0	0		0		38794	1/4Q		38794	
PayloadDevelopment												
CMCM-7	Other	TBD	0	0		0		0				
CMCM-8	Other	TBD	0	0		0		0				
CMCM-9	Other	TBD	0	0		0		0				
CMCM-10	Other	TBD	0	0		0		0				
SubtotalProductDevelopment			0	0		0		56794			56794	
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
TargetSupport												
TargetsPrimeContract	Other	TBD	0	0			3/4Q					
SubtotalSupportCosts			0	0		0		0			0	
Remarks												

UNCLASSIFIED

MDAExhibitR -3RDT&EProjectCostAnalysis	Date February20 03
---	------------------------------

APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDevelopmentandPrototypes(ACD&P)	R-INOMENCLATURE 0603888CBallisticMissileDefenseTestandTargets
--	--

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
AssetManagement												
Short/MedRangeTargets	Various	Various										
LongRangeTargets	Various	Various										
VariousBoosterManagement	Various	Various										
SubtotalTestandEvaluation			0	0		0		0			0	

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		0		56794			56794	
------------------	--	--	---	---	--	---	--	-------	--	--	-------	--

Remarks

UNCLASSIFIED

MDAExhibitR -4AScheduleDetail	Date February2003
--------------------------------------	-----------------------------

APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDevelopmentandPrototypes(ACD&P)	R-1NOMENCLATURE 0603888CBallisticMissileDefenseTestandTargets
--	--

ScheduleProfile	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
TestingMilestones								
CMCM -10								4Q
CMCM -7							4Q	
CMCM -8							4Q	
CMCM -9								4Q
Medium/LongRangeLFBRRF							1Q	
StrategicRangeAirLaunchRRF						4Q		
DevelopmentMilestones								
CMCM -10						2Q-4Q	1Q-4Q	1Q-3Q
CMCM -7						2Q-4Q	1Q-4Q	1Q-3Q
CMCM -8						2Q-4Q	1Q-4Q	1Q-3Q
CMCM -9						2Q-4Q	1Q-4Q	1Q-3Q
Medium/LongRangeLFBRRF				2Q-4Q	1Q-4Q	1Q-4Q		
StrategicRangeAirLaunchTargetRRF		4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-3Q		

--

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 0603888C Ballistic Missile Defense Test and Targets
---	--

COST (\$ in Thousands)	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
0602 Program Operations	0	0	6576	6839	7113	7397	7693	8001
RDT&E Articles Qty	0	0	0	0	0	0	0	0

A. Mission Description and Budget Item Justification

Transferred in from the Ballistic Missile Defense System Segment Program Element 0603880C.

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. There are requirements for this area based on most economical and efficient utilization of contractors versus government personnel.

Fiscal Requirements include reimbursable services acquired through the Defense Working Capital Fund (DWC) 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 PE's while maintaining an orderly fiscal structure for executing the individual Program Operation efforts.

B. Accomplishments/Planned Program

	FY2002	FY2003	FY2004	FY2005
Personnel	0	0	3148	3116
RDT&E Articles (Quantity)				

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
--	------------------------------

APPROPRIATION/BUDGET ACTIVITY 4. Advanced Component Development and Prototypes (ACD&P)	R-INOMENCLATURE 0603888C Ballistic Missile Defense Test and Targets
---	--

	FY2002	FY2003	FY2004	FY2005
Management Support	0	0	2438	2556
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	0	0	990	1167
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
PE0603881C Ballistic Missile Defense Terminal Defense Segment	195800	136399	810440	924356	985514	805785	558071	371649		
PE0603880C Ballistic Missile Defense System Segment	790535	1046652	0	0	0	0	0	0		
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		
PE0603889C Ballistic Missile Defense Products	0	0	343644	384763	333636	343447	349335	360951		

UNCLASSIFIED

MDAExhibitR -2ARDT&EProjectJustification							Date February2003				
APPROPRIATION/BUDGETACTIVITY 4.AdvancedC omponentDevelopmentandPrototypes(ACD&P)				R-INOMENCLATURE 0603888CBallisticMissileDefenseTestandTargets							
PE0604861CTheaterHigh -AltitudeArea DefenseSystem -TMD -EMD	818632	888323	0	0	0	0	0	0	0		
PE0604865CPatriotPAC -3TheaterMissile DefenseAcquisition -EMD	130630	176155	0	0	0	0	0	0	0		
PE0604867CNavyAreaTheaterMissile Defense -EMD	96121	0	0	0	0	0	0	0	0		
PE0603175CBallisticMissileDefense Technology	145021	151130	240820	205791	200956	247990	287864	306472			
PE0603869CMeadsC oncepts -Dem/Val	0	114781	0	0	0	0	0	0			
PE0603879CAAdvancedConcepts, EvaluationsandSystems	0	0	151696	216778	166308	193949	241947	234484			
PE0901585CPentagonReservation	6381	7432	14481	13384	12758	12850	13158	13476			
PE0605502CSmallBusinessI nnovative Research -MDA	145102	0	0	0	0	0	0	0			
PE0901598CMangementHeadquarters - MDA	30191	25365	93441	101373	114107	121743	128972	133499			