

UNCLASSIFIED

MDA Exhibit R -2 RDT&E Budget Item Justification	Date February 2003
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APPROPRIATION/BUDGET ACTIVITY 4. Advanced Component Development and Prototypes (ACD&P)	R-1 NOMENCLATURE 0603869C Meads Concepts -Dem/Val
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COST (\$ in Thousands)	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
Total PECost	0	114781	0	0	0	0	0	0
2015 Medium Extended Air Defense (MEADS)	0	114781	0	0	0	0	0	0

A. Mission Description and Budget Item Justification

MEADS in FY2002 was included in the Missile Defense Agency (MDA) Terminal Defense Segment Program Element (PE) 0603881C. MEADS was programmed to transfer to the Army in FY2003 but per Congressional direction remained with MDA and was assigned its own MDA PE (0603869C). MEADS is programmed to transfer to the Army in FY2004.

The Medium Extended Air Defense System (MEADS) is an Objective Forces system. As an international co-development program, MEADS is a Terminal Defense Segment Mission Area investment that is essential to fulfill the requirements of the U.S. Army and U.S. Marine Corps for a low-medium air and missile defense system in the 21st century. MEADS will offer a significant improvement in tactical mobility and strategic deployability over comparable missile systems. It will defend the maneuver force and other critical forward-deployed assets against short and medium range Theater Ballistic Missiles (TBMs), cruise missiles and other air-breathing threats throughout all phases of tactical operations. MEADS will operate with upper-tiers systems in areas of debarkation and assembly and provide continuous coverage alone, or with Short-Range Air Defense Systems (SHORAD) systems in the division area of the battlefield during movement to contact and decisive operations. MEADS will be interoperable with other airborne and ground-based sensors and utilize an etched and distributed architecture and modularly-configurable battle elements to provide a robust, 360-degree defense against short and medium range TBMs, cruise missiles, unmanned aerial vehicles, tactical air-to-surface missiles, rotary-wing and fixed-wing threats.

The MEADS program has been restructured to leverage the interceptor from the PATRIOT Advanced Capability-3 (PAC-3) program and to extend the Program Definition/Validation (PD/V) phase with a thirty-two and half month Risk Reduction Effort (RRE) that focuses on developing the critical technologies required for maneuver force protection and overall risk reduction. U.S. funded bridging effort commenced on 14 August 2000 to begin work on the highest risk and long-lead items in the RRE Scope of Work. The International Memorandum of Understanding (MOU) was signed 27 June 2001, and the RRE contract was awarded 10 July 2001.

There remains a critical void in maneuver force defense against the current and future Air and Missile Defense (AMD) threat of short and medium range TBMs, cruise missiles, and low-to-medium altitude advanced air-breathing threats. This program will meet this challenge by integrating the PAC-3 missile and developing the critical technologies required for maneuver force protection, including development and testing of a lightweight launcher, reloader, 360-degree multifunction fire control radar and an etched and distributed Battle Management/Command, Control, Communications, Computers, and Intelligence (BM/C4I) Tactical Operations Center (TOC). The PAC-3 missile is the baseline interceptor for MEADS. Sensor and battle management software technology from both U.S. and international programs will be examined to enhance and augment organic equipment functions, reducing development cost and risk. Improvements will be balanced against costs and the projected threat to develop a U.S. and allied capability to counter the current and future AMD threats. The approach emphasizes prototyping of system-specific and surrogate hardware in key areas of BM/C4I, fire control radar, and lightweight launchers to satisfy mobility, strategic deployability and interoperability requirements.

UNCLASSIFIED

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

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B.Pro gramChangeSummary	FY2002	FY2003	FY2004	FY2005
Previous President's Budget (FY2003PB)	0	0	0	0
Current President's Budget (FY2004PB)	0	114781	0	0
Total Adjustments	0	114781	0	0
Congressional Specific Program Adjustments	0	117745	0	0
Congressional Undistributed Adjustments	0	-2082	0	0
Reprogrammings	0	-882	0	0
SBIR/STTR Transfer	0	0	0	0

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The FY2003 MEADS funding was reduced by \$2.082M during the appropriations cycle for Congressional Undistributed Reductions.

The FY2003 MEADS funding was also reduced by \$0.882M for inflation.

UNCLASSIFIED

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

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2015 Medium Extended Air Defense (MEADS)	0	114781	0	0	0	0	0	0
RDT&E Articles Qty	0	0	0	0	0	0	0	0

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B. Accomplishments/Planned Program

	FY2002	FY2003	FY2004	FY2005
Risk Reduction (RRE)		38533		
RDT&E Articles (Quantity)	0	0		

Continue U.S. contribution to the North Atlantic Treaty Organization (NATO) MEADS Management Agency (NAMEADSMA) International Program Office operational and administrative budgets for the MEADS RRE contract and continued development of digital end-to-end simulation, continued development of a prototype launcher, fire control radar, prototype BM/C4I hardware/software, test planning, technology transfer and anti-tamper. Continued tri-national planning for seamless transition to the Design and Development (D&D) Phase Contract.

UNCLASSIFIED

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	FY2002	FY2003	FY2004	FY2005
Proj Def - Val (PD/V)				
RDT&E Articles (Quantity)				
Note: Project Definition - Validation (PD/V) is an FY2002 and prior activity and, for administrative purposes only, is included heretop provide a section in the R -3 to show Total Prior Year costs.				
	FY2002	FY2003	FY2004	FY2005
Multi-Spectral RFDatalink		2879		
RDT&E Articles (Quantity)	0	0		
Provides for the Development of the Multi -Spectral Radio Frequency (RF) Datalink (MRFDL) in the PAC -3 Missile (Hardware Only).				
	FY2002	FY2003	FY2004	FY2005
Program Integration		53580		
RDT&E Articles (Quantity)	0	0		
Conduct program integration efforts that will examine Department of Defense (DoD), Joint Vision and Army transformation objective force mix and integration issues; support MEADS in the test and evaluation of Air and Missile Defense (AMD) task force interoperability; support development and maintenance of Joint Data Network interface requirements and planning and appropriate planning of MEADS manpower, training, human factors, safety issues, cost reduction initiatives, single canister design, composite tracker and U.S. only security.				
	FY2002	FY2003	FY2004	FY2005
PD/V Test Support				
RDT&E Articles (Quantity)				
Note: Project Definition - Validation (PD/V) is an FY2002 and prior activity and, for administrative purposes only, is included heretop provide a section in the R -3 to show Total Prior Year costs.				

UNCLASSIFIED

MDAExhibitR -2ARDT&EProjectJustification	Date February2003
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APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDevelopmentandPrototypes(ACD&P)	R-INOMENCLATURE 0603869CMeadsConcepts -Dem/Val
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	FY2002	FY2003	FY2004	FY2005
InternalOperating		6530		
RDT&EArticles(Quantity)	0	0		

ContinueMEADSprogrammanagement,supportandsalaries forboththenationalandinternationalprogramoffices.IncludeseffortstosupportU.S.uniquerequirementsforMEADSdocumentation plan.

	FY2002	FY2003	FY2004	FY2005
GovernmentAgenciesandSupportContracts		13259		
RDT&EArticles(Quantity)				

Continuefundingforgovernmentagenciesandsupportcontractstoprovidetechnicalanalysisandtoolsinspecialtyareasoflethality,BM/C4Iandsystems simulations,aswellassupportof conductingindependentevaluationsofcontractor tradesanda nalysis.

C.OtherProgramFundingSummary

	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009	To Complete	Total Cost
PE0901598CManagementHeadquarters - MDA	30191	25365	93441	101373	114107	121743	128972	133499		
PE0603888CBallisticMis sileDefenseTest andTargets	0	0	611522	711181	661416	643302	639839	672396		
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		
PE0605502CSmallBusinessInnovative Research -MDA	145102	0	0	0	0	0	0	0		
PE0901585CPentagonReservation	6381	7432	14481	13384	12758	12850	13158	13476		
PE0603890CBallisticMissileDefense SystemEngineeringandIntegration	0	0	483996	522458	604445	628594	703055	706501		

UNCLASSIFIED

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

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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		
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		

D. Acquisition Strategy

The MEADS acquisition strategy included competition between two transatlantic industrial teams in the Program Definition/Validation (PD/V) phase. These two international entities prepared and competed for the PD/V phases. As the Department of Defense and partner nations restructured the program, the PD/V phase was extended with the selection of a single contractor team to conduct a three-year risk reduction effort (RRE). In August 2000, the Defense Acquisition Executive (DAE) approved entry in the RRE. In this phase, technology from Germany, Italy and the United States, including the PAC-3 missile, will be leveraged to define the most cost-effective solution to meet the MEADS operational requirements. The MEADS Product Office is also pursuing integration of MEADS BM/C4I with the Project Manager, Air & Missile Defense Command and Control Systems (AMDCSS), to take advantage of other Army developments that can be incorporated into the MEADS program. A U.S. funded bridging effort commenced on 14 August 2000 to work on the high-risk areas and long-lead items within the scope of the RRE effort. The International MOU was signed 27 June 2001 and the RRE contract was awarded 10 July 2001. Per the 2 January 2002 SECDEF missile defense direction memo, the U.S. national unique requirements of the MEADS program will be developed in consultation with the Missile Defense Agency (MDA). The international requirements of the MEADS program will be directed per the International Memorandum of Understanding (MOU) and as modified in the future for international participation in the Ballistic Missile Defense System (BMDS).

UNCLASSIFIED

MDA Exhibit R -3RDT&E Project Cost Analysis	Date February 2003
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I. Product Development Cost (\$in Thousands)												
Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY2003 Cost	FY2003 Award Date	FY2004 Cost	FY2004 Award Date	FY2005 Cost	FY2005 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Risk Reduction (RRE)												
Risk Reduction (RRE)	C/CPFF	NAMEADSMA/HSV, AL	90510	37033	2Q						127543	
Risk Reduction (RRE)	C/CPFF	LMMC/Orlando, FL	6612								6612	
Bridging Effort	C/CPFF	NAMEADSMA/HSV, AL	12000								12000	
Implement TPRP	C/CPFF	LMMC/Orlando, FL	3000								3000	
Proj Def - Val (PD/V)												
Proj Def - Val (PD/V)	C/FFP	NAMEADSMA/HSV, AL	101672								101672	
International Teaming	C/FFP	LM/H&R Teams/HSV, AL	9605								9605	
Multi-Spectral RFDatalink												
Multi-Spectral RFDatalink	C/CPFF	LMMC/Dallas, TX	9135	2879	1Q						12014	
Subtotal Product Development			232534	39912		0		0			272446	

Remarks

Note: MEADS in FY2002 was included in the Missile Defense Agency (MDA) Terminal Defense Segment Program Element (PE) 0603881C. The Total priority years (PYs) cost column includes the costs from the prior MEADS program elements.

II. Support Costs Cost (\$in Thousands)												
Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY2003 Cost	FY2003 Award Date	FY2004 Cost	FY2004 Award Date	FY2005 Cost	FY2005 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Program Integration												
Program Integration	C/Other	PEO AMD/MDA/HSV, AL	2057	48605	2Q						50662	

UNCLASSIFIED

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Int'l Program Office	C/Other	NAMEADSMA/HSV,AL	7432	1500	2Q						8932	
U.S. Contracts	C/Other	MEADS Product Office/HSV,AL	10510	2595	2Q						13105	
U.S. OGAs	C/MIPR	MEADS Product Office/HSV,AL	16530	10664	2Q						27194	
U.S. Security	C/Other	Lockheed Martin/Syracuse, NY, Dallas, TX, FL	4000	3745	3Q						7745	
U.S. AoA	C/MIPR	MEADS Product Office/HSV,AL	2298								2298	
Composite Tracker	C/MIPR	CAS/HSV,AL		1230	2Q						1230	
Government Agencies and Support Contracts												
Subtotal Support Costs			42827	68339		0		0			111166	

Remarks

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III. Test and Evaluation Cost (\$ in Thousands)

Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY2003 Cost	FY2003 Award Date	FY2004 Cost	FY2004 Award Date	FY2005 Cost	FY2005 Award Date	Cost to Complete	Total Cost	Target Value of Contract
PD/VT Test Support												
Redstone Technical Test Center	C/MIPR	RTTC/HSV,AL	253								253	
ADSAM	Other	SMDC/HSV,AL	9915								9915	
Subtotal Test and Evaluation			10168	0		0		0			10168	

Remarks

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UNCLASSIFIED

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IV. Management Services Cost (\$ in Thousands)												
Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY2003 Cost	FY2003 Award Date	FY2004 Cost	FY2004 Award Date	FY2005 Cost	FY2005 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Internal Operating												
Internal Operating	C/Other	MEADS Product Office/NAMEADS MA/HSV, AL	19956	6530	2Q						26486	
Subtotal Management Services			19956	6530		0		0			26486	

Remarks

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Project Total Cost			305485	114781		0		0			420266	
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Remarks

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UNCLASSIFIED

MDAExhibitR -4ScheduleProfile	Date February2003
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APPROPRIATION/BUDGETACTIVITY 4.AdvancedComponentDevelopmentandPrototypes(ACD&P)	R-INOMENCLATURE 0603869CMead sConcepts -Dem/Val
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FiscalYear	2002				2003				2004				2005				2006				2007				2008				2009			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Decisions																																
SystemLevelInterfaceDemo								▼																								
Other																																
ProgramReview								▲																								

UNCLASSIFIED

MDAExhibitR -4AScheduleDetail						Date February2003		
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ScheduleProfile	FY2002	FY2003	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009
Decisions								
SystemLevelInterfaceDemo		4Q						
Other								
ProgramReview		4Q						

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