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<b>MDA Exhibit R-2 RDT&amp;E Budget Item Justification</b>	Date <b>February 2004</b>
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<b>APPROPRIATION/BUDGET ACTIVITY</b> <b>RDT&amp;E, DW/04 Advanced Component Development and Prototypes (ACD&amp;P)</b>	<b>R-1 NOMENCLATURE</b> <b>0603869C Mead Concepts - Dem/Val</b>
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COST (\$ in Thousands)	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Total PE Cost	101,754	0	0	0	0	0	0
2015 Medium Extended Air Defense (MEADS)	101,754	0	0	0	0	0	0

*Note: Per Congressional direction, beginning in FY04 MEADS transitioned to the Army.*

**A. Mission Description and Budget Item Justification**

The Medium Extended Air Defense System (MEADS) is a future Force system. It is an international co-development program essential to fulfill the requirements of the U.S. Army and the U.S. Marine Corps for a low-medium air and missile defense system in the 21st century. MEADS will offer a significant improvement in surveillance, target tracking, integrated fire control and target engagement, 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 (CMs) and other air-breathing threats such as unmanned combat aerial vehicles (UCAVs) throughout all phases of tactical operations. MEADS will operate with upper-tier systems in areas of debarkation and assemble and provide continuous coverage alone, or with Shorter Range Air Defense Systems (SHORAD) such as SLAMRAAM in the maneuver areas of the battlefield during movement to contact and decisive operations. MEADS will be interoperable with other airborne and ground-based sensors and utilize a netted and distributed architecture with modularly-configurable battle elements to provide a robust, 360-degree defense against short and medium range TBMs, CMs, UAVs, tactical air-to-surface missiles, rotary-wing and fixed-wing threats.

The MEADS program is currently executing a thirty two and half month Risk Reduction Effort (RRE) phase. The primary objectives of RRE are to develop program cost and schedule consensus to mature critical technologies, and prepare program planning for entry into the Design and Development (D&D) Phase at Milestone B in 2004. The D&D Phase is currently planned to be a six year, ten month effort producing six MEADS Fire Units with the First Unit Equipped in FY12. The D&D Phase will be executed under an International Memorandum (MOU) between the participating nations.

A critical void remains in maneuver force defense against the current and future Air and Missile Defense (AMD) threat of short and medium range TBMs, CMs, 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 Light Weight Launcher, Reloader, 360-degree Multifunction Fire Control and Surveillance Radars and a netted 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, manpower requirements 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 Light Weight Launcher to satisfy mobility, strategic deployability and interoperability requirements.

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<b>APPROPRIATION/BUDGET ACTIVITY</b> <b>RDT&amp;E, DW/04 Advanced Component Development and Prototypes (ACD&amp;P)</b>	<b>R-1 NOMENCLATURE</b> <b>0603869C Mead Concepts - Dem/Val</b>
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<b>B. Program Change Summary</b>	FY 2003	FY 2004	FY 2005
Previous President's Budget (FY 2004 PB)	114,781	0	0
Current President's Budget (FY 2005 PB)	101,754	0	0
Total Adjustments	-13,027	0	0
Congressional Specific Program Adjustments	0	0	0
Congressional Undistributed Adjustments	0	0	0
Reprogrammings	-6,595	0	0
SBIR/STTR Transfer	-6,432	0	0

The FY 2003 MEADS funding was reduced by \$2.082 million during the appropriations cycle for Congressionally Undistributed Reductions.

The FY 2003 MEADS funding was also reduced by \$0.882 million for inflation.

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<b>MDA Exhibit R-2A RDT&amp;E Project Justification</b>	Date <b>February 2004</b>
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<b>APPROPRIATION/BUDGET ACTIVITY</b>	<b>R-1 NOMENCLATURE</b>
<b>RDT&amp;E, DW/04 Advanced Component Development and Prototypes (ACD&amp;P)</b>	<b>0603869C Meads Concepts - Dem/Val</b>

COST (\$ in Thousands)	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
2015 Medium Extended Air Defense (MEADS)	101,754	0	0	0	0	0	0
RDT&E Articles Qty	0	0	0	0	0	0	0

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**B. Accomplishments/Planned Program**

	FY 2003	FY 2004	FY 2005
Risk Reduction (RRE)	30,710		
RDT&E Articles (Quantity)			

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.

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MDA Exhibit R-2A RDT&E Project Justification		Date <b>February 2004</b>	
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, DW/04 Advanced Component Development and Prototypes (ACD&amp;P)</b>		R-1 NOMENCLATURE <b>0603869C Meads Concepts - Dem/Val</b>	
	FY 2003	FY 2004	FY 2005
Proj Def-Val (PD/V)			
RDT&E Articles (Quantity)			
Note: Project Definition-Validation (PD/V) is an FY 2002 and prior activity and, for administrative purposes only, is included here to provide a section in the R-3 to show Total Prior Year costs.			
	FY 2003	FY 2004	FY 2005
Multi-Spectral RF Datalink	6,080		
RDT&E Articles (Quantity)			
Provides for the Development of the Multi-Spectral Radio Frequency (RF) Datalink (MRFDL) in the PAC-3 Missile (Hardware Only).			
	FY 2003	FY 2004	FY 2005
Program Integration	46,041		
RDT&E Articles (Quantity)			
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.			
	FY 2003	FY 2004	FY 2005
PD/V Test Support			
RDT&E Articles (Quantity)			
Note: Project Definition-Validation (PD/V) is an FY 2002 and prior activity and, for administrative purposes only, is included here to provide a section in the R-3 to show Total Prior Year costs.			
	FY 2003	FY 2004	FY 2005
Internal Operating	5,591		
RDT&E Articles (Quantity)			
Continue MEADS program management, support and salaries for both the national and international program offices. Includes efforts to support U.S. unique requirements for MEADS documentation plan.			

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<b>APPROPRIATION/BUDGET ACTIVITY</b> <b>RDT&amp;E, DW/04 Advanced Component Development and Prototypes (ACD&amp;P)</b>	<b>R-1 NOMENCLATURE</b> <b>0603869C Meads Concepts - Dem/Val</b>
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	FY 2003	FY 2004	FY 2005
Government Agencies and Support Contracts	13,332		
RDT&E Articles (Quantity)			

Continue funding for government agencies and support contracts to provide technical analysis and tools in specialty areas of lethality, BM/C4I and system simulations, as well as support of conducting independent evaluations of contractor trades and analysis.

**C. Other Program Funding Summary**

	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To Complete	Total Cost
PE 0901598C Management Headquarters - MDA	35,331	92,449	141,923	146,099	145,112	151,727	154,583	Continuing	Continuing
PE 0603175C Ballistic Missile Defense Technology	151,217	225,268	204,320	199,468	246,291	286,286	305,365	Continuing	Continuing
PE 0603879C Advanced Concepts, Evaluations and Systems	0	149,993	256,159	229,512	232,463	231,583	224,626	Continuing	Continuing
PE 0603880C Ballistic Missile Defense System Segment	1,028,016	0	0	0	0	0	0	Continuing	Continuing
PE 0603882C Ballistic Missile Defense Midcourse Defense Segment	3,056,035	3,744,066	4,404,335	3,067,800	3,087,147	1,881,298	1,802,257	Continuing	Continuing
PE 0603883C Ballistic Missile Defense Boost Defense Segment	705,643	617,270	492,614	555,667	611,736	473,602	455,961	Continuing	Continuing
PE 0603884C Ballistic Missile Defense Sensors	327,013	425,421	591,957	790,265	1,453,679	1,122,189	1,232,893	Continuing	Continuing
PE 0603886C Ballistic Missile Defense System Interceptors	0	117,719	511,262	1,118,599	1,717,480	2,196,531	2,449,322	Continuing	Continuing
PE 0603888C Ballistic Missile Defense Test and Targets	0	635,782	716,427	673,476	656,152	654,015	688,119	Continuing	Continuing
PE 0603889C Ballistic Missile Defense Products	0	305,309	418,608	421,049	445,971	456,339	469,621	Continuing	Continuing
PE 0603890C Ballistic Missile Defense System Core	0	445,356	479,764	492,988	527,541	539,210	568,365	Continuing	Continuing
PE 0604861C Theater High-Altitude Area Defense System - TMD - EMD	887,616	0	0	0	0	0	0	Continuing	Continuing

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<b>APPROPRIATION/BUDGET ACTIVITY</b> <b>RDT&amp;E, DW/04 Advanced Component Development and Prototypes (ACD&amp;P)</b>	<b>R-1 NOMENCLATURE</b> <b>0603869C Meads Concepts - Dem/Val</b>
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	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To Complete	Total Cost
PE 0604865C Patriot PAC-3 Theater Missile Defense Acquisition - EMD	138,922	0	0	0	0	0	0	Continuing	Continuing
PE 0605502C Small Business Innovative Research - MDA	138,791	0	0	0	0	0	0	Continuing	Continuing
PE 0901585C Pentagon Reservation	7,432	14,327	13,884	12,958	12,850	13,158	13,476	Continuing	Continuing

**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 (AMDCCS), 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).

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MDA Exhibit R-3 RDT&E Project Cost Analysis							Date February 2004			
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)					R-1 NOMENCLATURE 0603869C Meads Concepts - Dem/Val					
<b>I. Product Development Cost ( \$ in Thousands )</b>										
Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost to Complete	Total Cost	Target Value of Contract
<b>Risk Reduction (RRE)</b>										
Risk Reduction (RRE)	C/CPFF	NAMEADSMA/ HSV, AL	90,510						90,510	
Risk Reduction (RRE)	C/CPFF	LMMC/ Orlando, FL	6,612						6,612	
Bridging Effort	C/CPFF	NAMEADSMA/ HSV, AL	12,000						12,000	
Implement TPRP	C/CPFF	LMMC/ Orlando, FL	3,000						3,000	
<b>Multi-Spectral RF Datalink</b>										
Multi-Spectral RF Datalink	C/CPFF	LMMC/ Dallas, TX	9,135						9,135	
<b>Proj Def-Val (PD/V)</b>										
Proj Def-Val (PD/V)	C/FFP	NAMEADSMA/ HSV, AL	101,672						101,672	
International Teaming	C/FFP	LM/H&R Teams/ HSV, AL	9,605						9,605	
Subtotal Product Development			232,534	0		0		0	232,534	
<b>Remarks</b>										
Note: MEADS is assigned its own MDA PE (0603869C) for FY 2003. Total Prior Year costs (including FY 2002) are captured in the Total Prior Year column of the MEADS PE 0603869C.										
<b>II. Support Costs Cost ( \$ in Thousands )</b>										
Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost to Complete	Total Cost	Target Value of Contract
<b>Program Integration</b>										
Program Integration	C/Variou	PEO AMD/ HSV, AL	2,057						2,057	

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MDA Exhibit R-3 RDT&E Project Cost Analysis							Date <b>February 2004</b>			
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, DW/04 Advanced Component Development and Prototypes (ACD&amp;P)</b>					R-1 NOMENCLATURE <b>0603869C Meads Concepts - Dem/Val</b>					
Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Int'l Program Office	C/Various	NAMEADSMA/ HSV, AL	7,432						7,432	
U.S. Contracts	C/Various	MEADS Product Office/ HSV, AL	10,510						10,510	
U.S. OGAs	C/MIPR	MEADS Product Office/ HSV, AL	16,530						16,530	
U.S. Security	C/Various	Lockheed Martin/ Syracuse, NY, Dallas, TX, FL	4,000						4,000	
U.S. AoA	C/MIPR	MEADS Product Office/ HSV, AL	2,298						2,298	
Composite Tracker	C/MIPR	CAS/ HSV, AL								
<b>Government Agencies and Support Contracts</b>										
Subtotal Support Costs			42,827	0		0		0	42827	
<b>Remarks</b>										
Note: MEADS is assigned its own MDA PE (0603869C) for FY 2003. Total Prior Year costs (including FY 2002) are captured in the Total Prior Year column of the MEADS PE 0603869C.										



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MDA Exhibit R-3 RDT&E Project Cost Analysis							Date <b>February 2004</b>			
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, DW/04 Advanced Component Development and Prototypes (ACD&amp;P)</b>					R-1 NOMENCLATURE <b>0603869C Meads Concepts - Dem/Val</b>					
<b>III. Test and Evaluation Cost ( \$ in Thousands )</b>										
Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost to Complete	Total Cost	Target Value of Contract
<b>PD/V Test Support</b>										
Redstone Technical Test Center	MIPR	RTTC/ HSV, AL	253						253	
ADSAM	C/Various	SMDC/ HSV, AL	9,915						9,915	
Subtotal Test and Evaluation			10,168	0		0		0	10168	
<b>Remarks</b>										
Note: MEADS is assigned its own MDA PE (0603869C) for FY 2003. Total Prior Year costs (including FY 2002) are captured in the Total Prior Year column of the MEADS PE 0603869C.										
<b>IV. Management Services Cost ( \$ in Thousands )</b>										
Cost Categories:	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost to Complete	Total Cost	Target Value of Contract
<b>Internal Operating</b>										
Internal Operating	C/Various	MEADS Product Office/NAMEADSM A/ HSV, AL	19,956						19,956	
Subtotal Management Services			19,956	0		0		0	19956	
<b>Remarks</b>										
Note: MEADS in FY 2002 was included in the Missile Defense Agency (MDA) Terminal Defense Segment Program Element (PE) 0603881C. The Total prior years (PYs) costs column includes the costs from the prior MEADS program elements.										
Project Total Cost			305,485	0		0			305,485	
<b>Remarks</b>										
Note: MEADS in FY 2002 was included in the Missile Defense Agency (MDA) Terminal Defense Segment Program Element (PE) 0603881C. The Total prior years (PYs) costs column includes the costs from the prior MEADS program elements.										



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MDA Exhibit R-4A Schedule Detail						Date February 2004	
APPROPRIATION/BUDGET ACTIVITY RDT&E, DW/04 Advanced Component Development and Prototypes (ACD&P)				R-1 NOMENCLATURE 0603869C Meads Concepts - Dem/Val			
Schedule Profile	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
<b>Decisions</b>							
System Level Interface Demo	4Q						
<b>Other</b>							
Program Review	4Q						