

# ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)

February 2003

## BUDGET ACTIVITY

### 7 - Operational system development

## PE NUMBER AND TITLE

### 0203801A - Missile/Air Defense Product Improvement Program

COST (In Thousands)	FY 2002 Actual	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
Total Program Element (PE) Cost	13302	41787	44468	32025	16765	10899	11171	11419	0	194025
036 PATRIOT PROD IMP PGM	9434	41787	44468	32025	16765	10899	11171	11419	0	184408
303 STINGER RMP PIP	3868	0	0	0	0	0	0	0	0	9617

**A. Mission Description and Budget Item Justification:** The goal of the Air Defense Artillery (ADA) modernization is to provide well-trained soldiers with the most capable systems at the right time to defeat the evolving threat. The ADA systems support the Air and Missile Defense (AMD) force which assists the Army and the Joint Force in gaining Full Spectrum Dominance in any operational requirement. ADA must continually be upgraded and modernized to meet all challenges, from small scale contingencies to major theater wars (MTW). FY04/FY05 funds support critical improvements to the Patriot program.

<b><u>B. Program Change Summary</u></b>	FY 2002	FY 2003	FY 2004	FY 2005
Previous President's Budget (FY 2003)	13727	43738	45266	32630
Current Budget (FY 2004/2005 PB)	13302	41787	44468	32025
Total Adjustments	-425	-1951	-798	-605
Congressional program reductions				
Congressional rescissions		-505		
Congressional increases				
Reprogrammings	-49	-242		
SBIR/STTR Transfer	-376	-1204		
Adjustments to Budget Years			-798	-605

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit)							February 2003				
BUDGET ACTIVITY 7 - Operational system development				PE NUMBER AND TITLE 0203801A - Missile/Air Defense Product Improvement Program				PROJECT 036			
COST (In Thousands)		FY 2002 Actual	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
036	PATRIOT PROD IMP PGM	9434	41787	44468	32025	16765	10899	11171	11419	0	184408
<p><b><u>A. Mission Description and Budget Item Justification:</u></b>The Patriot Product Improvement Program upgrades the Patriot system through a series of individual materiel changes (MC) culminating in the attainment of the Patriot Advanced Capability - 3 (PAC-3) system. The communication upgrades improve Patriot's above and below battalion communication equipment. These changes eliminate Patriot-peculiar communications equipment and improve Patriot's interoperability between systems and the Services. FY00 was the first year for the Remote Launch Communication Enhancement Upgrade (RLCEU) Link 16 Phase 1 and Post Deployment Build 5 (PDB 5). RLCEU Link 16 will develop and test the hardware required for a Link-16 terminal, terminal control, and communications processing equipment to receive and process the Link 16 Joint Data Net information. PDB 5 will improve system capability against advanced threats (Theater Ballistic Missiles and Air-Breathing Threats (TBMs and ABTs) in all environments, to include clutter and/or intense Electronic Counter Measures (ECM). Program objective will be to define the software changes necessary to enhance system capabilities against advanced TBM and cruise missile threats. In addition, interoperability improvements [e.g., Cooperative Engagement Capability (CEC) interface, cueing, and Tactical Data Information Link (TADIL) direct to Fire Unit (FU)], PAC-3 missile integration improvements in ground software, Classification Discrimination &amp; Identification (CDI3) enhancements, and on-line diagnostic evolution will be addressed. This system supports the Legacy to Objective transition path of the Transformation Campaign Plan (TCP).</p>											
<b><u>Accomplishments/Planned Program</u></b>							<b><u>FY 2002</u></b>	<b><u>FY 2003</u></b>	<b><u>FY 2004</u></b>	<b><u>FY 2005</u></b>	
Continue Post PDB 5							4161	6010	9483	7588	
Recapitalization							5273	26527	28985	19437	
Special Program (PIP)							0	4250	0	0	
SIAP							0	5000	6000	5000	
Totals							9434	41787	44468	32025	

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Improvement Program**

PROJECT

**036**

<b><u>B. Other Program Funding Summary</u></b>	<b><u>FY 2002</u></b>	<b><u>FY 2003</u></b>	<b><u>FY 2004</u></b>	<b><u>FY 2005</u></b>	<b><u>FY 2006</u></b>	<b><u>FY 2007</u></b>	<b><u>FY 2008</u></b>	<b><u>FY 2009</u></b>	<b><u>To Compl</u></b>	<b><u>Total Cost</u></b>
Budget Activity 3 - Patriot Mod (C50700)	24819	148671	212575	86131	75443	77490	71881	41854	0	738864
Budget Activity 3 - Patriot Mod Initial Spares CA0267	722	39946	32055	14775	14849	9576	9034	8124	0	129081
Medium Sets - M53500	0	6394	816	1305	1374	1405	1432	1442	0	14168
Position Azimuth Determining SYS (PADS) - M75700	0	0	783	782	782	781	779	779	0	4686

**C. Acquisition Strategy:** The design objective of the Patriot system was to provide a baseline system capable of modification to cope with the evolving threat. This alternative minimizes technological risks and provides a means of enhancing system capability through planned upgrades of deployed systems. The Patriot program consists of two interrelated acquisition programs - the Patriot growth program and the PAC-3 missile program. Growth program modifications are grouped into configurations, which are scheduled to be fielded in the same timeframe. Configuration groupings are convenient for managing block changes of hardware and software and are not a performance-related grouping. However, incremental increases in performance will be determined for each configuration in order to provide benchmarks for configuration testing and for the development of user doctrine and tactics.

ARMY RDT&E COST ANALYSIS(R-3)									February 2003			
BUDGET ACTIVITY <b>7 - Operational system development</b>					PE NUMBER AND TITLE <b>0203801A - Missile/Air Defense Product Improvement Program</b>					PROJECT <b>036</b>		
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . RLCEU Link 16 Phase I			1226	0		0		0		Continue	Continue	0
b . Post PDB 5			2760	1210		3553		2368		Continue	9891	Continue
c . Recapitalization			5273	26527	2Q	28985	2Q	19437	2Q	Continue	80222	0
d . Special Program (PIP)			0	4250	2Q	0		0		Continue	Continue	0
e . SIAP			0	5000	3Q	6000	3Q	5000	3Q	Continue	Continue	0
Subtotal:			9259	36987		38538		26805		Continue	Continue	Continue
II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . In-House Support		RSA/AL	14961	700		900		810		Continue	17371	Continue
b . Matrix Support		RSA/AL	3347	500		550		520		Continue	4917	Continue
Subtotal:			18308	1200		1450		1330		Continue	22288	Continue

ARMY RDT&E COST ANALYSIS(R-3)									February 2003			
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III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Missile Command	1095	RSA/AL	15221	1250		1500		1000		Continue	18971	Continue
b . White Sands Missile Range	MIPR	WSMR/NM	12758	350		430		400		Continue	13938	Continue
c . RDEC and Other Govt Agent	1095/MIPR	RSA/AL	95732	2000		2550		2490		0	102772	0
Subtotal:			123711	3600		4480		3890		Continue	135681	Continue
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2003 Cost	FY 2003 Award Date	FY 2004 Cost	FY 2004 Award Date	FY 2005 Cost	FY 2005 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:			0	0		0		0		0	0	0
Project Total Cost:			151278	41787		44468		32025		Continue	Continue	Continue

Schedule Profile Detail (R-4a Exhibit)							February 2003	
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<u>Schedule Detail</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
Configuration 3 Initial Operational Test & Evaluation (IOT&E)	2-4Q							
Initiate PAC-3 Evolutionary Block Upgrades	1Q							
PAC-3 Missile Block 02 Production DAB		1Q						
PAC-3 Missile Block 04 Production			4Q					
PAC-3 IOC				4Q				
PAC-3 Missile Block 06 Production						4Q		