

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2006

BUDGET ACTIVITY

PE NUMBER AND TITLE

4 - Advanced Component Development and Prototypes

0603305A - Army Missile Defense Systems Integration

	FY 2005	FY 2006	FY 2007
<u>B. Program Change Summary</u>			
Previous President's Budget (FY 2006)	112069	14573	15089
Current BES/President's Budget (FY 2007)	109799	81494	11233
Total Adjustments	-2270	66921	-3856
Congressional Program Reductions		-822	
Congressional Rescissions		-357	
Congressional Increases		68100	
Reprogrammings	-2270		
SBIR/STTR Transfer			
Adjustments to Budget Years			-3856

Project TR3 FY06 Congressional Add is in the amount of \$2.5 million for Mobile Tactical High Energy Laser (MTHL).

Project TR4 FY06 Congressional Adds in the amount of \$64.6 million include the following projects: \$2.6 million for Advanced Battery Technology; \$.5 million for Advanced Laser Electric Power; \$1.2 million for Advanced Strap Down Seeker (ASDS); \$1.8 million for Aero Acoustic Test Facility (Phase II); \$1.8 million for Army Missile Defense - Advanced Electronics Rosebud Integration; \$1 million for Army Missile Defense Integration of Thermo-Acoustic Piezo Energy Conversion; \$1 million for Ballute Technology Development; \$1 million for Biological Air Filtering System Technology (BAFST); \$6.2 million for Carbon Foam Program - Missile Defense; \$1 million for Component Integrated Modeling and Simulation Test Analysis Environment; \$2.4 million for Continuation of Microelectromechanical Systems and Nanotechnology; \$2.4 million for Credible Threat Prediction Capability Development; \$2.1 million for Dielectric Enhanced Sensor Systems (DESS); \$2.6 million for Global Infrasound Monitoring; \$1.2 million for Integrated Composite Missile Structures; \$1.5 million for Joint Wavelet Transform of Hyperspectral Data (JWaTH); \$1 million for Low Coast Avionics; \$1 million for Low Cost Surveillance System (LCSS); \$1 million for Mobile Optical Sensor Suite (MOSS); \$2.8 million for Multiple Component Army Flight Test; \$3.1 million for Next Generation Interceptors Materials Research; \$2.6 million for Next Generation Passive Sensors; \$1.4 million for Radar Power Technology (RPT); \$1.5 million for Radar-on-a-Chip (RAD-CHIP) Research Program; \$2 million for Standoff Hazardous Agent Detection and Evaluation System (SHADES) Research Program; \$4 million for Standoff Sensor for Radionuclide Identification (SSRID); \$1 million for Thermal and Electronic Nanoscale Transport (TENT); \$3.4 million for Transfer Missile Power System - Onboard Vehicle Power; \$5.2 million for UAV Platform for Sensor Package and Mission Profile Development; \$2.8 million for Ultra Light UAV Sensor Platform; and \$1.5 million for Vertical Integration for Missile Defense Surveillance Data. FY07 funds realigned to higher priority requirements.

Project TR6 FY06 Congressional Add is in the amount of \$1 million for Medical Imaging.

FY07 funds realigned to higher priority requirements.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)								February 2006	
BUDGET ACTIVITY 4 - Advanced Component Development and Prototypes			PE NUMBER AND TITLE 0603305A - Army Missile Defense Systems Integration					PROJECT TR4	
COST (In Thousands)	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
TR4 MISSILE DEFENSE INTEGRATION	55954	65298	1698	1814	1171	1642	0	0	182012
A. Mission Description and Budget Item Justification: HQDA General Order No. 5, 1 March 1998, designated the US Army Space and Missile Defense Command (SMDC), the Army specified proponent for Ground-Based Midcourse Ballistic Missile Defense, and the Army operational integrator for Theater Missile Defense (TMD) and AR 5-22 designates SMDC as the specified proponent for Ballistic Missile Defense (BMD). As such, SMDC is responsible to develop warfighting concepts, conduct warfighting experiments to validate those concepts, identify capabilities needed to implement the validated concepts, and develop Doctrine, Organization, Training, Materiel, Leadership & Education, Personnel and Facilities (DOTMLPF) solutions to realize those missile defense capabilities.									
Accomplishments/Planned Program						<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	
Continue efforts to integrate concepts and DOTMLPF solutions for Army ground-based missile defense capabilities, across the four domains of missile defense (passive defense, active defense, attack operations and battle management).						1822	1642	1698	
Includes FY05 Congressional Add for Interactive Modeling and Simulation; Dielectric Enhanced Sensor System; Advanced Battery Technology; Next Generation Passive Surveillance Systems; Vertical Integration for Missile Defense Surveillance Data; Global Infrasonic Monitoring of Atmosphere; Ballute Technology Development; Nanoscience Initiative; Remote Sensor Monitoring Technology; Ultra Light UAV Sensor Platform; Credible Threat Prediction Capability Development; Advanced Laser Electric Power Program; Composite Chassis; Multiple Component Army Flight Test; Low Cost Avionics; Advanced Strap-Down Seeker; Carbon Foam Missile Defense Agency; Eagle Eyes Nuclear Detection Program; Next Generation Hardware-in-the-loop; integrated Composite Airframe Structure Program; Anti-Stealth Research-Passive Surveillance System; C4ISR Visualization; Spectral Operations Resources Center; and Future Laser Neutralization System.						54132	0	0	
Includes FY06 Congressional Adds for Advanced Battery Technology; Advanced Laser Electric Power; Advanced Strap Down Seeker (ASDS); Aero Acoustic Test Facility (Phase II); Army Missile Defense - Advanced Electronics Rosebud Integration; Army Missile Defense Integration of Thermo-Acoustic Piezo Energy Conversion; Ballute Technology Development; Biological Air Filtering System Technology (BAFST); Carbon Foam Program - Missile Defense; Component Integrated Modeling and Simulation Test Analysis Environment; Continuation of Microelectromechanical Systems and Nanotechnology; Credible Threat Prediction Capability Development; Dielectric Enhanced Sensor Systems (DESS); Global Infrasonic Monitoring; Integrated Composite Missile Structures; Joint Wavelet Transform of Hyperspectral Data (JWaTH); Low Coast Avionics; Low Cost Surveillance System (LCSS); Mobile Optical Sensor Suite (MOSS); Multiple Component Army Flight Test; Next Generation Interceptors Materials Research; Next Generation Passive Sensors; Radar Power Technology (RPT); Radar-on-a-Chip (RAD-CHIP) Research Program; Standoff Hazardous Agent Detection and Evaluation System (SHADES) Research Program; Standoff Sensor for Radionuclide Identification (SSRID); Thermal and Electronic Nanoscale Transport (TENT); Transfer Missile Power System - Onboard Vehicle Power; UAV Platform for Sensor Package and Mission Profile Development; Ultra Light UAV Sensor Platform; Vertical Integration for Missile Defense Surveillance Data.						0	63656	0	
Total						55954	65298	1698	

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)		February 2006
BUDGET ACTIVITY 4 - Advanced Component Development and Prototypes	PE NUMBER AND TITLE 0603305A - Army Missile Defense Systems Integration	PROJECT TR4
<p>C. Acquisition Strategy Program supports the continuous integration of Army ground-based missile defense capabilities and Doctrine, Organization, Training, Material, Leadership & Education, Personnel and Facilities (DOTMLPF) solutions. Various performers will conduct planned accomplishments.</p>		

ARMY RDT&E COST ANALYSIS (R3)										February 2006		
BUDGET ACTIVITY			PE NUMBER AND TITLE							PROJECT		
4 - Advanced Component Development and Prototypes			0603305A - Army Missile Defense Systems Integration							TR4		
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Various	Execute Congressional Adds	Various	47355	54132	2-4Q	63656	2-4Q	0		0	165143	0
Subtotal:			47355	54132		63656		0		0	165143	0
II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Govt support & support contracts	Various	Various	5093	1822	1-4Q	1642	1-4Q	1698	1-4Q	0	10255	0
Subtotal:			5093	1822		1642		1698		0	10255	0
III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:			0									
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:			0									
Project Total Cost:			52448	55954		65298		1698		0	175398	0

Schedule Profile (R4 Exhibit)																	February 2006															
BUDGET ACTIVITY					PE NUMBER AND TITLE																	PROJECT										
4 - Advanced Component Development and Prototypes					0603305A - Army Missile Defense Systems Integration																	TR4										
Event Name					FY 05				FY 06				FY 07				FY 08				FY 09				FY 10				FY 11			
					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
Continue integration of Army missile defense capabilities & DOTMLPF solutio																																
Execute FY05 Congressional Adds																																
Execute FY06 Congressional Adds																																

Schedule Detail (R4a Exhibit)						February 2006	
BUDGET ACTIVITY 4 - Advanced Component Development and Prototypes		PE NUMBER AND TITLE 0603305A - Army Missile Defense Systems Integration				PROJECT TR4	
<u>Schedule Detail</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>
Continue integration of Army missile defense capabilities and DOTMLPF solutions	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q
Execute Congressional adds	1-4Q	2-4Q					

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)								February 2006	
BUDGET ACTIVITY 4 - Advanced Component Development and Prototypes				PE NUMBER AND TITLE 0603305A - Army Missile Defense Systems Integration				PROJECT TR5	
COST (In Thousands)	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
TR5 MISSILE DEFENSE BATTLELAB	12621	12746	9535	9458	12648	12845	10595	0	104039
A. Mission Description and Budget Item Justification: This project funds the delivery of innovations to the warfighter in the Space and Missile Defense Command mission areas of Missile Defense, Space, Information Operations (IO), Global Strike (GS), Command, Control, Communications, Intelligence, Surveillance and Reconnaissance (C4ISR). The innovations are provided through prototyping, operational analysis and experimentation to support the future force. The project supports the Army Service Component Command responsibilities for integration of Army capabilities into U.S. Strategic Command.									
<u>Accomplishments/Planned Program</u>						<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	
Experiments/Advanced Prototype components into Command and Control (C2) Systems - Experiments assessed/exploited Doctrine, Organization, Training, Material, Leadership and Education, Personnel and Facilities (DOTMLPF) issues. Participated in major Army and Joint Experiments integrating space, missile defense, IO, GS and C4ISR organizational/operational concepts into the Army Campaign Plan (ACP). Assessed space, missile defense, IO, GS and C4ISR impacts on doctrine and materiel. Seventeen experiments will be completed in FY06. These include Joint Expeditionary Force 2006, Urban Resolve 2015, Joint Forces Command Experiment 06, other micro experiments hosted by other TRADOC Battle Labs (focusing on NET Operations, Intelligence Surveillance and Reconnaissance (ISR), and Battlefield Surveillance Brigade. Four major and four minor experiments are scheduled with TRADOC in FY07. The Future Operation Capability (FOC) test bed integrates commercial state-of-the-art technologies into C4ISR experiments. Prototype versions of the FOC supported operations Iraqi Freedom and Homeland Defense.						7714	7704	5960	
Operational Analysis/Tools, Modeling and Simulation (M&S)- Studies and Analysis included operational assessments of concepts, doctrine, organizations, technologies and tactics. Also examined Future Combat system/Transformation issues for space and missile defense including Space Control, Army Equities in Space - Intelligence Surveillance and Reconnaissance (AEIS-ISR), Joint Ground Tracking, ISR Integration and targeting. Tools and M&S accomplishments included M&S for experimentation and operational assessments, and the maintenance of M&S tools. Evolving concepts will require analysis that addresses emerging needs in FY06-07. Space control will require analysis to support the military utility analysis and requirements definition in FY07. Additionally, M&S integration will be required to support the fielding of Army simulations and experiments for Information Operations and Global Strike. Plans include continued maintenance of M&S tools and support for experimentation and analysis.						4907	5042	3575	
Total						12621	12746	9535	
<u>C. Acquisition Strategy</u> Not applicable for this item.									

ARMY RDT&E COST ANALYSIS (R3)										February 2006		
BUDGET ACTIVITY 4 - Advanced Component Development and Prototypes				PE NUMBER AND TITLE 0603305A - Army Missile Defense Systems Integration						PROJECT TR5		
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:			0									
II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Experiments, Exercises, Enhancements, Maintenance analysis	CPAFF/CPFF	Various, AL & CO	11293	5375	1-4Q	5478	1-4Q	2393	1-4Q	Continue	Continue	0
Govt Support and Support Contracts	MIPR/Allot	Various, AL , CO & NM	13082	7246	1-4Q	7268	1-4Q	7142	1-4Q	Continue	Continue	0
Subtotal:			24375	12621		12746		9535		Continue	Continue	0
III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:			0									
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:			0									
Project Total Cost:			24375	12621		12746		9535		0	0	0

Schedule Profile (R4 Exhibit)																February 2006																			
BUDGET ACTIVITY								PE NUMBER AND TITLE																PROJECT											
4 - Advanced Component Development and Prototypes								0603305A - Army Missile Defense Systems Integration																TR5											
Event Name								FY 05				FY 06				FY 07				FY 08				FY 09				FY 10				FY 11			
								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
Conduct experiments, operational analysis, maintain M&S for ASCC Missions																																			

Schedule Detail (R4a Exhibit)						February 2006	
BUDGET ACTIVITY 4 - Advanced Component Development and Prototypes		PE NUMBER AND TITLE 0603305A - Army Missile Defense Systems Integration				PROJECT TR5	
<u>Schedule Detail</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>
Conduct experiments, conduct operational analysis and maintain M&S tools for ASCC mission areas.	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q