

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)								February 2003		
BUDGET ACTIVITY 5 - System Development and Demonstration				PE NUMBER AND TITLE 0604329A - Common Missile				PROJECT 013		
	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	Cost to	Total Cost
COST (In Thousands)	Actual	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	Complete	
013 AIR TO GROUND COMMON MISSILE	16075	28602	183790	182932	148314	51328	24943	57679	0	698346
<p><u>A. Mission Description and Budget Item Justification:</u> The Common Modular Missile (CMM) is an Objective Force missile system that provides Line of Sight (LOS) and Beyond Line of Sight (BLOS) capabilities, including precision strike and fire and forget technologies, increased range, and lethality for Army rotary wing systems - Comanche (RAH-66) and Apache (AH-64). CMM is potentially a lethality candidate for Future Combat Systems (FCS) ground platforms. The CMM is a joint program (rotary and fixed wing requirements) with the Navy and USMC and is a cooperative development program with the United Kingdom. Threshold aircraft for the Navy are the F/A 18 E/F and the AH-1Z Cobra. The CMM maximizes the warfighters' operational flexibility by allowing them to effectively engage a variety of stationary and mobile targets on the battlefield, including advanced armor, bunkers, buildings, patrol craft, command and control vehicles, transporter/erector (SCUD) launchers and light armored vehicles. A goal of the CMM is to minimize the logistics burden of the combat force. CMM reduces the number of different types of missiles that will need to be shipped to a combat zone and allows flexibility in the location of resupply on the battlefield. CMM's modular design and continuous parallel technology insertion program will reduce life-cycle costs, including demilitarization, while ensuring the missile system continues to provide the required improvements to keep pace with needed capabilities and advancing threats.</p> <p>The CMM with multi-mode seeker will replace the aging stocks of the HELLFIRE family of missiles, the Navy Maverick missile, and has the potential to be the replacement/midlife upgrade for the UK Brimstone missile and the potential to mitigate risk for the aging legacy ground force missiles (TOW) with a CMM variant. The CMM multi-mode seeker will allow maximum capability in adverse weather, day or night, and in an obscured/coutermeasure environment. Developmental cost is much less than that required to develop four separate missile systems. Technology maturation and preliminary systems integration will be accomplished using SMART (Simulation and Modeling for Acquisition, Requirements and Training) to begin systems integration efforts for the enabling subsystems, including multi-mode seekers, variable thrust propulsion and advanced warheads. In FY04, the Qualified Baseline Design, developmental testing and operational assessment will be initiated for the System Development and Demonstration phase.</p> <p>The CMM system supports the Legacy to Objective transition path of the Transformation Campaign Plan (TCP).</p>										
<u>Accomplishments/Planned Program</u>						FY 2002	FY 2003	FY 2004	FY 2005	
Complete Risk Reduction engineering effort on seeker, warhead, propulsion and platform integration						10354	18769	0	0	
Continue Systems Engineering - Risk Reduction development of multi-sensor testbed, tri-mode seeker, GPS/IMU, controllable propulsion and enhanced multi-functional warhead						5721	0	0	0	

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BUDGET ACTIVITY

PE NUMBER AND TITLE

PROJECT

5 - System Development and Demonstration

0604329A - Common Missile

013

Accomplishments/Planned Program (continued)

	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
Complete Systems Engineering - Risk Reduction evaluation of sensor models, geometric/performance models, perform warhead lethality, and continue development of seeker, sensor, propulsion and warhead technologies	0	9833	0	0
Initiate Qualified Baseline Design, developmental testing, and operational assessment for System Development and Demonstration (SDD).	0	0	141853	164084
Procure component hardware for engineering testing, prepare and update missile design documentation and procure prototype hardware and test equipment	0	0	41937	18848
RDT&E Articles Quantity - Flyable FY 2004 - 42, FY2005 - 14	0	0	0	0
RDT&E Articles Quantity - Non-Flyable FY 2004 - 31	0	0	0	0
RDT&E Articles Quantity - Non-functional inert FY 2004 - 18	0	0	0	0
Totals	16075	28602	183790	182932

B. Program Change Summary

	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
Previous President's Budget (FY 2003)	16592	29919	48485	64564
Current Budget (FY 2004/2005 PB)	16075	28602	183790	182932
Total Adjustments	-517	-1317	135305	118368
Congressional program reductions				
Congressional rescissions		-329		
Congressional increases				
Reprogrammings	-56	-164		
SBIR/STTR Transfer	-461	-824		
Adjustments to Budget Years			135305	118368

Additional funds of \$135.305M in FY04 and \$118.368M in FY05 accelerate First Unit Equipped (FUE) from FY10 to FY08 in support of Army Transformation.

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<u>C. Other Program Funding Summary</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>	<u>To Compl</u>	<u>Total Cost</u>
C70302 - Common Missile	0	0	0	0	0	39711	114499	102555	1729000	1985765
<p><u>D. Acquisition Strategy:</u> The CMM System Definition/Risk Reduction contractors were selected via full and open competition. The CMM Program's Acquisition Strategy is based upon an evolutionary acquisition with spiral development. Full Block 1 system capability will be acquired in 60 months through a two-phased spiral approach. Spiral 1 will provide threshold Key Performance Parameter (KPP) requirements in 36 months for FUE of Apache AH-64D and Cobra AH-1Z in FY08. Spiral 2 will complete integration on the FA 18 E/F and Comanche to support FUE in FY09 and will provide full Block 1 Operational Requirements Document (ORD) requirements 12 months later. The SDD effort will be competed among the risk reduction contractors for contract award covering Spiral 1 and Spiral 2 development.</p>										

ARMY RDT&E COST ANALYSIS(R-3)									February 2003			
BUDGET ACTIVITY 5 - System Development and Demonstration					PE NUMBER AND TITLE 0604329A - Common Missile					PROJECT 013		
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 . Prime Contracts (Risk Reduction)	CPFF, Full & Open	Raytheon, AZ; Lockheed Martin, FL; Boeing, AL	7083	10396	1Q	0		0		0	17479	0
b . Support Contracts (Risk Reduction/SDD)	Various	Various	4219	5005	1-3Q	4500	1-3Q	4500	1-3Q	7850	26074	0
c . Development Engineering (Risk Reduction/SDD)	Various	Various	2013	3368	1-4Q	1625	1-4Q	1656	1-4Q	2445	11107	0
d . Prime Contracts (SDD)	TBD	TBD	0	0		160244	1Q	151530	1Q	355394	667168	0
Subtotal:			13315	18769		166369		157686		365689	721828	0
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 . SETA Support	Various	Various	1411	1589	1-3Q	2000	1-3Q	2000	1-3Q	3376	10376	0
Subtotal:			1411	1589		2000		2000		3376	10376	0

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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 . Prime Contract/Government Inhouse	TBD	TBD	1119	1172	1-3Q	5854	1-3Q	9758	1-3Q	28393	46296	0
Subtotal:			1119	1172		5854		9758		28393	46296	0
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
a . System Engineering/Proj Mgt (Risk Reduction/SDD)	Various	Various	4913	7072	1-4Q	9567	1-4Q	13488	1-4Q	32806	67846	0
Subtotal:			4913	7072		9567		13488		32806	67846	0
Project Total Cost:			20758	28602		183790		182932		430264	846346	0

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>
Design/Procure Tandem Warhead Hardware	1-2Q							
System Requirements Review	2Q							
Baseline Design Review		1Q						
Complete Performance Modeling & Virtual Prototype		3Q						
Complete Initial Design CAD/CAE		3Q						
Complete Simulation of System in Battlefield		4Q						
Milestone B Decision		4Q						
SPIRAL 1 ACTIVITIES:								
- SDD Contract Award			1Q					
- Preliminary Design Review (PDR)			2Q					
- Critical Design Review (CDR)			4Q					
- System Qualification				3-4Q	1-3Q			
- Limited User Test					4Q			
- Milestone C Decision					4Q			
- Production Qualification Test (PQT)							2Q	
- Live Fire Test							2-3Q	
- Initial Operational Test & Evaluation (IOT&E)							2-3Q	
SPIRAL 2 ACTIVITIES:								
- Contract Option Award					1Q			
- System Qualification						4Q	1-3Q	
- IOT&E								4Q
- LRIP I (Spiral 1)						1Q		
- LRIP II (Spiral 1)							1Q	
- LRIP III (Spiral 1 & 2)								1Q
- PQT								3Q
INITIATE BLOCK II ACTIVITIES								1Q