ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE
7 - Operational system development	**0203802A - Other Missile Product Improvement Programs**

	COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
	Total Program Element (PE) Cost	19086	1885	1527						40302
781	Hellfire UAV	7457	1885	1527						10869
786	APKWS Simulator Upgrade	12								12
788	ATACMS PIP	11617								29421

A. Mission Description and Budget Item Justification: The Laser HELLFIRE II missile requires replacement of the gyro and software modification to facilitate deployment from high altitudes and increased engagement geometries to defeat a broad target set ranging from heavy armor to urban structures. Modifications will be made to both the current AGM-114K or AGM-114K-2 (shaped charge) and N (blast fragmentation) model missiles and result in an AGM-114 P+ configuration. The missile will be backwards compatible with current rotary wing platforms.

The Advanced Precision Kill Weapon System (APKWS) Program was terminated in FY07.

Army Tactical Missile Systems (ATACMS) are the U.S. Army's primary 24/7, all-weather, surface-to-surface organic long range precision missiles employed by modular Fires Brigades supporting Brigade Combat Teams (BCT), Joint Special Operations Force (JSOF), and Joint Force combatant commanders. ATACMS missiles are used to shape the battlefield with destructive and suppressive Precision Strike fires out to a range of 300 KM against area and point targets in Open, Complex and Urban environments. To date, approximately 500 ATACMS missiles have been expended in support of Operation Enduring Freedom (OEF) / Operation Iraqi Freedom (OIF) in the Global War On Terror (GWOT). The current ATACMS Quick Reaction Unitary (QRU) replaces the Anti-Personnel Anti-Material (APAM) warhead used against area and point targets in Open Terrain with low collateral damage.
ATACMS Unitary is the next incremental development of the ATACMS QRU missile. This incremental development will validate the use of a tri-modal fuze system using the WDU-18 warhead. The WDU-18 warhead plus the addition of the tri-modal fuze system will provide an air-burst capability for area targets; impact detonation for surface targets; and delay-detonation for underground targets, multi-story buildings, or for targets with collateral damage adverse circumstances. This effort includes development and test activities and will extend missile service-life by approximately 10 years. In accordance with the Army Acquisition Executive's Termination letter dated 11 June 2007, the ATACMS development program has been directed to be brought to an orderly conclusion.

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B. Program Change Summary	FY 2007	FY 2008	FY 2009
Previous President's Budget (FY 2008/2009)	22554	1897	1537
Current BES/President's Budget (FY 2009)	19086	1885	1527
Total Adjustments	-3468	-12	-10
Congressional Program Reductions		-12	
Congressional Rescissions			
Congressional Increases			
Reprogrammings	-2834		
SBIR/STTR Transfer	-634		
Adjustments to Budget Years			-10

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
7 - Operational system development	**0203802A - Other Missile Product Improvement Programs**	**781**

COST (In Thousands)	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
781 Hellfire UAV	7457	1885	1527						10869

A. Mission Description and Budget Item Justification: The Laser HELLFIRE II missile requires replacement of the gyro and software modification to facilitate deployment from high altitudes and increased engagement geometries to defeat a broad target set ranging from heavy armor to urban structures. The missile will also be backwards compatible with current rotary wing platforms. The summary activities of the project are: a) replace the missile altitude gyro with an Inertial Measurement Unit (IMU), b) develop a modified digital communication link between the missile and the launcher/platform required to perform Unmanned Aircraft Systems (UAS) functions, c) modify autopilot algorithms and associated software to take advantage of the enhanced engagement envelope offered by the IMU, and d) fully develop, test, and qualify the hardware and software for materiel release for Army fixed and rotary wing platforms. Modifications will be made to both the current AGM-114K or AGM-114K-2(shaped charge) and N (blast fragmentation) model missiles and result in an AGM-114 P+ configuration. These missiles will be designated the P-4A (shaped charge warhead, with sleeve) and N-4 (metal augmenting charge warhead) configurations.

Accomplishments/Planned Program:	FY 2007	FY 2008	FY 2009
Define and develop system requirements and preliminary design.	3269	224	113
Develop test plans, test support equipment and testing.	2272	1357	1171
Perform government engineering support	1916	251	243
Small Business Innovative Research/Small Business Technology Transfer Programs (SBIR/STTR)		53	
Total	7457	1885	1527

B. Other Program Funding Summary	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
C70100 Laser HELLFIRE Missile (Basic/IHW/HFII)		45689	48629	31721	32710				158749

Comment:

C. Acquisition Strategy The HELLFIRE AGM-114 P+ configuration is an in-house development effort that "leverages" previous experience associated with integration of HELLFIRE on the Air Force Predator Unmanned Aerial Vehicle (UAV) and the current Warrior System Design and Development effort (reviews, testing, and documentation). The end result of the missile modification/integration effort will be an Engineering Change Proposal (ECP) defining the hardware and software changes to be incorporated into production of the missiles for the Warrior UAS and rotary wing platforms.

ARMY RDT&E COST ANALYSIS (R3)

February 2008

BUDGET ACTIVITY
7 - Operational system development

PE NUMBER AND TITLE
0203802A - Other Missile Product Improvement Programs

PROJECT
781

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Engineering Services	CPFF	Longbow Limited Liability Company, Orlando, FL	2285								2285	
Support Contracts	Various	Various	1708	2759	1-4Q	224	1-3Q	113	1-3Q		4804	
Developmental Engineering	Various	Various	795	1917	1-4Q						2712	
Subtotal:			4788	4676		224		113			9801	

Remarks: Cost Plus Fixed Fee (CPFF)

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Test Support	Various	Various	2292	2272	1-4Q	1345	1-4Q	1171	1-4Q		7080	
Subtotal:			2292	2272		1345		1171			7080	

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost To Complete	Total Cost	Target Value of Contract
In-House Support	Various	Various	221	295	1-4Q	251	1-4Q	243	1-4Q		1010	
SBIR/STTR				214	2Q	65	2Q				279	
Subtotal:			221	509		316		243			1289	

ARMY RDT&E COST ANALYSIS (R3)

February 2008

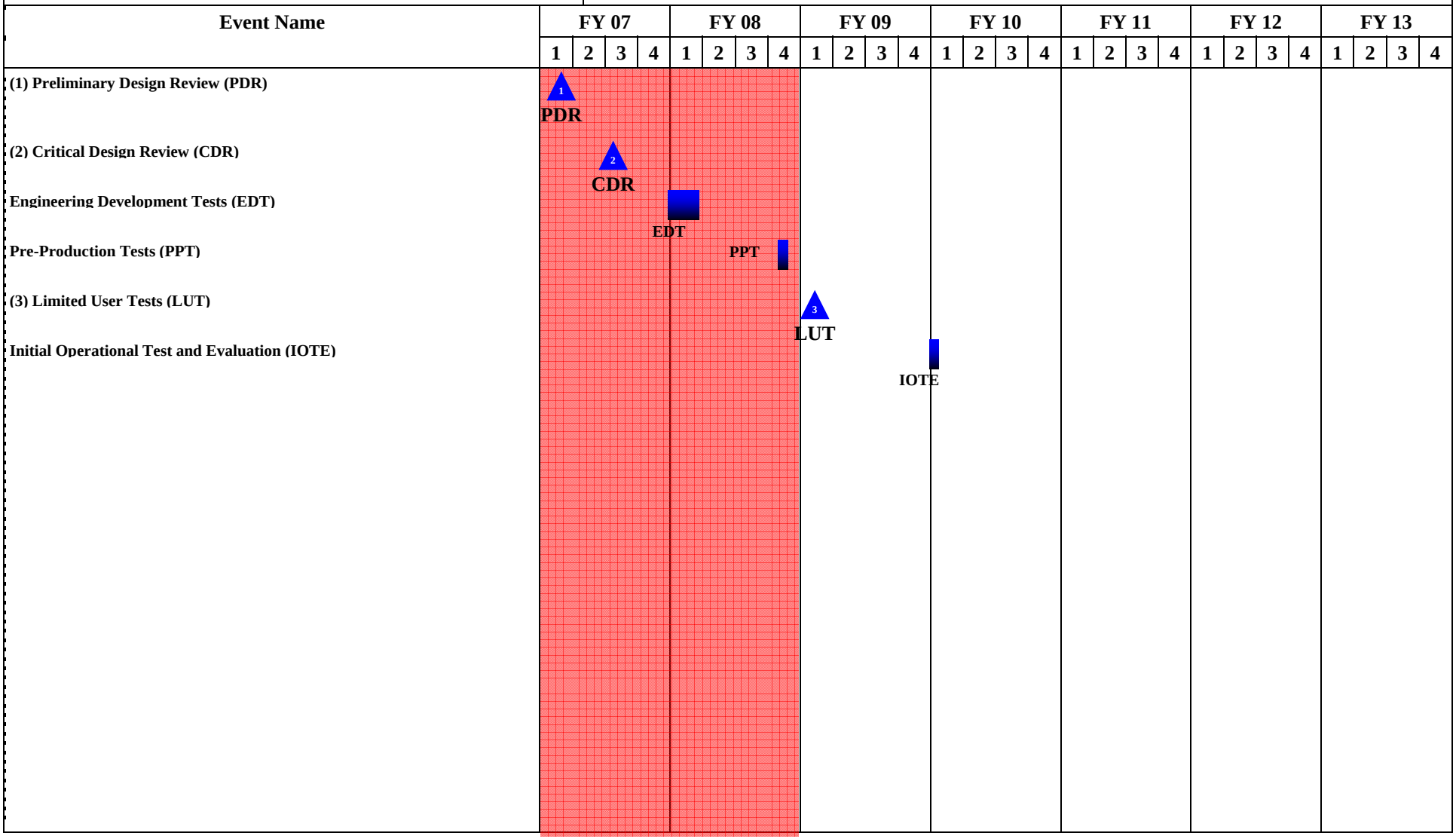
BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
7 - Operational system development	**0203802A - Other Missile Product Improvement Programs**	**781**

Project Total Cost:	**7301**	**7457**		**1885**		**1527**			**18170**	

Schedule Profile (R4 Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
7 - Operational system development	**0203802A - Other Missile Product Improvement Programs**	**781**



Schedule Detail (R4a Exhibit)

February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
7 - Operational system development	**0203802A - Other Missile Product Improvement Programs**	**781**

Schedule Detail	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Preliminary Design Review (PDR)	1Q						
Critical Design Review (CDR)	3Q						
Engineering Development Tests (EDT)		1Q					
Pre-Production Tests (PPT)		4Q					
Limited User Tests (LUT)			1Q				
Initial Operational Test and Evaluation (IOTE)				1Q			