ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2004

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603645A - ARMORED SYSTEM MODERNIZATION - ADV DEV**	**F48**

COST (In Thousands)	FY 2003 Actual	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total Cost
F48 NETWORKED FIRES SYSTEM TECHNOLOGY	127951	0	0	0	0	0	0	0	127951

A. Mission Description and Budget Item Justification: This project funds a risk reduction effort to develop Networked Fires Systems Technology command and control capability and develop early prototypes of the NetFires Block I Precision Attack Missile (PAM). In FY04, this effort transitions to PE 0604645A - Armored Systems Modernization (ASM) - Engineering Development. A major component of the Networked Fires System Technology is NetFires, a platform-independent launch unit with integrated, networked electronics and software capable of firing Precision Attack and Loitering Attack Missiles (PAM/LAM). The NetFires system consists of a family of platform independent, containerized guided munitions that are vertically launched directly from a container that is optimized for logistics, deployability, and lethality, and corresponding Command, Control, Communications, Computers, and Intelligence, Surveillance and Reconnaissance (C4ISR) capability to manage and employ these assets. The C4ISR portion of NetFires provides missile mission planning/management application, launcher C3 software, management and execution of munition-target pairing, loading targeting and flight information prior to launch to the missile, the ability to designate and employ PAM and LAM munitions, conduct in-flight retargeting and retargeting of in-flight missiles via the tactical information grid.

The NetFires Block I PAM leverages Common Missile technology into a vertical launch capability that will engage a wide spectrum of targets via a dual-mode Imaging Infrared (I2R) and Semi-Active Laser (SAL) seeker in fire and forget and laser-designated modes. The PAM is a guided missile with a multi-capable warhead effective against armor and soft targets for attacking Line of Sight (LOS), Non-Line of Sight (NLOS) and Beyond LOS targets. The PAM will receive targeting and flight information prior to launch via NetFires C4ISR and use an internal, jam-resistant guidance system to fly to the initial target location. Targeting updates can be sent to the missile in flight via NetFires C4ISR. The seeker will search the target area during the terminal portion of the flight and make final corrections to hit the target. The PAM will have a seeker that enables precision attack with or without the need for laser anointment of the target. PAM will support laser designated, laser anointed, and fire-and-forget modes of operation.

Networked Fires Systems Technology C4ISR provides responsive and precise Non-Line of Sight (NLOS) lethality against a dynamic enemy as well as autonomous clearance of fires for target acquisition, command, and control. The C4ISR will provide tactical and technical fire control including attack analysis, munition-target pairing, mission data development, mission planning, missile mission planning/management application, ballistics solutions, airspace management and deconfliction, protection against potential information warfare attacks, and a hand-held Special Operation Forces (SOF) missile planner/manager which leverages Pocket-sized Forward Entry Device (PFED) technology for planning, execution and management of Networked Fires attacks by pre-early entry warfighters. With the submission of the FY03 Amended President's Budget, Networked Fires System Technology was identified as a new start.

The system supports the Future Force Transition Path of the Transformation Campaign Plan (TCP).

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Exhibit R-2
Budget Item Justification

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)	February 2004

BUDGET ACTIVITY **4 - Advanced Component Development and Prototypes**	PE NUMBER AND TITLE **0603645A - ARMORED SYSTEM MODERNIZATION - ADV DEV**	PROJECT **F48**

Accomplishments/Planned Program	FY 2003	FY 2004	FY 2005
Network risk mitagation to provide early demonstration of the Command & Control software	41136	0	0
Conduct and obtain essential engineering / design efforts related to MGV Common items. These designs are required for risk mitigation	45919	0	0
NLOS-LS Transition DARPA Technologies	2847	0	0
NLOS-LS Trade studies and Risk mitigation	6100	0	0
NLOS-LS Define Increment I configuration	24397	0	0
NLOS-LS Perform Electronic Safe & Arm Device (ESAD) and warhead technology	4066	0	0
NLOS-LS Define platform & network integration requirements	3486	0	0
Totals	127951	0	0

B. Program Change Summary	FY 2003	FY 2004	FY 2005
Previous President's Budget (FY 2004)	114509	0	0
Current Budget (FY 2005 PB)	127951	0	0
Total Adjustments	13442	0	0
Congressional program reductions			
Congressional rescissions			
Congressional increases			
Reprogrammings	13442		
SBIR/STTR Transfer			
Adjustments to Budget Years			

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C. Other Program Funding Summary: Not applicable for this item.

D. Acquisition Strategy: Networked Fires Systems Technology Concept and Technology Development (CTD) effort will use existing prime contractors to complete CTD phase. The System Development and Demonstration (SDD) Missile and Launcher efforts will be competed between the CTD contractors. The C4ISR efforts will continue to use existing prime contractors to develop incremental software release synchronized and coordinated with missile and launcher efforts to minimize technical and schedule risk.

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Exhibit R-2
Budget Item Justification

ARMY RDT&E COST ANALYSIS(R3)

February 2004

BUDGET ACTIVITY
4 - Advanced Component Development and Prototypes

PE NUMBER AND TITLE
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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 and IN; Lockheed Martin, FL; Boeing, AL & CA: UDLP, MN	0	80493	1Q	0		0		0	80493	0
b . Support Contracts (Modeling & Simulation)	Various	PM Unit of Action Networks (UAN)	0	8700	1-3Q	0		0		0	8700	0
c . Development Engineering	Various	NSWC, VA; CERDEC, NJ; AMRDEC, AL; USMA, NY: DARPA: Mitre, VA	0	22708	1-4Q	0		0		0	22708	0
Subtotal:			0	111901		0		0		0	111901	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	TBD	Computer Sciences Corp, NJ; Booz Allen Hamilton, NJ and VA; and Various	0	2200	1-3Q	0		0		0	2200	0
Subtotal:			0	2200		0		0		0	2200	0

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Exhibit R-3
Cost Analysis

ARMY RDT&E COST ANALYSIS(R3)

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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 In-House	TBD	Unit of Action Mounted Maneuver Battle Lab, KY; ARDEC, NJ; ATEC, OK; Redstone Tech Test Center, AL	0	9200	1-3Q	0		0		0	9200	0
Subtotal:			0	9200		0		0		0	9200	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/Project Management	Various	PM Common Missile (CM), AL; PM IE, NJ; PM UAN, NJ	0	4650	1-4Q	0		0		0	4650	0
Subtotal:			0	4650		0		0		0	4650	0
Project Total Cost:			0	127951		0		0		0	127951	0

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Exhibit R-3
Cost Analysis

Schedule Detail (R4a Exhibit)

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Schedule Detail	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Contract Change Order (Risk Reduction System Definition)	1Q						
Preliminary Launcher C3 Interface Control Document for Request for Proposal	1Q						
Milestone B	4Q						

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Exhibit R-4a
Budget Item Justification