

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

May 2009

BUDGET ACTIVITY 5 - System Development and Demonstration		PE NUMBER AND TITLE 0604827A - Soldier Systems - Warrior Dem/Val			
COST (In Thousands)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	Cost to Complete	Total Cost
Total Program Element (PE) Cost	1545	17730	19786	Continuing	Continuing
S56 MOUNTED SOLDIER		17730	19786	Continuing	Continuing
S65 SOLDIER POWER	1545				1545

A. Mission Description and Budget Item Justification: This program element is composed of two projects: Project S56 for Mounted Warrior Soldier System (MWSS) and Project S57 for Land Warrior (LW). MWSS provides combat crewmembers and vehicle commanders in the Current and Future force with increased mission effectiveness on the network centric battlefield in the areas of lethality, command and control, communications, survivability, mobility, and sustainability. MWSS provides the dismounted and mounted combat crewmembers increased capabilities to conduct offensive and defensive operations by providing uninterrupted viewing of their platform and dismounted Soldiers. MWSS Helmet Mounted Display extends fire control information to vehicle crewmembers while they are standing up in, or viewing out of the hatch allowing them to maintain immediate situational awareness of their direct battle space, while simultaneously controlling inter-netted fires, vehicle, or dismounted Soldiers. Project S57 supports the LW concept, a first generation, modular, integrated fighting system focused on the needs of the individual infantry Soldier and Soldiers in support of the close fight. An Army Stryker Battalion was equipped with LW and MW for evaluation purposes in FY 2006. The LW and MW systems proved to be highly reliable and provided a significantly increased level of Battle Command Situational Awareness for dismounted forces and mounted crew members. As a result, the Battalion that was conducting the assessment decided to take the systems to war with them in the Spring of 2007.

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<u>B. Program Change Summary</u>	FY 2008	FY 2009	FY 2010
Previous President's Budget (FY 2009)	1589	15790	13901
Current BES/President's Budget (FY 2010)	1545	17730	19786
Total Adjustments	-44	1940	5885
Congressional Program Reductions		-52	
Congressional Rescissions			
Congressional Increases		1992	
Reprogrammings			
SBIR/STTR Transfer	-44		
Adjustments to Budget Years			5885

Change Summary Explanation: Funding - FY 2010 funding increase to support the Mounted Warrior program.

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COST (In Thousands)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	Cost to Complete	Total Cost
S56 MOUNTED SOLDIER		17730	19786	Continuing	Continuing

A. Mission Description and Budget Item Justification: Mounted Soldier (MS) provides combat crew members and vehicle commanders in the Current and Future Force with increased mission effectiveness on the network centric battlefield in the areas of lethality, command and control, communications, survivability, mobility and sustainability. The MS integrates the following subsystems into the vehicle platform: 1) Body Gear provides the soldier access to the vehicle intercom system while mounted or dismounted, and a cooling vest; 2) Head Gear provides the mounted soldier the ability to view the platform command and control system through a Soldier worn display; 3) Vehicle Interface Kit provides the Micro-Climate Cooling Unit, Vehicle Mounting Kits (A and B kits), Intercom interface and antennae; and 4) System Connectivity provides required cables, connectors and a cooling hose. The MS equips Combat Vehicle Crewman/Vehicle Commanders on Heavy Brigade Combat Team (HBCT), Stryker Brigade Combat Team (SBCT) and Future Combat Systems (FCS) platforms.

<u>Accomplishments/Planned Program:</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
FY09 and FY10: Developmental engineering, prototyping, manufacturing, and systems engineering, assessment, contractor testing and program management support for Mounted Soldier (MS) for use in Heavy and Stryker Brigades.		16599	16262
FY09 and FY10: Governmental Test and Evaluation activities		690	3524
FY09: Small Business Innovative Research/Small Business Technology Transfer (SBIR/SBTR)		441	
Total		17730	19786

<u>B. Other Program Funding Summary</u>	FY 2008	FY 2009	FY 2010	To Compl	Total Cost
MS OPA3 M80600000			1085		1085

Comment:

C. Acquisition Strategy The MS acquisition roadmap is comprised of two increments. The MS Increment I is documented in the Mounted Warrior Soldier System (MWSS) Capability Production Document (CPD) and was fielded to the 4/9 IN BN of the 4th SBCT during FY07/08 to maintain tethered voice communications, tethered access to host platform displays, sensors, and sights via a tethered helmet mounted display (HMD). The MS Increment II is documented in the Mounted Soldier System (MSS) Capability Development Document (CDD). Increment II implements a strategy of time-phased development driven by technology maturity, vehicle availability, and user prioritization. Increment II adds wireless voice communications and Micro-Climate cooling. The acquisition approach is centered around vehicle kit development and integration since the planned MS subsystems are using relatively mature technology. The MS program takes advantage of components available from other Government agencies, and

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Commercial-Off-the-Shelf (COTS) components and technologies as available.

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BUDGET ACTIVITY			PE NUMBER AND TITLE							PROJECT		
5 - System Development and Demonstration			0604827A - Soldier Systems - Warrior Dem/Val							S56		
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Develop and Engineer Mounted Soldier System Wireless Comms	FFP	Thales Communications, Inc., Clarksburg, MD				4187	3Q	3678	1-4Q		7865	
Develop and Engineer Mounted Soldier System Microclimate Cooling	FFP	TBD				3320	3Q	3822	1-4Q		7142	
Develop and Engineer Mounted Soldier System Display	FFP	Rockwell Collins, Carlsbad, CA				2044	2Q	3000	1-4Q		5044	
Subtotal:						9551		10500			20051	
II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Mounted Soldier Support	OGA, MIPR	Various				3266		3178	1-4Q		6444	
Subtotal:						3266		3178			6444	
III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Various Testing Organizations	OGA, MIPR	ATEC, TTC/YPG/DTC/EPG/ARL-SLAD, etc.	2000			690	1-4Q	3524	1-4Q		9782	
Subtotal:			2000			690		3524			9782	
IV. Management Services	Contract	Performing Activity &	Total	FY 2008	FY 2008	FY 2009	FY 2009	FY 2010	FY 2010	Cost To	Total	Target

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	Method & Type	Location	PYs Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Complete	Cost	Value of Contract
PM Soldier Warrior oversight of MS program	In-House/Task Order	PM Soldier Warrior, Ft. Belvoir, VA				3782	1-4Q	2584	1-4Q		6366	
SBIR/SBTRR						441	1Q				441	
Subtotal:						4223		2584			6807	
Project Total Cost:			2000			17730		19786			43084	

Schedule Profile (R4 Exhibit)

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Event Name	FY 08				FY 09				FY 10				FY 11				FY 12				FY 13				FY 14				FY 15			
	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	1	2	3	4
MWSS Increment I - Deployed with 4/9 IN BN	MS Increment I - Deployed with 4/9 IN BN																															
(1) MS Increment II - Milestone B	MS Increment II - Milestone B Decision																															
MS Increment II - EMD HBCT	MS Increment II - EMD HBCT																															
(2) MS Increment II - Milestone C	MS Increment II - Milestone C Decision																															
MS Increment II - LRIP HBCT	MS Increment II - LRIP HBCT																															
Independent Operational Test and Evaluation (IOTE)	IOTE																															
MS Increment II - Production HBCT	MS Increment II - Production HBCT																															
MS Increment II - EMD SBCT	MS Increment II - EMD SBCT																															
MS Increment II - EMD FCS	MS Increment II - EMD FCS																															

Schedule Detail (R4a Exhibit)

May 2009

BUDGET ACTIVITY		PE NUMBER AND TITLE						PROJECT	
5 - System Development and Demonstration		0604827A - Soldier Systems - Warrior Dem/Val						S56	
<u>Schedule Detail</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	
MWSS Increment I - Deployed with 4/9 IN BN	1Q - 4Q								
MS Increment II - Milestone B	1Q								
MS Increment II - EMD HBCT		1Q - 4Q	1Q - 3Q						
MS Increment II - Milestone C			4Q						
MS Increment II - LRIP HBCT			4Q	1Q - 4Q	1Q - 2Q				
Independent Operational Test and Evaluation (IOTE)				4Q	1Q				
MS Increment II - Production HBCT					3Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	
MS Increment II - EMD SBCT				1Q - 4Q	1Q - 4Q				
MS Increment II - EMD FCS						2Q - 4Q	1Q - 4Q	1Q - 4Q	

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COST (In Thousands)	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate	Cost to Complete	Total Cost
S65 SOLDIER POWER	1545				1545

A. Mission Description and Budget Item Justification: Congressional adds in FY08 and FY09 support the M-25 Defense Acquisition Challenge Program Fuel Cell by focusing on solutions that reduce the M-25 system weight and complexity, and increase energy density to accomplish the most lightweight and compact power source possible. Soldier Fuel Cells will provide more power in a smaller, lighter weight package compared to batteries thereby lightening the Soldiers' carried load.

\$2 Million should be reflected in FY09. This funding has been received by PEO Soldier.

<u>Accomplishments/Planned Program:</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
FY08 and FY09: Congressional adds are combined to provide developmental and system improvement efforts to the M-25 Soldier Fuel Cell System.	1545		
FY09: Small Business Innovative Research/Small business Technology Transfer (SBIR/SBTTR)			
Total	1545		

B. Other Program Funding Summary Not applicable for this item.

C. Acquisition Strategy Not applicable for this item.

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5 - System Development and Demonstration			0604827A - Soldier Systems - Warrior Dem/Val							S65		
I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Development and System Improvements to M-25	TBD	TBD		1545	4Q		3Q				1545	
SBIR/SBTRR							1Q					
Subtotal:				1545							1545	
II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 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 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	FY 2010 Cost	FY 2010 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												
Project Total Cost:				1545							1545	