

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)							February 2006		
BUDGET ACTIVITY 5 - System Development and Demonstration			PE NUMBER AND TITLE 0604854A - Artillery Systems - EMD						
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
Total Program Element (PE) Cost	12016	5397	1650	6009	5616	5778	0	0	99068
509 LIGHTWEIGHT 155M HOWITZER	8397	667	0	6009	5616	5778	0	0	82295
516 PALADIN/FAASV	3619	4730	1650	0	0	0	0	0	16773
<p><u>A. Mission Description and Budget Item Justification:</u> This program element supports the Joint Light Weight 155mm Howitzer (LW155) and the Paladin/FAASV Improvement programs.</p> <p>The LW155, a joint program with the Marine Corps, provides the replacement for the current 1970's vintage M198, 155mm Towed Howitzer. The LW155 provides significant improvement in strategic and tactical mobility over the M198. The Army portion of the joint development is the Towed Artillery Digitization (TAD). TAD is the digital fire control system for the LW155. TAD provides increased accuracy, survivability, and lethality for Army and USMC 155mm Towed Artillery. The LW155 will be the first towed platform capable of firing the Excalibur precision munition, which will provide precision strike capability out to ranges of 40 kilometers with 10 meter accuracy.</p> <p>The Paladin/FAASV project integrates several system improvements that provide for: stowage and automated dispensing of M231/M232, Modular Artillery Charge System (MACS) that is displacing the current propelling charges; the Graphical User Interface (GUI) software; the Defense Advanced GPS Receiver (DAGR); and upgrading components of the Paladin Digital Fire Control System (PDFCS) to avoid obsolescence, as well as develop and integrate XM982 Extended Range Projectile requirements in the PDFCS. In addition, other system improvements include the battlefield digitization trainer, the direct drive generator, and development of the Paladin Operations Center Vehicle (Pal OCV). The system improvements provide significantly improved mission effectiveness, increased reliability, maintainability, supportability, and Battle Command on-the-move, as well as reduced life cycle costs.</p>									

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2a Exhibit)								February 2006		
BUDGET ACTIVITY			PE NUMBER AND TITLE					PROJECT		
5 - System Development and Demonstration			0604854A - Artillery Systems - EMD					516		
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
516	PALADIN/FAASV	3619	4730	1650	0	0	0	0	0	16773
<p>A. Mission Description and Budget Item Justification: The Paladin/Field Artillery Ammunition Support Vehicle (FAASV) project allows for integration of several system improvements which will provide for: development of Battlefield Digitization Trainer software, and development and integration of the EXCALIBUR (XM982) extended Range Projectile requirements into the Paladin Digital Fire Control System (PDFCS). These system improvements provide significantly improved mission effectiveness, increased reliability, maintainability and supportability, as well as reduced life cycle costs and obsolescence (e.g. Battlefield Digitization Trainer software development will modernize the training system to match the current fielded vehicle's fire control system, and Integration of EXCALIBUR (XM982) requirements into the PDFCS allows the Paladin to accept EXCALIBUR (XM982) fire missions.)</p>										
Accomplishments/Planned Program							<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	
Develop and integrate the EXCALIBUR (XM982) Extended Range Projectile requirements into the Paladin Digital Fire Control System							2800	4319	1544	
Program management of Paladin/FAASV program							221	41	106	
Research and investigate Power Management requirements.							0	370	0	
Develop Battlefield Digitization Trainer software which combines the current Paladin Fire Control PC trainer with the Force XX1 Battle Command Brigade and Below (FBCB2) Digitization trainer. This combined package will allow for realistic classroom training for the First Digitized Corps and the Counter Attack Corps.							598	0	0	
Total							3619	4730	1650	
B. Other Program Funding Summary		FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	To Compl	Total Cost
PA, WTCV, GA0400 Paladin		18859	14603	28714	33558	44087	26704	17283	43800	227608
PA, WTCV, GA8010 FAASV PIP		6766	6353	0	0	0	0	0	0	13119
OMA, FAASV Recap, MDEP RR17		13960	15090	0	0	0	0	0	0	43298
OMA, FAASV SDO, MDEP RR17		149	150	0	0	0	0	0	0	620
<p>C. Acquisition Strategy The Paladin/FAASV project will leverage both Government and Contractor capabilities to accomplish the development of the Paladin/FAASV system improvement projects. Government in-house engineering will perform some component level design and system integration. Final System Level Testing will be performed by</p>										

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<p>Other Government Agencies (OGA). Competitive contracts will be used for many of the component level design and hardware fabrication. To the extent possible, maximum use of existing commercial off-the-shelf hardware and software will be utilized.</p>		

ARMY RDT&E COST ANALYSIS (R3)										February 2006		
BUDGET ACTIVITY				PE NUMBER AND TITLE						PROJECT		
5 - System Development and Demonstration				0604854A - Artillery Systems - EMD						516		
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
Component Design and Software Development	STS/CPFF	Northrop Grumman, Carson, CA	4825	202	3Q	879	2Q	344	1Q	0	6250	6250
System Integration	STS/CPFF	BAE Systems, York, Pa	4304	0		3000	2Q	0		0	7304	7304
TDP Development	MIPR	Other Gov't Agencies	452	0		0		0		0	452	452
Software Development & System Integration	MIPR	TACOM-ARDEC, Picatinny, NJ	0	3196	2Q	440	2Q	500	1Q	0	4136	4136
Misc Other Gov't Agencies	MIPR	Other Gov't Agencies	0	0		0		0		0	0	0
Generator Power Management	STS/CPFF	BAE Systems, York, PA	0	0		370	3Q	0		0	370	370
Subtotal:			9581	3398		4689		844		0	18512	18512
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
Logistics	MIPR	TACOM-ACALA, Moline, IL	229	0		0		0		0	229	370
Subtotal:			229	0		0		0		0	229	370
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
Component Level Testing	MIPR	TACOM-ARDEC, Picatinny, NJ	953	0		0		0		0	953	1158
System Level Testing	MIPR	Various OGAs	930	0		0		700	1Q	0	1630	4022
Subtotal:			1883	0		0		700		0	2583	5180

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BUDGET ACTIVITY 5 - System Development and Demonstration				PE NUMBER AND TITLE 0604854A - Artillery Systems - EMD									PROJECT 516	
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		
PMO Support	NA	PM Paladin/FAASV, Picatinny, NJ	627	221	1Q	41	2Q	106	1Q	0	995	995		
Subtotal:			627	221		41		106		0	995	995		
Project Total Cost:			12320	3619		4730		1650		0	22319	25057		

Schedule Profile (R4 Exhibit)																		February 2006																	
BUDGET ACTIVITY								PE NUMBER AND TITLE																		PROJECT									
5 - System Development and Demonstration								0604854A - Artillery Systems - EMD																		516									
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
System Integration & Eng Support - Paladin Battlefield Digitization Trainer																																			
Research & Investigate Power Management Requirements																																			
Develop & Integrate Excalibur Req's into Paladin Digital Fire Control Sys																																			
Testing of Excalibur Requirements in Paladin Digital Fire Control Sys																																			

Schedule Detail (R4a Exhibit)						February 2006	
BUDGET ACTIVITY 5 - System Development and Demonstration			PE NUMBER AND TITLE 0604854A - Artillery Systems - EMD				PROJECT 516
<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>
Award OGA for sys integration of Paladin Battlefield Digitization Trainer and Excalibur SW	4Q						
Perform sys integr & engr support of the Paladin Battlefield Digitization Trainer & Excalibur SW	4Q	1-2Q					
Award OGA for Software Dev of XM982 requirements into the Paladin Digital Fire Control System	2Q						
Award Contract to Develop and Integrate the XM982 rqmts into the Paladin Digital Fire Control Sys	3Q						
Perform Development and Integration of XM982 requirements into the Paladin Digital Fire Control Sys.	2-4Q	1-2Q					
Award OGA for Software Dev of XM982 rqmts into the Paladin Digital Fire Control System.		2Q					
Award Contract to Develop and Integrate XM982 rqmts into Paladin Digital Fire Control System.		2Q					
Perform Development and Integration of XM982 reqmts into Paladin Digital Fire Control System.		2-4Q	1Q				
Award OGA for Software Integration of XM982 requirements in the Paladin Digital Fire Control System.			1Q				
Award Contract for Integration of XM982 rqmts into the Paladin Digital Fire Control System.			1Q				
Perform Integration of XM982 rqmts into the Paladin Digital Fire Control System.			1-2Q				
Award OGA for Testing of XM982 rqmts in the Paladin Digital Fire Control System.			1Q				
Perform Testing of XM982 rqmts in the Paladin Digital Fire Control System.			1-2Q				
Award contract to research & investigate Power Management Requirements.		3Q					
Perform reserach & investigate Power Management Requirements.		2-4Q	1-2Q				