

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Army									DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 7: Operational Systems Development				R-1 ITEM NOMENCLATURE PE 0203758A: Digitization							
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	7.835	10.636	6.329	0.000	6.329	8.328	9.919	9.181	9.285	Continuing	Continuing
374: HOR BATTLEFLD DIGITIZN	7.835	10.636	6.329	0.000	6.329	8.328	9.919	9.181	9.285	Continuing	Continuing
A. Mission Description and Budget Item Justification											
Horizontal Battlefield Digitization is a strategy that allows warfighters, from the individual soldier and platform to echelons above corps, to share critical situation awareness (SA) and command and control (C2) information. It conducts analysis and evaluation of new information technologies, concepts, and applications of integrated management activities to meet the dynamic Army acquisition technology requirements. The strategy applies digital information technologies to acquire exchange and employ data throughout the operational environment, providing a clear and accurate common operational picture for leaders at al levels. This timely sharing of information significantly improves the ability of commanders and leaders to quickly make decisions, synchronize forces and fires, and increase the operational tempo. Digitization is a means of realizing a fully integrated C2 capability to the platoon level, including interoperability links with joint and multi-national forces. The major efforts included in the program element are: 1) Integration and synchronization of the Army's interoperability efforts, coordination of interoperability efforts between joint and multi-national forces, and the synchronization of combat material and training efforts to develop Army information technologies; 2) Systems engineering and integration of hardware and software interfaces between and across the warfighting functions and across multiple Program Executive Offices, providing System of System (SOS) capabilities that satisfy warfighter requirements and enable the execution of mission operations by providing one Common Operational Picture (COP)/Common Tactical Picture. 3) Oversee and support synchronization of LandWarNet Battle Command capabilities and ensure interoperability across the current and future force. 4) Support fielding of integrated systems to Active and Reserve Components (USARNG and USAR) in accordance with Army Force Generation (ARFORGEN). 5) Supports integration and enhancements to Army Equipping Enterprise System (AE2S) software for the single program language, single platform system that incorporates Force Development Investment Information System (FDIIS), Continuous Early Validation (CEaVa), COP and Army Flow Model(AFM).											

UNCLASSIFIED

R-1 Line Item #161

Page 1 of 11

551 of 897

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Army				DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 7: Operational Systems Development		R-1 ITEM NOMENCLATURE PE 0203758A: Digitization			
B. Program Change Summary (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Previous President's Budget	9.502	10.692	7.074	0.000	7.074
Current President's Budget	7.835	10.636	6.329	0.000	6.329
Total Adjustments	-1.667	-0.056	-0.745	0.000	-0.745
• Congressional General Reductions		0.000			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Adjustments 1	-1.667	-0.056	-0.745	0.000	-0.745
Change Summary Explanation					
Change Summary Explanation: Funding - FY 09: Funding decreased by 1400 to support FUZE Technology.FY 10: Funding increased to support AE2S in Horizontal Battlefield Digitization.FY 11: OSD identified decrement based on DFAS disbursement reports.					

UNCLASSIFIED

R-1 Line Item #161

Page 2 of 11

552 of 897

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 7: <i>Operational Systems Development</i>				R-1 ITEM NOMENCLATURE PE 0203758A: <i>Digitization</i>				PROJECT 374: <i>HOR BATTLEFLD DIGITIZN</i>			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
374: <i>HOR BATTLEFLD DIGITIZN</i>	7.835	10.636	6.329	0.000	6.329	8.328	9.919	9.181	9.285	Continuing	Continuing
Quantity of RDT&E Articles											
A. Mission Description and Budget Item Justification Horizontal Battlefield Digitization is a strategy that allows warfighters, from the individual soldier and platform to echelons above corps, to share critical situation awareness (SA) and command and control (C2) information. It conducts analysis and evaluation of new information technologies, concepts, and applications of integrated management activities to meet the dynamic Army acquisition technology requirements. The strategy applies digital information technologies to acquire exchange and employ data throughout the operational environment, providing a clear and accurate common operational picture for leaders at all levels. This timely sharing of information significantly improves the ability of commanders and leaders to quickly make decisions, synchronize forces and fires, and increase the operational tempo. Digitization is a means of realizing a fully integrated C2 capability to the platoon level, including interoperability links with joint and multi-national forces. The major efforts included in the program element are: 1) Integration and synchronization of the Army's interoperability efforts, coordination of interoperability efforts between joint and multi-national forces, and the synchronization of combat material and training efforts to develop Army information technologies; 2) Systems engineering and integration of hardware and software interfaces between and across the warfighting functions and across multiple Program Executive Offices, providing System of System (SOS) capabilities that satisfy warfighter requirements and enable the execution of mission operations by providing one Common Operational Picture (COP)/Common Tactical Picture. 3) Oversee and support synchronization of LandWarNet Battle Command capabilities and ensure interoperability across the current and future force. 4) Support fielding of integrated systems to Active and Reserve Components (USARNG and USAR) in accordance with Army Force Generation (ARFORGEN). 5) Supports integration and enhancements to Army Equipping Enterprise System (AE2S) software for the single program language, single platform system that incorporates Force Development Investment Information System (FDIIS), Continuous Early Validation (CEaVa), COP and Army Flow Model (AFM).											
B. Accomplishments/Planned Program (\$ in Millions)											
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
Program #1						1.694	1.987	1.352	0.000	1.352	
Conduct technical interoperability assessments, perform interoperability/integration analyses, analyze networked weapon system and Situational Awareness (SA), Command and Control (C2), Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR) systems compatibility, and assess technical and operational test plans, activities, and results.											

UNCLASSIFIED

R-1 Line Item #161

Page 3 of 11

553 of 897

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 7: Operational Systems Development	R-1 ITEM NOMENCLATURE PE 0203758A: Digitization	PROJECT 374: HOR BATTLEFLD DIGITIZN				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: FY 2009						
FY 2010 Plans: FY 2010						
FY 2011 Base Plans: FY 2011 Base						
FY 2011 OCO Plans: FY 2011 OCO						
Program #2 Integrate and synchronize interoperability across SA/C2/C4ISR programs in support of acquisition synchronization, testing, training, and fielding System of Systems capabilities to the Army Force. Continue application across current and future force.		1.910	2.194	1.941	0.000	1.941
FY 2009 Accomplishments: FY 2009						
FY 2010 Plans: FY 2010						
FY 2011 Base Plans: FY 2011 Base						
FY 2011 OCO Plans: FY 2011 OCO						

UNCLASSIFIED

R-1 Line Item #161

Page 4 of 11

554 of 897

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 7: Operational Systems Development		R-1 ITEM NOMENCLATURE PE 0203758A: Digitization		PROJECT 374: HOR BATTLEFLD DIGITIZN		
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #3 Support digitization technical integration with Active and Reserve Components both CONUS and OCONUS. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans: FY 2011 OCO		1.304	1.317	0.842	0.000	0.842
Program #4 Procures AE2S software integration and enhancements for the single program language, single platform system that incorporates FDIIS, CEaVa, COP and AFM FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base		0.000	2.000	1.000	0.000	1.000

UNCLASSIFIED

R-1 Line Item #161

Page 5 of 11

555 of 897

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 7: Operational Systems Development		R-1 ITEM NOMENCLATURE PE 0203758A: Digitization		PROJECT 374: HOR BATTLEFLD DIGITIZN		
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 OCO Plans: FY 2011 OCO						
Program #5 Support Joint and Coalition interoperability programs to improve integration and interoperability in accordance with Army Software Blocking Policy, Joint Planning Guidance, Coalition Specifications, Joint Capabilities Integration and Development System (JCIDS) requirements. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans: FY 2011 OCO		0.600	0.810	0.538	0.000	0.538
Program #6 Manage cross-platform software and hardware development, testing, training, and fielding to ensure the coordinated interoperability for each Army Force unit rotation. FY 2009 Accomplishments: FY 2009		0.928	1.030	0.656	0.000	0.656

UNCLASSIFIED

R-1 Line Item #161

Page 6 of 11

556 of 897

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 7: Operational Systems Development	R-1 ITEM NOMENCLATURE PE 0203758A: Digitization	PROJECT 374: HOR BATTLEFLD DIGITIZN			
B. Accomplishments/Planned Program (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2010 Plans: FY 2010					
FY 2011 Base Plans: FY 2011 Base					
FY 2011 OCO Plans: FY 2011 OCO					
Program #7 Apply university academic and research resources to the integration of Army complex modeling, simulation, and training in support of modernized forces. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans: FY 2011 OCO	1.399	1.000	0.000	0.000	0.000
Program #8 Small Business Innovative Research/Small Business Technology Transfer Programs	0.000	0.298	0.000	0.000	0.000

UNCLASSIFIED

R-1 Line Item #161

Page 7 of 11

557 of 897

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 7: <i>Operational Systems Development</i>		R-1 ITEM NOMENCLATURE PE 0203758A: <i>Digitization</i>		PROJECT 374: <i>HOR BATTLEFLD DIGITIZN</i>	
B. Accomplishments/Planned Program (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2009 Accomplishments:</i> FY 2009					
<i>FY 2010 Plans:</i> FY 2010					
<i>FY 2011 Base Plans:</i> FY 2011 Base					
<i>FY 2011 OCO Plans:</i> FY 2011 OCO					
Accomplishments/Planned Programs Subtotals	7.835	10.636	6.329	0.000	6.329
C. Other Program Funding Summary (\$ in Millions) N/A					
D. Acquisition Strategy To validate/demonstrate concepts and requirements, near term efforts are focused on developing a seamless battlefield software architecture and digitized hardware systems to include: evaluation of the horizontal battlefield digitization resources for systems, acquisition, integration, and testing of digital capability across multiple command and control, communications, sensors, and weapons platforms. The result will be an integrated, synchronize capability designed to meet the near-term requirements of the Stryker Brigade Combat Teams and the Army Future Force. Also supports the Army's role in joint and multi-national digitization programs, battle command efforts and Joint Battlefield Situational Awareness.					
E. Performance Metrics Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.					

UNCLASSIFIED

R-1 Line Item #161

Page 8 of 11

558 of 897

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army											DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 7: <i>Operational Systems Development</i>				R-1 ITEM NOMENCLATURE PE 0203758A: <i>Digitization</i>				PROJECT 374: <i>HOR BATTLEFLD DIGITIZN</i>					
Product Development (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
System/Software Integration	C	Various Location could not be determined.	112.271	4.486		2.656		0.000		2.656	Continuing	Continuing	0
International Digitization	C	Various Location could not be determined.	11.001	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Technical Analysis	C	MITRE McLean, VA	12.956	2.194		1.941		0.000		1.941	Continuing	Continuing	0
Other Government Agencies	C	Various Location could not be determined.	6.522	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Single Integrated Ground Picture	C	Nothing entered for Activity and Location. Location could not be determined.	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Subtotal			142.750	6.680		4.597		0.000		4.597			0.000
Remarks													

UNCLASSIFIED

R-1 Line Item #161

Page 9 of 11

559 of 897

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army											DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 7: Operational Systems Development					R-1 ITEM NOMENCLATURE PE 0203758A: Digitization				PROJECT 374: HOR BATTLEFLD DIGITIZN					
Support (\$ in Millions)														
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Directorate of Integration Office Operations	C	Pentagon Arlington, VA	14.422	0.000		0.000		0.000		0.000	Continuing	Continuing	0	
System Eng. & Field Integration, Internet and graphics support.	C	Quantum Res International Pentagon & Arlington, VA, Ft. Monroe, VA, & Ft. H	10.058	0.956		0.732		0.000		0.732	Continuing	Continuing	0	
Software Integration and enhancements	C	SAIC Pentagon & Ft. Belvoir	0.000	2.000		1.000		0.000		1.000	Continuing	Continuing	0	
Subtotal			24.480	2.956		1.732		0.000		1.732			0.000	
Remarks														
Test and Evaluation (\$ in Millions)														
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Other Govt. Agencies	C	Various Location could not be determined.	5.062	0.000		0.000		0.000		0.000	Continuing	Continuing	0	
University XXI Initiatives	C	Univ. of Texas and Texas A&M	19.472	1.000		0.000		0.000		0.000	Continuing	Continuing	0	

UNCLASSIFIED

R-1 Line Item #161

Page 10 of 11

560 of 897

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army											DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 7: <i>Operational Systems Development</i>				R-1 ITEM NOMENCLATURE PE 0203758A: <i>Digitization</i>				PROJECT 374: <i>HOR BATTLEFLD DIGITIZN</i>					
Test and Evaluation (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
		Location could not be determined.											
Studies/Analyses	C	Pentagon Arlington, VA	2.116	0.000		0.000		0.000		0.000	Continuing	Continuing	0
DISM Battalion Test	C	Nothing entered for Activity and Location. Location could not be determined.	1.000	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Subtotal			27.650	1.000		0.000		0.000		0.000			0.000
Remarks Continue to fund University XXI efforts in FY10 as a stop gap in anticipation for congressional mark in FY11.													
			Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			194.880	10.636		6.329		0.000		6.329			0.000
Remarks													

UNCLASSIFIED

R-1 Line Item #161

Page 11 of 11

561 of 897