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Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Army	DATE: February 2012
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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>
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COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
Total Program Element	6.103	8.016	35.180	-	35.180	9.162	8.786	7.081	7.201	Continuing	Continuing
374: <i>HOR BATTLEFLD DIGITIZN</i>	6.103	8.016	35.180	-	35.180	9.162	8.786	7.081	7.201	Continuing	Continuing

Note

The Army will request prior approval reprogramming of the \$25M NIE funding into appropriate procurement accounts prior to execution.

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, and provides 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/SA capability to the platoon level, including interoperability links with joint and multi-national ground 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 Systems (SOS) capabilities that satisfy warfighter requirements and enable the execution of mission operations by providing one Common Operational Picture (COP)/Common Tactical Picture (CTP). 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) Support of the the Army Equipping Enterprise System (AE2S) integration of the Force Development Investment Information System (FDIIS), Army Flow Model (AFM), and the Continuing Early Validation (CEaVa) programs into a single integrated system. This supports the Army's Equipping Strategy Army Force Generation, ARFORGEN, and consolidates capabilities to gain efficiencies. IAW the National Defense Authorization Act 804 and OSD's report to congress, Army is poised to implement the "Agile Business Process" that will result in an iterative and incremental approach to software development and hardware/software capability integration. This process will improve effectiveness in the identification, assessment and acquisition of capability solutions for the Army Network. The \$25M FY13 Network Integrated Evaluation (NIE) budgeted in this PE will resource procurements of the material solutions that results from the FY12 NIE Cycle. The Army will request prior approval reprogramming of this funding into appropriate procurement accounts prior to execution.

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B. Program Change Summary (\$ in Millions)	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013 Base</u>	<u>FY 2013 OCO</u>	<u>FY 2013 Total</u>
Previous President's Budget	6.329	8.029	9.802	-	9.802
Current President's Budget	6.103	8.016	35.180	-	35.180
Total Adjustments	-0.226	-0.013	25.378	-	25.378
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.189	-			
• Adjustments to Budget Years	-0.037	-0.013	25.378	-	25.378

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COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
374: HOR BATTLEFLD DIGITIZN	6.103	8.016	35.180	-	35.180	9.162	8.786	7.081	7.201	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, and provides 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/SA capability to the platoon level, including interoperability links with joint and multi-national ground 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 Systems (SOS) integration capabilities that satisfy warfighter requirements and enable the execution of mission operations by providing one Common Operational Picture (COP)/Common Tactical Picture (CTP). 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) Support the Army Equipping Enterprise System (AE2S) integration of the Force Development Investment Information System (FDIIS), Army Flow Model (AFM) and the Continuous Early Validation (CEaVa) programs into a single integrated system. This supports the Army's Equipping Strategy, ARFORGEN, and consolidates capabilities to gain efficiencies. IAW the National Defense Authorization Act 804 and OSD's report to Congress, Army is poised to implement the "Agile Business Process" that will result in an iterative and incremental approach to software development and hardware/software capability integration. This process will improve effectiveness in the identification, assessment and acquisition of capability solutions for the Army Network. The \$25M Network Integrated Evaluation (NIE) funds budgeted in FY13 in this PE will resource procurements of the material solutions that results from the FY12 NIE Cycle. The Army will request prior approval reprogramming of this funding into appropriate procurement accounts prior to execution.											
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)								FY 2011	FY 2012	FY 2013	
Title: Interoperability Assessment								1.252	2.088	2.560	
								0	0		
Description: funds are to be used for the following efforts											
FY 2011 Accomplishments:											
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,											

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2011	FY 2012	FY 2013
Surveillance, and Reconnaissance (C4ISR) systems compatibility, and assess technical and operational test plans, activities, and results. FY 2012 Plans: 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. FY 2013 Plans: 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.				
Title: SA/C2/C4ISR Articles: Description: funds are to be used for the following efforts FY 2011 Accomplishments: 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. FY 2012 Plans: 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. FY 2013 Plans: 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.		1.815 0	2.085 0	2.560
Title: Ditization Technical Integration Articles: Description: funds are to be for the following efforts FY 2011 Accomplishments:		0.842 0	0.865 0	1.025

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2011	FY 2012	FY 2013
Support digitization technical integration with Active and Reserve Components both CONUS and OCONUS. FY 2012 Plans: Support digitization technical integration with Active and Reserve Components both CONUS and OCONUS. FY 2013 Plans: Support digitization technical integration with Active and Reserve Components both CONUS and OCONUS.				
Title: AE2S Software Description: funds are to be for the following efforts FY 2011 Accomplishments: Procures AE2S software integration and enhancements for the single program language, single platform system that incorporates FDIIS, CEaVa, COP and AFM FY 2012 Plans: Procures AE2S software integration and enhancements for the single program language, single platform system that incorporates FDIIS, CEaVa, COP and AFM FY 2013 Plans: Procures AE2S software integration and enhancements for the single program language, single platform system that incorporates FDIIS, CEaVa, COP and AFM		Articles: 1.000 0	1.000 0	1.000
Title: Joint & Coalition Interoperability Description: funds the following efforts FY 2011 Accomplishments: 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 2012 Plans:		Articles: 0.538 0	0.738 0	1.255

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2011	FY 2012	FY 2013
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 2013 Plans: 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.				
Title: Academic Research Articles: Description: funds to be used for the following effort FY 2012 Plans: Apply university academic and research resources to the integration of Army complex modeling, simulation, and training in support of modernized forces. FY 2013 Plans: Apply university academic and research resources to the integration of Army complex modeling, simulation, and training in support of modernized forces.		-	0.500 0	0.570
Title: Cross-platform development Articles: Description: funds to be used for the following efforts FY 2011 Accomplishments: Manage cross-platform software and hardware development, testing, training, and fielding to ensure the coordinated interoperability for each Army Force unit rotation. FY 2012 Plans: Manage cross-platform software and hardware development, testing, training, and fielding to ensure the coordinated interoperability for each Army Force unit rotation. FY 2013 Plans:		0.656 0	0.740 0	1.210

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2011	FY 2012
Manage cross-platform software and hardware development, testing, training, and fielding to ensure the coordinated interoperability for each Army Force unit rotation.			
Title: Network Integrated Evaluation (NIE) Description: Funds are available for Congress to place in appropriate procurement accounts prior to execution in FY13. FY 2013 Plans: Implement agile business solutions through the Network Integrated Evaluation (NIE) cycle in FY12 that address Army system shortcomings and bring efficiency, effectiveness and affordability to an otherwise burdensome process. This process enables the Army to be more responsive to Soldiers' current needs and avoids long-term production commitments to potentially obsolete technology. Material solutions to fill capability gaps from the FY12 cycle will be ready for procurement in FY13. The Army will request prior approval reprogramming of this funding into appropriate procurement accounts prior to execution.		-	-
			25.000
Accomplishments/Planned Programs Subtotals		6.103	8.016
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, synchronized 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.			