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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2012 Army	<b>DATE:</b> February 2011
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<b>APPROPRIATION/BUDGET ACTIVITY</b>				<b>R-1 ITEM NOMENCLATURE</b>							
2040: <i>Research, Development, Test &amp; Evaluation, Army</i> BA 7: <i>Operational Systems Development</i>				PE 0203758A: <i>Digitization</i>							
<b>COST (\$ in Millions)</b>	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012 Base</b>	<b>FY 2012 OCO</b>	<b>FY 2012 Total</b>	<b>FY 2013</b>	<b>FY 2014</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
Total Program Element	8.218	6.329	8.029	-	8.029	9.802	9.060	8.684	6.999	Continuing	Continuing
374: <i>HOR BATTLEFLD DIGITIZN</i>	8.218	6.329	8.029	-	8.029	9.802	9.060	8.684	6.999	Continuing	Continuing

**Note**

Change Summary Explanation:

FY 10: Funding decreased by 2,418K; reprogramming to support Underbody Blast (1,317K) and CAA's FLOIS (738K) and SBIR/STTR transfer (363K).

FY 12: Funding decreased for adjustments to Budget Years(299K).

**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.

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<b>B. Program Change Summary (\$ in Millions)</b>	<b><u>FY 2010</u></b>	<b><u>FY 2011</u></b>	<b><u>FY 2012 Base</u></b>	<b><u>FY 2012 OCO</u></b>	<b><u>FY 2012 Total</u></b>
Previous President's Budget	10.636	6.329	8.328	-	8.328
Current President's Budget	8.218	6.329	8.029	-	8.029
Total Adjustments	-2.418	-	-0.299	-	-0.299
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments 1	-2.418	-	-0.299	-	-0.299

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2012 Army								<b>DATE:</b> February 2011			
<b>APPROPRIATION/BUDGET ACTIVITY</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army</i> BA 7: <i>Operational Systems Development</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0203758A: <i>Digitization</i>				<b>PROJECT</b> 374: <i>HOR BATTLEFLD DIGITIZN</i>			
<b>COST (\$ in Millions)</b>	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012 Base</b>	<b>FY 2012 OCO</b>	<b>FY 2012 Total</b>	<b>FY 2013</b>	<b>FY 2014</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
374: <i>HOR BATTLEFLD DIGITIZN</i>	8.218	6.329	8.029	-	8.029	9.802	9.060	8.684	6.999	Continuing	Continuing
Quantity of RDT&E Articles											
<b>A. Mission Description and Budget Item Justification</b> 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.											
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>								<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012</b>	
<b>Title:</b> Interoperability Assessment								1.762	1.352	2.101	
<b>Articles:</b>								0	0		
<b>Description:</b> funds are to be used for the following efforts											
<b>FY 2010 Accomplishments:</b> 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.											
<b>FY 2011 Plans:</b>											

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Army		DATE: February 2011		
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 Programs (\$ in Millions, Article Quantities in Each)		FY 2010	FY 2011	FY 2012
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.  <b>FY 2012 Plans:</b> 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.				
<b>Title:</b> SA/C2/C4ISR  <b>Articles:</b>  <b>Description:</b> funds are to be used for the following efforts  <b>FY 2010 Accomplishments:</b> 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.  <b>FY 2011 Plans:</b> 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.  <b>FY 2012 Plans:</b> 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.		2.044 0	1.941 0	2.085
<b>Title:</b> Ditization Technical Integration  <b>Articles:</b>  <b>Description:</b> funds are to be for the following efforts  <b>FY 2010 Accomplishments:</b> Support digitization technical integration with Active and Reserve Components both CONUS and OCONUS.  <b>FY 2011 Plans:</b>		1.172 0	0.842 0	0.865

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2010	FY 2011	FY 2012
Support digitization technical integration with Active and Reserve Components both CONUS and OCONUS. <b>FY 2012 Plans:</b> Support digitization technical integration with Active and Reserve Components both CONUS and OCONUS.				
<b>Title:</b> AE2S Software  <b>Description:</b> funds are to be for the following efforts  <b>FY 2010 Accomplishments:</b> Procures AE2S software integration and enhancements for the single program language, single platform system that incorporates FDIIS, CEaVa, COP and AFM  <b>FY 2011 Plans:</b> Procures AE2S software integration and enhancements for the single program language, single platform system that incorporates FDIIS, CEaVa, COP and AFM  <b>FY 2012 Plans:</b> Procures AE2S software integration and enhancements for the single program language, single platform system that incorporates FDIIS, CEaVa, COP and AFM		<b>Articles:</b> 1.000 0	1.000 0	1.000
<b>Title:</b> Joint & Coalition Interoperability  <b>Description:</b> funds the following efforts  <b>FY 2010 Accomplishments:</b> 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.  <b>FY 2011 Plans:</b> 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.  <b>FY 2012 Plans:</b>		<b>Articles:</b> 0.410 0	0.538 0	0.738

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2010	FY 2011	FY 2012
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.				
<div>Title: Cross-platform development</div> <div>Articles:</div> <div>Description: funds to be used for the following efforts</div> <div>FY 2010 Accomplishments:</div> <div>Manage cross-platform software and hardware development, testing, training, and fielding to ensure the coordinated interoperability for each Army Force unit rotation.</div> <div>FY 2011 Plans:</div> <div>Manage cross-platform software and hardware development, testing, training, and fielding to ensure the coordinated interoperability for each Army Force unit rotation.</div> <div>FY 2012 Plans:</div> <div>Manage cross-platform software and hardware development, testing, training, and fielding to ensure the coordinated interoperability for each Army Force unit rotation.</div>		0.630 0	0.656 0	0.740
<div>Title: Academic Research</div> <div>Articles:</div> <div>Description: funds to be used for the following effort</div> <div>FY 2010 Accomplishments:</div> <div>Apply university academic and research resources to the integration of Army complex modeling, simulation, and training in support of modernized forces.</div> <div>FY 2012 Plans:</div> <div>Apply university academic and research resources to the integration of Army complex modeling, simulation, and training in support of modernized forces.</div>		1.200 0	-	0.500
Accomplishments/Planned Programs Subtotals		8.218	6.329	8.029

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**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.

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