Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Army											Date: May 2017	
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 7: *Operational Systems Development*						R-1 Program Element (Number/Name) PE 0203758A *I Digitization*						
COST ($ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	-	4.188	6.483	4.803	-	4.803	6.384	6.090	5.716	5.637	Continuing	Continuing
374: *HOR Battlefld Digitizn*	-	4.188	6.483	4.803	-	4.803	6.384	6.090	5.716	5.637	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. Digital information technologies to acquire, exchange, and employ data throughout the operational environment, are used to provide an operational picture for leaders. This timely sharing of information significantly improves the ability to quickly make decisions, synchronize forces and fires, and increase the operational tempo. The major efforts included in the program element are: 1) Integration and synchronization of the Army's interoperability efforts; between joint and multi-national forces, combat material, and training efforts. 2) Systems engineering and integration of hardware and software from a System of Systems (SOS) perspective. 3) Develop Army Equipping Enterprise System (AE2S) integration of the Force Development Investment Information System (FDIIS), Army Flow Model (AFM), and Force Development Knowledge Center (FDKC) programs into a single integrated system.

Digitization efforts are in support of the Army Equipping Strategy, National Defense Authorization Act 804, and OSD reports to Congress.

B. Program Change Summary ($ in Millions)

	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	4.361	6.483	6.328	-	6.328
Current President's Budget	4.188	6.483	4.803	-	4.803
Total Adjustments	-0.173	0.000	-1.525	-	-1.525
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.173	-			
• Adjustments to Budget Years	0.000	0.000	-1.525	-	-1.525

Change Summary Explanation

FY 2016 Funding was reduced by (.173) million and transferred to in support of SBIR/STTR.
FY 2018 reduction $1.525 million realigned to meet higher priorities.

Exhibit R-2A, RDT&E Project Justification: FY 2018 Army										Date: May 2017	

Appropriation/Budget Activity 2040 / 7				R-1 Program Element (Number/Name) PE 0203758A / Digitization					Project (Number/Name) 374 / HOR Battlefld Digitizn		

COST ($ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
374: HOR Battlefld Digitizn	-	4.188	6.483	4.803	-	4.803	6.384	6.090	5.716	5.637	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project funds the Army Equipping Enterprise System (AE2S) continued development and integration of the Force Development Investment Information System (FDIIS), Army Flow Model (AFM), and the Force Development Knowledge Center (FDKC) into an improved, single system. Continued development of the suite of the AE2S applications is necessary to create and improve workflow efficiencies amongst various organizations and data base systems, Active and Reserve Component equipment transparency reporting requirements, and Active and Reserve equipment fielding plans to the Solider according to the Army Force Generation (ARFORGEN). Additionally, this program element funds various Federally Funded Research and Development Center (FFRDC) projects that provide system engineering expertise to provide unbiased advice, formulate course of actions, analyze programs and make technical support and process recommendations to create efficiencies and improve systems. Specifically, these FFRDC projects support Army Mission Command and network architecture (operational and systems) development, technical and policy document review in support of planning and acquisition, network and joint integration and interoperability evaluations and assessments, program and database analysis, independent technical analysis, special studies, and acquisition process improvement. In accordance with the National Defense Authorization Act (NDAA) 804 and support of the Office of the Secretary of Defense's (OSD) report to Congress, the Army is poised to implement an 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

B. Accomplishments/Planned Programs ($ in Millions)	FY 2016	FY 2017	FY 2018
Title: Interoperability and Integration	0.349	1.054	0.824
Description: Funds are to be used for the following efforts **FY 2016 Accomplishments:** FFRDC contractor shall conduct independent analyses of Army, joint, and multinational interfaces, adherence to standards, implementation profiles and interoperability baselines **FY 2017 Plans:** FFRDC contractor shall conduct independent analyses of Army, joint, and multinational interfaces, adherence to standards, implementation profiles and interoperability baselines **FY 2018 Plans:** FFRDC contractor shall conduct independent analyses of Army, joint, and multinational interfaces, adherence to standards, implementation profiles and interoperability baselines			
Title: Operational Capability Analysis and Evaluation	0.294	1.114	0.871
Description: Funds are to be used for the following efforts			

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Appropriation/Budget Activity 2040 / 7	**R-1 Program Element (Number/Name)** PE 0203758A / Digitization	**Project (Number/Name)** 374 / HOR Battlefld Digitizn

B. Accomplishments/Planned Programs ($ in Millions)	FY 2016	FY 2017	FY 2018
FY 2016 Accomplishments: FFRDC contractor shall conduct iterative capability analyses and assessments consistent with CJCSI 3170 (JCIDS) and 6212 (Net Readiness) to ensure Army and joint program technical and operational requirements are consistent. Efforts support army and joint initiatives. *FY 2017 Plans:* FFRDC contractor shall conduct iterative capability analyses and assessments consistent with CJCSI 3170 (JCIDS) and 6212 (Net Readiness) to ensure Army and joint program technical and operational requirements are consistent. Efforts support army and joint initiatives. *FY 2018 Plans:* FFRDC contractor shall conduct iterative capability analyses and assessments consistent with CJCSI 3170 (JCIDS) and 6212 (Net Readiness) to ensure Army and joint program technical and operational requirements are consistent. Efforts support army and joint initiatives.			
Title: Systems Architecture Development *Description:* Funds are to be used for the following efforts *FY 2016 Accomplishments:* FFRDC contractor shall conduct broad concept studies with emphasis on interoperability and joint/coalition operations. *FY 2017 Plans:* FFRDC contractor shall conduct broad concept studies with emphasis on interoperability and joint/coalition operations. *FY 2018 Plans:* FFRDC contractor shall conduct broad concept studies with emphasis on interoperability and joint/coalition operations.	0.404	0.910	0.711
Title: AE2S Software *Description:* Procures AE2S software integration and enhancements for the single program language, single platform system that incorporates FDIIS, CEaVa, COP and AFM. *FY 2016 Accomplishments:* Integrate existing code-base for FDIIS, AFM and FDKC to reduce overall cost and maintenance footprint and incorporate the development of new applications to satisfy Long-Range Investment Requirements Analysis (LIRA), Sustainment Program Evaluation Group (SS PEG), and Equipping PEG (EE PEG) Manpower. *FY 2017 Plans:*	2.303	1.958	1.267

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Appropriation/Budget Activity 2040 I 7	**R-1 Program Element (Number/Name)** PE 0203758A I *Digitization*	**Project (Number/Name)** 374 I *HOR Battlefld Digitizn*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2016	FY 2017	FY 2018
Integrate existing code-base for FDIIS, AFM and FDKC to reduce overall cost and maintenance footprint and incorporate the development of new applications to satisfy Long-Range Investment Requirements Analysis (LIRA), Sustainment Program Evaluation Group (SS PEG), and Equipping PEG (EE PEG) Manpower. *FY 2018 Plans:* Integrate existing code-base for FDIIS, AFM and FDKC to reduce overall cost and maintenance footprint and incorporate the development of new applications to satisfy Long-Range Investment Requirements Analysis (LIRA), Sustainment Program Evaluation Group (SS PEG), and Equipping PEG (EE PEG) Manpower.			
Title: Technical Reviews and Technical Performance Analysis *Description:* Funds are to be used for the following efforts *FY 2016 Accomplishments:* FFRDC contractor shall provide technology maturity assessments and prepare technical recommendations in support of Army Transformation and specific technologies of interest to G8. Test and evaluate network systems and infrastructure modeling and simulations. *FY 2017 Plans:* FFRDC contractor shall provide technology maturity assessments and prepare technical recommendations in support of Army Transformation and specific technologies of interest to G8. Test and evaluate network systems and infrastructure modeling and simulations. *FY 2018 Plans:* FFRDC contractor shall provide technology maturity assessments and prepare technical recommendations in support of Army Transformation and specific technologies of interest to G8. Test and evaluate network systems and infrastructure modeling and simulations.	0.473	0.909	0.710
Title: Academic Research *Description:* Apply university academic and research resources to the integration of Army complex modeling, simulation, and training in support of modernized forces. *FY 2016 Accomplishments:* Apply university academic and research resources to the integration of Army complex modeling, simulation, and training in support of modernized forces. *FY 2017 Plans:*	0.365	0.538	0.420

Exhibit R-2A, **RDT&E Project Justification:** FY 2018 Army		**Date:** May 2017
Appropriation/Budget Activity 2040 *I* 7	**R-1 Program Element (Number/Name)** PE 0203758A *I Digitization*	**Project (Number/Name)** 374 *I HOR Battlefld Digitizn*

B. Accomplishments/Planned Programs ($ in Millions)	**FY 2016**	**FY 2017**	**FY 2018**
Will apply university academic and research resources to the integration of Army complex modeling, simulation, and training in support of modernized forces. *FY 2018 Plans:* Will apply university academic and research resources to the integration of Army complex modeling, simulation, and training in support of modernized forces.			
Accomplishments/Planned Programs Subtotals	4.188	6.483	4.803

C. Other Program Funding Summary ($ in Millions)
 N/A
Remarks

D. Acquisition Strategy

 The AE2S development will be done through either a competitive Cost Plus or Fixed Price Incentive contracts that will deliver capabilities in increments, recognizing up front the need for future improvements. The objective of the strategy is to develop and optimize system capabilities while reducing risk and streamlining business and engineering processes.

 FFRDC requirements will be accomplished by competitive contract.

 Other efforts will be accomplished by various contract methods and types.

E. Performance Metrics
 N/A