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 0303150A *I WWMCCS/Global Command and Control System*

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	-	6.810	4.718	10.475	-	10.475	4.554	5.465	14.261	15.509	Continuing	Continuing
C86: *Army Global C2 System*	-	6.810	0.467	6.028	-	6.028	0.000	0.000	0.000	0.000	0.000	13.305
EA5: *Strategic and Joint Mission Command*	-	0.000	4.251	4.447	-	4.447	4.554	5.465	14.261	15.509	Continuing	Continuing

A. Mission Description and Budget Item Justification

Global Command and Control System-Army (GCCS-A): This project is the Army component system that directly supports the implementation of the Global Command and Control System Family of Systems. GCCS-A provides automated command and control tools for Army Strategic and Operational Theater Commanders to enhance warfighter capabilities throughout the spectrum of conflict during joint and combined operations in support of National Security. The GCCS-A developed software systems dramatically improves the Army's ability to analyze courses of action; develop and manage Army Forces; and ensure feasibility of war plans. In accordance with Army Command Post Computing Environment and Joint Command and Control objectives, GCCS-A was re-architected away from a scalable process architecture based server - thick client architecture to a virtualized server - web client architecture hosted on Battle Command Common Services (BCCS)/Tactical Server Infrastructure (TSI) and Mission Command Workstation. GCCS-A strategic tools for readiness reporting have been modernized and replaced with the Defense Readiness Reporting System - Army (DRRS-A), a suite of web based applications for Army Readiness, Force Registration and Force Projection.

Army Joint and Strategic Command and Control (AJaSC2) is a modernization development effort for the Army's joint and strategic C2 capabilities. AJaSC2 provides the materiel solution in response to the Army Mission Command for Unified Action Capability Definition Package (AMCUA CDP). AJaSC2 enables Army operational headquarters to integrate with the Joint Force Commands and Unified Action Partners (UAP). AJaSC2 provides Army leaders: Joint Common Operating Picture (COP); Adaptive planning and execution capabilities for distributed, synchronous and asynchronous collaboration services to develop, revise, and execute their warfighting plans supported by theaterwide analytics; strategic Situational Awareness (SA) to coalition operations and other mission partners and Coordination and synchronization of Joint Execution Mission Management.

Fiscal Year 2018 Base funding in the amount of $0.316 million supports GCCS-A 4.3 software updates and Army Interoperability Certification (AIC) testing of the GCCS-A Bridge Effort in conjunction with Common Operating Environment. Certification testing ensures that GCCS-A Bridge Effort software is successfully configured as a virtual machine on BCCS/TSI and is interoperable with Army and Joint Mission Command Systems.

Fiscal Year 2018 base funding in the amount of $5.712 million will support the Army's capability for unit readiness reporting, unit registration and force planning and projection activities to enable Title 10 reporting to Congress. Specifically the funding will provide program and acquisition oversight, technical development and training support to enable the readiness and force projection capabilities.

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 0303150A I *WWMCCS/Global Command and Control System*		

B. Program Change Summary ($ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	7.034	4.718	4.710	-	4.710
Current President's Budget	6.810	4.718	10.475	-	10.475
Total Adjustments	-0.224	0.000	5.765	-	5.765
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.224	-			
• Adjustments to Budget Years	0.000	0.000	5.712	-	5.712
• Other Adjustments 12	0.000	0.000	0.053	-	0.053

Change Summary Explanation

Fiscal Year 2018 funding increase in the amount of $5.712 million will support the Army's capability for unit readiness reporting, unit registration and force planning and projection activities to enable Title 10 reporting to Congress. Specifically the funding will provide program and acquisition oversight, technical development and training support to enable the readiness and force projection capabilities. Increase in the amount of $.053 million reflects project EA5 pricing adjustments.

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 0303150A I WWMCCS/Global Command and Control System	Project (Number/Name) C86 I Army Global C2 System

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
C86: *Army Global C2 System*	-	6.810	0.467	6.028	-	6.028	0.000	0.000	0.000	0.000	0.000	13.305
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Global Command and Control System-Army (GCCS-A): This project is the Army component of the Global Command and Control System (GCCS) Family of Systems (FoS). GCCS-A provides automated command and control tools, including Force readiness, planning and movement, and situational awareness, for Army Strategic and Operational Theater commanders to enhance warfighter capabilities throughout the spectrum of conflict during Joint and combined operations in support of National Security. GCCS-A dramatically improves the Army's ability to analyze courses of action, develop and manage Army forces and execute war plans. GCCS-A links the GCCS-Joint Common Operating Picture with the Army Mission Command systems. In accordance with Army Command Post Computing Environment and Joint Command and Control objectives, GCCS-A will be re-architected away from a scalable process architecture based server - thick client architecture to a virtualized server - Battle Command Common Services (BCCS)/Tactical Server Infrastructure (TSI) and Mission Command Workstation.

Fiscal Year 2018 Base funding in the amount of $0.316 million supports GCCS-A 4.3 software updates and Army Interoperability Certification (AIC) testing of the GCCS-A Bridge Effort in conjunction with Common Operating Environment. Certification testing ensures that GCCS-A Bridge Effort software is successfully configured as a virtual machine on BCCS/TSI and is interoperable with Army and Joint Mission Command Systems.

Fiscal Year 2018 base funding in the amount of $5.712 million will support the Army's capability for unit readiness reporting, unit registration and force planning and projection activities to enable Title 10 reporting to Congress. Specifically the funding will provide program and acquisition oversight, technical development and training support to enable the readiness and force projection capabilities.

B. Accomplishments/Planned Programs ($ in Millions)

	FY 2016	FY 2017	FY 2018
Title: Software and System Engineering *Description:* Software and System Engineering for GCCS-A and DRRS-A Modernization *FY 2016 Accomplishments:* Software and System Engineering for GCCS-A. Successful completion of the follow-on operational test. *FY 2017 Plans:* Software and System Engineering modifications to existing GCCS-A version 4.3 baseline	2.932	0.180	-
Title: Synchronize with Joint C2 objective Architecture *Description:* Software ehancement efforts required to synchronize with Joint C2 objective Architecture	2.798	0.047	-

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 0303150A / *WWMCCS/Global Command and Control System*	**Project (Number/Name)** C86 / *Army Global C2 System*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2016	FY 2017	FY 2018
FY 2016 Accomplishments: Software enhancement efforts required to synchronize with COE/CPCE and Joint C2 objective Architecture *FY 2017 Plans:* Synchronize existing baseline with any COE standard modifications			
Title: Test and Evaluation *Description:* Test and Evaluation for GCCS-A *FY 2016 Accomplishments:* Test and Evaluation for GCCS-A. JITC/CTSF/SEC testing. *FY 2017 Plans:* Test and Evaluation for GCCS-A. CTSF and SEC testing/support. *FY 2018 Plans:* Test and Evaluation for GCCS-A. CTSF and SEC testing/support.	0.450	0.110	0.166
Title: Program Support and Management *Description:* Program management includes overall management of program execution, major events, reporting, funds execution, contract management, and logistical support. Includes participation in program planning meetings and IPTs *FY 2016 Accomplishments:* Program Support and Management for GCCS-A *FY 2017 Plans:* Program Support and Management for GCCS-A *FY 2018 Plans:* Program Support and Management for GCCS-A	0.630	0.130	0.150
Title: Program Support and Management for Readiness Capabilities *Description:* Provides program management and acquisition oversight functions to enable the Army's readiness capabilities. *FY 2018 Plans:* Provide program management and acquisition oversight functions to enable the Army's readiness capabilities.	-	-	0.559
Title: Development, Training and System Support for Readiness Capabilities	-	-	5.153

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 0303150A / WWMCCS/Global Command and Control System	Project (Number/Name) C86 / Army Global C2 System

B. Accomplishments/Planned Programs ($ in Millions)	FY 2016	FY 2017	FY 2018
Description: Provides technical development, training and overall system support for the Army's readiness capabilities. FY 2018 Plans: Provide technical development, training and overall system support for the Army's readiness capabilities.			
Accomplishments/Planned Programs Subtotals	6.810	0.467	6.028

C. Other Program Funding Summary ($ in Millions)

Line Item	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
• BA8250: BA8250 Army Global Cmd & Control Sys (AGCCS) - OPA	8.291	2.530	2.658	-	2.658	2.643	3.688	2.848	-	0	22.658

Remarks

D. Acquisition Strategy

GCCS-A is modernizing to meet the requirements defined in the Joint C2 Capability Development Document (CDD) and to align with the Joint and Army Enterprise architectures.

In accordance with the Joint Requirements Oversight Committee (JROC) Memorandum (JROCM) 145-09 which states, "The JROC endorses efforts to develop and implement programmatic recommendations to support the "Do No Harm" Strategy", GCCS-A continues to synchronize and modernize along with the GCCS Family of Systems (FoS).

The GCCS-A Modernization Strategy consists of two separate program efforts. (1) A Bridge effort, Acquisition Category (ACAT) III level and (2) a Modernization development effort for the Army's Joint and Strategic command and Control capabilities infrastructure software products. The GCCS-A modernization development effort will be in compliance with Joint Command and Control Capability Development Document (JC2 CDD) and Army Mission Command for Unified Action Capability Definition Package (AMCUA CDP). DRRS-A will continue to satisfy readiness reporting requirements from Army Readiness Division (DAMO-ODR). The Bridge Effort's acquisition approach consists of a support agreement with CECOM LCMC SEC as the prime software developer utilizing a mix of government and contractor support.

The product development funded under this R-Form is an integral part of the Mission Command System of Systems, under a strategy designed to optimize opportunity to improve readiness among the systems, to capture the benefits of competition where possible and to ensure the rapid integration of new capability into warfighter systems.

E. Performance Metrics
N/A

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 0303150A I WWMCCS/Global Command and Control System	Project (Number/Name) EA5 I Strategic and Joint Mission Command

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
EA5: *Strategic and Joint Mission Command*	-	0.000	4.251	4.447	-	4.447	4.554	5.465	14.261	15.509	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Army Joint and Strategic Command and Control (AJaSC2) is a modernization development effort for the Army's joint and strategic C2 capabilities. AJaSC2 provides the materiel solution in response to the Army Mission Command for Unified Action Capability Definition Package (AMCUA CDP). AJaSC2 enables Army operational headquarters to integrate with the Joint Force Commands and Unified Action Partners (UAP). AJaSC2 is a software only implementation of strategic applications and interoperability services that leverage the unified software architecture design (core infrastructure and selected common applications being implemented in the CPCE) that provides Army leaders: Joint Common Operating Picture (COP); Adaptive planning and execution capabilities for distributed, synchronous and asynchronous collaboration services to develop, revise, and execute their warfighting plans supported by theaterwide analytics; strategic Situational Awareness (SA) to coalition operations and other mission partners and coordination and synchronization of Joint Execution Mission Management. Capability Packages enabled by AJaSC2 are providing Force Employment, Joint Force Synchronization, and Total Force Analysis. The operational payoff providing the Joint Force Commander a linkage between Army Mission Command and Unified Action Partners, enabling Unified Action through integration with existing and future applications (including CPCE and MCE) and contributes to achieving Shared Understanding during Unified Land Operations (ULO) facilitating effective Mission Command.

Current plan for Fiscal Year 2017 funding is to utilize 853K to support initial development design of Capability Packages. Fiscal Year 2018 base funding supports program level pre-Material Development Decision (MDD) activities including final design efforts, documentation required by policy and regulation, research and analysis, and Joint requirements validation process.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2016	FY 2017	FY 2018
Title: Software Design and Systems Engineering (Pre Milestone B) *Description:* Software Development and Systems Engineering of Capability Packages (Common Operating Environment (COE) System Engineering) *FY 2017 Plans:* Supports initial software development and engineering support of Capability Packages. *FY 2018 Plans:* Finalize Capability Package designs and required specifications/standards. Conduct research and analysis and systems engineering in coordination with other Joint Programs with an interdependency and with the Army Command Post and Mounted Computing Environments.	-	3.341	1.853
Title: Synchronization with COE and Command Post Computing Environment (CP CE) and Joint C2 objective Architecture	-	0.510	-

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 0303150A / WWMCCS/Global Command and Control System	Project (Number/Name) EA5 / Strategic and Joint Mission Command

B. Accomplishments/Planned Programs ($ in Millions)	FY 2016	FY 2017	FY 2018
Description: Software ehancement efforts required to sync with COE/CPCE and Joint C2 objective architecture **FY 2017 Plans:** Software enhancement efforts required to synchronize with COE/CPCE and Joint C2 objective Architecture			
Title: Program Support and Management **Description:** Program management includes overall management of program execution, major events, reporting, funds execution, contract management, and logistical support. Includes participation in program planning meetings and IPTs **FY 2017 Plans:** Program Support and Management for AJaSC2 **FY 2018 Plans:** Develop technical requirements for the three Capability Packages and synchronize those requirements with CPCE and the Joint community to ensure requirements supporting the Joint C2 objective Architecture are fully accounted for.	-	0.400	1.315
Title: Joint Requirements Validation Process **Description:** Synchronization and Systems Engineering efforts with COE and Command Post Computing Environment (CPCE) and Joint C2 objective Architecture for CP 3, 4 and 5. **FY 2018 Plans:** Develop technical requirements for the three Capability Packages and synchronize those requirements with CPCE and the Joint community to ensure requirements supporting the Joint C2 objective Architecture are fully accounted for.	-	-	1.279
Accomplishments/Planned Programs Subtotals	-	4.251	4.447

C. Other Program Funding Summary ($ in Millions)

Line Item	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
• BA8250A: *BA8250 Army Global Cmd & Control Sys (AGCCS) - OPA*	8.291	2.530	2.658	-	2.658	2.643	3.688	2.848	-	0.000	22.658

Remarks

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 0303150A *I WWMCCS/Global Command and Control System*	**Project (Number/Name)** EA5 *I Strategic and Joint Mission Command*

D. Acquisition Strategy

In accordance with the Army Mission Command for Unified Action (AMCUA) CDP approved December of 2014. The AMCUA CDP provides an overarching structure for future Army Mission Command systems. The AMCUA initiative will meet the requirements to enable planning and share situational awareness within an interdependent enterprise services network comprised of Unified Action Partners (UAP) and sister service components to achieve integrated mission operations. The AMCUA CDP defines the Land Component-unique Mission Command (MC) capabilities that the Army will develop to enable unified action through integration with existing and future Joint and Service command and control applications. MC capability contributions will enable Joint Forces Land Component Command (JFLCC) Commanders to gain and maintain Situational Awareness (SA), make decisions, and exercise authority and direction via a flexible, distributive and seamless system.

The acquisition strategy for AJaSC2 consists of the development, testing and fielding of Capability Packages implemented over time and synchronized with Command Post Computing Environment infrastructure. AJaSC2 will utilize the "Information Technology (IT) Box" construct. As such, evolutionary development of the software will continue as defined Capability Packages to meet emerging requirements that fall within the bounds of the approved IT Box. AJaSC2 strategy will consist of agile application development which will utilize and leverage existing and emerging technologies from Programs of Record and Common Operating Environment (COE) infrastructure. The product development under this R-Form will be accomplished in part under a Project Manager, Mission Command engineering services contract approach which will consist of multiple prime contractors competitively bidding on development efforts.

E. Performance Metrics

N/A