Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army											Date: March 2014	
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 5: *System Development & Demonstration (SDD)*					**R-1 Program Element (Number/Name)** PE 0604805A *I Command, Control, Communications Systems - Eng Dev*							
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
Total Program Element	-	18.543	7.376	4.433	-	4.433	9.161	17.215	2.462	-	-	59.190
593: *Joint Battle Command - Platform (JBC-P)*	-	18.543	7.376	4.433	-	4.433	9.161	17.215	2.462	-	-	59.190

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

This Program Element (PE) supports efforts to develop interoperability of Army programs and products, horizontally and vertically for the digitized battlefield. Project D485 supports Information Standards Interoperability Engineering and Joint Interoperability Certification. It provides the critical elements of the Army/Joint Technical Architecture, the mandated standards and communication protocols for Army/Joint ground and air operations, and crucial certification test tools to evaluate systems' interoperability for the Warfighter in support of the Vice Chief of Staff of the Army (VCSA) and Army Acquisition Executive (AAE). It also provides Joint certification testing and certification recommendations to the Joint Chiefs of Staff (JCS) for Army systems. This Army-wide effort directly supports the management, oversight, development, maintenance, and interoperability at the Army enterprise level C4I/IT (Command, Control, Communications, Computers, and Intelligence/Information Technology) architecture efforts required to implement Unit Set Fielding (USF), Software Blocking (SWB) Policy and Army Knowledge Management.

Project D593, Joint Battle Command - Platform (JBC-P) funds the Systems Engineering, Software Development and Testing of JBC-P. Joint Battle Command - Platforms (JBC-P), which includes Blue Force Tracking (BFT) and Army Aviation, and provides true Joint force Command and Control (C2) Situational Awareness (SA) and communications (e.g., terrestrial, celestial) capability at the platform level through command center locations (e.g., Network Operations Centers (NOC), Tactical Operation Centers (TOCs), Brigade Command Posts) and enables mission accomplishment across the entire spectrum of military operations.

B. Program Change Summary ($ in Millions)

	FY 2013	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO**	**FY 2015 Total**
Previous President's Budget	20.776	7.379	14.210	-	14.210
Current President's Budget	18.543	7.376	4.433	-	4.433
Total Adjustments	-2.233	-0.003	-9.777	-	-9.777
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-2.233	-0.003	-9.777	-	-9.777

Exhibit R-2A, **RDT&E Project Justification:** PB 2015 Army	**Date:** March 2014

Appropriation/Budget Activity 2040 *I* 5	R-1 Program Element (Number/Name) PE 0604805A *I Command, Control,* *Communications Systems - Eng Dev*	Project (Number/Name) 593 *I Joint Battle Command - Platform* *(JBC-P)*

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
593: *Joint Battle Command - Platform (JBC-P)*	-	18.543	7.376	4.433	-	4.433	9.161	17.215	2.462	-	-	59.190
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

The Joint Battle Command - Platform (JBC-P) program is the cornerstone of joint forces Command and Control (C2) Situational Awareness (SA) and communications. JBC-P provides secure Blue Force Tracking capability in Platforms and Command Posts, providing soldiers and commanders a map-based Common Operating Picture of the battlefield, and as a result, reducing fratricide.

As part of the Army's Common Operating Environment (COE) Architecture initiative, developed to standardize end-user environments and enable streamlined deployment of new warfighting applications, JBC-P serves a primary role as the basis of the Mounted Computing Environment (MCE), one of six (6) environments within the COE framework. Future development of the Mounted CE will leverage JBC-P hardware and software to consolidate and integrate multiple warfighting systems in the Platform (Mounted) environment. This integrated Mounted CE, with its open standards, enhanced interoperability, and simplified end-user interface will speed delivery of new Mission Command applications to the warfighter while improving the effectiveness and value of current systems.

Fiscal Year 2015 funding provides Software Design and Development, System Engineering, associated Test and Integration, and Program Management that supports the development of the Mounted Computing Environment.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Software Development	8.643	2.568	1.272
Articles:	-	-	-
Description: Develop capabilities, product applications, platform interoperability, and system services across the JBC-P family of systems, to include the development of capabilities to meet Key Performance Parameters (KPPs), other system attributes. Also develop unique software and integration capabilities in support of the Mounted Computing Environment (MCE), part of the Common Operating Environment (COE). Develop Multi-Level Security Domains for Network, Users, and Information. *FY 2013 Accomplishments:* Complete engineering, design and coding for Core/Product Development Kit (PDK) software. Complete engineering, design, and coding for product builds 5 & 6 to fully maintain the KPPs and other system attributes outlined in the Capability Development Document in lieu of Capabilities Production Document for all of the products. Conduct user juries to gain user feedback on the software. Include Marine Corps participation in working groups and integrated product/process teams and provide software builds			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014	
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604805A / Command, Control, Communications Systems - Eng Dev	Project (Number/Name) 593 / Joint Battle Command - Platform (JBC-P)	

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
to the Marine Corps as required for testing to ensure joint requirements are included and adequately addressed throughout the software development effort. *FY 2014 Plans:* Software efforts include migrating to COTS (Android) and integrating additional Mission Command capabilities including precision fires and collaboration/planning functions for platform systems. Migrate to common open interfaces across other platform components (sensors, radios) in order to reduce complexity and make integration common across all platform vehicle types (VICTORY). Co-host systems/application on the Mounted Family of Computer Systems (MFoCS) i.e. router switch, forward observer system in order to reduce Size Weight and Power (SWaP) on platforms. Build automated tools to support compliance with MCE and COE standards. *FY 2015 Plans:* Funding is required for on-going software development efforts focused on the migration of JBC-P and other platform systems to the Mounted CE and COE standards. This effort includes migrating to specific network communications standards, and providing routing services on a Commercial Off the Shelf (COTS) operating system (Android). Software capabilities also under migration to MCE standards include the use of Common Geospatial (map) services and additional Vehicle Integration for C4ISR/EW Interoperability (VICTORY) component types. Funds are also required for continued conduct of user juries to assess software maturity.			
Title: Software/Systems Engineering	1.878	3.008	2.044
Articles:	-	-	-
Description: Perform Software/Systems Engineering in support of the development of JBC-P Capabilities, Applications, and Services, to include, but not limited to, Conducting Engineering Studies, Architecture Development (both Software and Network), System Analyses, Technical Readiness Assessments, Technical Interchange Meetings/Events, and development of Related Reports and other deliverables. *FY 2013 Accomplishments:* Complete Capability Set 13-14 security engineering including security certification and accreditation plan, safety engineering and FoS definition study and prototyping. Complete development of requirements analysis, System/Subsystem specification and high level system engineering for Capability Set 15-16 software. Commence system engineering for the migration of JBC-P baseline to MCE standards. *FY 2014 Plans:* Continue system engineering efforts for JBC-P in support of COE baselines, focusing on hardware/software integration, engineering and development of common services across platforms. Includes planning and engineering of future MCE capabilities			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0604805A / Command, Control, Communications Systems - Eng Dev	Project (Number/Name) 593 / Joint Battle Command - Platform (JBC-P)

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
using COTS (Android), i.e.: Common Authentication. Performance characterization on different HW/SW configurations using MFoCS. **FY 2015 Plans:** Funding is required for continued system engineering efforts in support of COE baselines and expanding common services across platforms. Includes planning and engineering of future MCE capabilities using COTS (Android), including Shared Software Databus, Common Geospatial (map) Services, Common Overlay, and Single Security Services.			
Title: Test, Evaluation and Integration Articles:	7.028 -	0.325 -	0.250 -
Description: Plan and conduct Integration Events (i.e., Tests and Assessments) in support of the JBC-P Family of Systems, to include participation in Network Integration Exercises (NIEs), User Juries, Risk Reduction Events, Vulnerability testing, and Army Interoperability Certification (AIC) testing. **FY 2013 Accomplishments:** Conduct a customer test at NIE 13.1, a formal Developmental Test at Risk Reduction Event (RRE) 13, the Initial Operational Test & Evaluation (IOT&E) at NIE 13.2 **FY 2014 Plans:** Test software capability in support of the Network Operations Center (NOC). Establish tools and a process for 3rd party application testing and accreditation. **FY 2015 Plans:** Ongoing Verification & Validation efforts of MCE, HW/SW integration testing, 3rd party application testing and accreditation. Support for Army Warfighting Experiments (AWE), user juries and other demonstrations for MCE.			
Title: Program Management Articles:	0.994 -	1.475 -	0.867 -
Description: JBC-P Program Management, including Technical, Logistics, and Business staff oversight. **FY 2013 Accomplishments:** Provide technical, logistics and business oversight for software and hardware development activities. Monitor progress of performing organizations and prepare reports to higher headquarters. Develop and implement plans for process and product improvements. **FY 2014 Plans:**			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 I 5	R-1 Program Element (Number/Name) PE 0604805A I Command, Control, Communications Systems - Eng Dev	Project (Number/Name) 593 I Joint Battle Command - Platform (JBC-P)

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
During this timeframe, will provide technical, logistics and business oversight for JBC-P FoS software development and system engineering activities. Program Management includes funds execution, contract management, and logistical support to program's RDT&E activities. Includes establishment of the MCE Governance process, which includes participation in Common Operating Environment (COE) working group infrastructure, operations, participation in Technical Advisory boards, system of systems engineering & the Platform Integrated Process Team (IPT) efforts. *FY 2015 Plans:* Provide program management, logistics, and business oversight for JBC-P/MCE Software/System Engineering activities. Program Management includes overall management of program milestones, major events, funds execution, contract management, and logistical support. Includes management of the MCE Governance process, which includes participation in COE working group infrastructure, operations, participation in Technical Advisory boards, system of systems engineering & the Platform IPT efforts.			
Accomplishments/Planned Programs Subtotals	18.543	7.376	4.433

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• Joint Battle Command - Platform: *OPA W61990*	62.199	70.214	97.892	-	97.892	97.569	106.873	102.213	120.351	-	657.311

Remarks

Procurement funding in Fiscal Year 2014 through 2019 (Base funding) is designated for the procurement, fielding, and program management of JBC-P Family of Systems including JBC-P, JBC-P Log, and the implementation of the Mounted Computing Environment (MCE).

D. Acquisition Strategy

The program entered Milestone B (Engineering and Manufacturing Development phase) in September 2009. RDTE funding for JBC-P began in Fiscal Year 2010. The Acquisition Strategy Report (ASR) was approved in July 2012. The Milestone Decision Authority (MDA) approved a Milestone C, conditional on positive Limited User Test (LUT) results, in July 2012.

The JBC-P Capabilities Development Document in lieu of Capabilities Production Document (CDD ILO CPD) was Joint Requirements Oversight Council (JROC) approved March 2013. Completed Initial Operational Test & Evaluation (IOT&E) as part of Network Integration Evaluation (NIE) 13.2 in 3QFY13. The IOT&E tested the JBC-P system software on existing FBCB2 hardware (non-dismountable vehicle systems) and future production-representative hardware. The MDA authorized entry into Full Rate Production (FRP) and deployment for JBC-P V1.4, December 2013, conditional on achieving Army Interoperability Certification (AIC) and Joint Interoperability Test Certification (JITC) prior to fielding.

Exhibit R-2A, **RDT&E Project Justification:** PB 2015 Army		**Date:** March 2014
Appropriation/Budget Activity 2040 *I* 5	**R-1 Program Element (Number/Name)** PE 0604805A *I Command, Control, Communications Systems - Eng Dev*	**Project (Number/Name)** 593 *I Joint Battle Command - Platform (JBC-P)*

As encouraged by DoD policy, development efforts are being performed by the Software Engineering Directorate (SED) of the Aviation and Missile Research, Development and Engineering Center (AMRDEC). Any additional development efforts in the approved CDD in lieu of CPD that cannot be accomplished by either SED or SEC will be obtained via other existing contract vehicles. Hardware along with fielding, training and field support efforts will be obtained through existing competitively awarded contracts.

E. Performance Metrics
 N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army												Date: March 2014	

Appropriation/Budget Activity 2040 I 5	R-1 Program Element (Number/Name) PE 0604805A I Command, Control, Communications Systems - Eng Dev	Project (Number/Name) 593 I Joint Battle Command - Platform (JBC-P)

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
JBC-P Software Development	MIPR	SED, Redstone Arsenal : Huntsville, AL	53.500	8.643		2.568		1.272		-		1.272	21.213	87.196	-
JBC-P Software/System Engineering	MIPR	Multiple : Multiple	28.840	1.878		3.008		2.044		-		2.044	9.607	45.377	-
Design, Develop, First Article Test, and Procure Hardware Prototypes	Various	Multiple : Multiple	7.225	-		-		-		-		-	-	7.225	-
Subtotal			89.565	10.521		5.576		3.316		-		3.316	30.820	139.798	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
PM Support (Gov't-Core)	Sub Allot	PM JBC-P : Aberdeen Proving Ground (APG), MD	1.900	0.994		1.475		0.867		-		0.867	2.405	7.641	-
PM Support (Gov't-Matrix)	IA	PM JBC-P : Aberdeen Proving Ground (APG), MD	1.365	-		-		-		-		-	1.874	3.239	-
PM Support (SETA Contractor)	C/CPFF	PM JBC-P : Aberdeen Proving Gound (APG), MD	2.393	-		-		-		-		-	1.249	3.642	-
Subtotal			5.658	0.994		1.475		0.867		-		0.867	5.528	14.522	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Develop and Conduct Tests and Assessments	MIPR	Multiple : Multiple	18.480	7.028		0.325		0.250		-		0.250	9.744	35.827	-
Subtotal			18.480	7.028		0.325		0.250		-		0.250	9.744	35.827	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army							**Date:** March 2014		
Appropriation/Budget Activity 2040 *I* 5				**R-1 Program Element (Number/Name)** PE 0604805A *I Command, Control, Communications Systems - Eng Dev*			**Project (Number/Name)** 593 *I Joint Battle Command - Platform (JBC-P)*		

	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	113.703	18.543	7.376	4.433	-	4.433	46.092	190.147	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 5	**R-1 Program Element (Number/Name)** PE 0604805A / Command, Control, Communications Systems - Eng Dev	**Project (Number/Name)** 593 / Joint Battle Command - Platform (JBC-P)

	FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
SW/MCE Development	████	████	████	████	████	████	████	████	████	████	████	████	████	████	████	████	████	████	████	████	████	████	████	████	████	████	████	
NIE 13.1 (Customer Test)	██																											
RRE 12 (Formal DT)		██																										
NIE 13.2 (IOT&E)			██																									
RRE 13				██																								
NIE 14.1					██																							
Full Rate Production (FRP)/SW Fielding Decision					██																							
RRE 14						██																						
NIE 14.2 (MOT&E)							██																					
First Unit Equipped (FUE) (planned)									████	████																		
FRP Delivery Orders Funded with PROC					████	████	████	████	████	████	████	████	████	████	████	████	████	████	████	████	████	████						
FRP Delivery Order 1 Award					████	████	████	████																				
FRP DO Award Year 2									████	████	████	████																
FRP DO Award Year 3													████	████	████	████												
FRP DO Award Year 4																	████	████	████	████								
FRP DO Award Year 5																					████	████	████	████				

Exhibit R-4A, **RDT&E Schedule Details:** PB 2015 Army		**Date:** March 2014
Appropriation/Budget Activity 2040 *I* 5	**R-1 Program Element (Number/Name)** PE 0604805A *I Command, Control, Communications Systems - Eng Dev*	**Project (Number/Name)** 593 *I Joint Battle Command - Platform (JBC-P)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
SW/MCE Development	1	2010	4	2019
NIE 13.1 (Customer Test)	1	2013	1	2013
RRE 12 (Formal DT)	2	2013	2	2013
NIE 13.2 (IOT&E)	3	2013	3	2013
RRE 13	4	2013	4	2013
NIE 14.1	1	2014	1	2014
Full Rate Production (FRP)/SW Fielding Decision	1	2014	1	2014
RRE 14	2	2014	2	2014
NIE 14.2 (MOT&E)	3	2014	3	2014
First Unit Equipped (FUE) (planned)	1	2015	3	2015
FRP Delivery Orders Funded with PROC	1	2014	1	2019
FRP Delivery Order 1 Award	1	2014	1	2015
FRP DO Award Year 2	1	2015	1	2016
FRP DO Award Year 3	1	2016	1	2017
FRP DO Award Year 4	1	2017	1	2018
FRP DO Award Year 5	1	2018	1	2019