Exhibit R-2, RDT&E Budget Item Justification: PB 2017 Army											Date: February 2016	
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 7: *Operational Systems Development*					R-1 Program Element (Number/Name) PE 0303142A *I SATCOM Ground Environment (SPACE)*							
COST ($ in Millions)	**Prior Years**	**FY 2015**	**FY 2016**	**FY 2017 Base**	**FY 2017 OCO**	**FY 2017 Total**	**FY 2018**	**FY 2019**	**FY 2020**	**FY 2021**	**Cost To Complete**	**Total Cost**
Total Program Element	-	9.978	9.355	18.815	-	18.815	10.677	8.993	9.055	8.416	Continuing	Continuing
253: *Dscs-Dcs (Phase II)*	-	4.067	1.594	5.164	-	5.164	6.626	5.857	5.930	6.084	Continuing	Continuing
456: *MILSATCOM System Engineering*	-	2.871	0.926	4.287	-	4.287	4.051	3.136	3.125	2.332	0.000	20.728
EA3: *Transportable Tactical Cmd Comms (T2C2)*	-	3.040	3.885	3.652	-	3.652	0.000	0.000	0.000	0.000	0.000	10.577
EK8: *Enroute Mission Command*	-	0.000	2.950	5.712	-	5.712	0.000	0.000	0.000	0.000	0.000	8.662

A. Mission Description and Budget Item Justification

Military Satellite Communication (MILSATCOM) systems are joint program/project efforts to satisfy ground mobile requirements for each Service, the Joint Chiefs of Staff (JCS), the National Command Authority, the combatant commanders, the Office of the Secretary of Defense, and other governmental, non-DoD users. The worldwide MILSATCOM systems are: the Super High Frequency (SHF) Defense Satellite Communications System (DSCS); the Wideband Global SATCOM (WGS); the MILSTAR Extremely High Frequency (EHF) Low Data Rate (LDR) and Medium Data Rate (MDR); the Advanced Extremely High Frequency (AEHF); and future MILSATCOM capabilities. All of these systems are required to support legacy, interim and emerging communication space architectures and Future Force requirements. The Army is responsible for materiel development, acquisition, product improvement, testing, fielding and integrated logistics support of ground satellite terminals and SATCOM control subsystems and all associated equipment used to provide range extension of Mission Command Networks and Systems. The Army also participates in the development of MILSATCOM programs, including architectures, payloads, waveforms, antennas and terminal developments to ensure US Army equities are appropriately addressed with our sister services. This includes technology assessment efforts associated with the integration of MILSATCOM components to US Army Landwarnet. This responsibility also includes maintaining the life cycle logistics support required to achieve end-to-end connectivity and interoperability, satisfying JCS network operations in support of the President, JCS, combatant commanders, Military Departments, Department of State, and other government Departments and Agencies. Project EK 8 to support testing for Enroute Mission Command (EMC)has been added to SATCOM Ground Environment programs in FY16. EMC supports Global Response Force (GRF) and other Army units with the requirement to conduct Airborne forcible entry operations with the ability to conduct mission command.

This program is designated as a DoD Space Program.

Exhibit R-2, RDT&E Budget Item Justification: PB 2017 Army					Date: February 2016
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army I* BA 7: *Operational Systems Development*			R-1 Program Element (Number/Name) PE 0303142A *I SATCOM Ground Environment (SPACE)*		
B. Program Change Summary ($ in Millions)	**FY 2015**	**FY 2016**	**FY 2017 Base**	**FY 2017 OCO**	**FY 2017 Total**
Previous President's Budget	11.006	9.355	17.748	-	17.748
Current President's Budget	9.978	9.355	18.815	-	18.815
Total Adjustments	-1.028	0.000	1.067	-	1.067
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-1.028	-			
• Adjustments to Budget Years	-	-	1.067	-	1.067

Change Summary Explanation

FY2017 increase is a net increase driven by:
T2C2: $3.6M Increase
DSCS: $2.259M Reduction
MILSATCOM: $0.249M Reduction
EMC: $0.077M Reduction

Exhibit R-2A, RDT&E Project Justification: PB 2017 Army			Date: February 2016
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303142A / *SATCOM Ground Environment (SPACE)*	Project (Number/Name) 253 / *Dscs-Dcs (Phase II)*	

COST ($ in Millions)	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
253: *Dscs-Dcs (Phase II)*	-	4.067	1.594	5.164	-	5.164	6.626	5.857	5.930	6.084	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project provides funds to develop Satellite Communication (SATCOM) ground subsystem equipment and software in support of Joint Chiefs of Staff (JCS) validated Mission Command Network and Systems requirements for the worldwide Defense Enterprise Wideband SATCOM System (DEWSS). DEWSS is composed of the Super High Frequency (SHF) Defense Satellite Communications System (DSCS) and Wideband Global SATCOM (WGS) programs, which are required to support legacy, interim and emerging communication space architectures and future Force requirements. Expansion of the WGS constellation and upgrades to both DSCS and WGS are vital to support the Army's emerging power projection and rapid deployment role. DSCS and WGS provide multiple channels of tactical end-to-end connectivity and interoperability with strategic networks and national decision-makers, satisfying JCS network operations in support of the President, JCS, combatant commanders, military departments, Department of State and other government departments and agencies.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2015	FY 2016	FY 2017
Title: Netcentric System Engineering and Analysis ***Description:*** Funding is provided for the following effort: ***FY 2015 Accomplishments:*** Fund analysis for Netcentric System Engineering ***FY 2016 Plans:*** Continue analysis for Netcentric System Engineering ***FY 2017 Plans:*** Continue analysis for Netcentric System Engineering	1.516	0.551	0.350
Title: Future analysis of Wideband SATCOM Operational Management System (WSOMS) database consolidation effort. ***Description:*** Funding is provided for the following effort: ***FY 2015 Accomplishments:*** WSOMS database consolidation effort to evaluate existing database schemas (structure) for each independent Wideband Control subsystem. The result of the analysis will be to define a structure of a consolidated database along with a transition plan. The desired impact will be to reduce total cost of ownership for multiple subsystems in terms of recurring annual licensing costs and shorten logistics trail with associated database storage equipment.	1.123	-	-
Title: Protected SATCOM Modem	1.428	1.043	4.814

Exhibit R-2A, RDT&E Project Justification: PB 2017 Army		Date: February 2016
Appropriation/Budget Activity 2040 / 7	**R-1 Program Element (Number/Name)** PE 0303142A / *SATCOM Ground Environment (SPACE)*	**Project (Number/Name)** 253 / *Dscs-Dcs (Phase II)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2015	FY 2016	FY 2017
Description: Funding is provided for the following effort: ***FY 2015 Accomplishments:*** Fund modem pilot program to address Anti-Jam (AJ) and Anti-Scintillation (AS) for the WGS constellation. ***FY 2016 Plans:*** To investigate the possibility of integrating anti-jam features into current Commercial Off-The-Shelf (COTS), Network Management System (NMS). ***FY 2017 Plans:*** Build a prototype network of 6 modems and integrate with Gateway equipment at Joint SATCOM Engineering Center (JSEC). Study Anti-Jam System behavior when subjected to real threat in a classified environment.			
Accomplishments/Planned Programs Subtotals	4.067	1.594	5.164

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
• 20: *Defense Enterprise Wideband SATCOM Systems (DEWSS) (BB8500)*	121.085	172.306	143.805	-	143.805	133.863	178.093	170.270	139.721	Continuing	Continuing

Remarks

D. Acquisition Strategy

FY2017 funding in the amount of $5.164 million finances Project Manager, Defense Communications and Army Transmission Systems (PM DCATS) netcentric systems engineering, modem risk mitigation, and DoD Information Assurance Certification Accreditation Process (DIACAP) support. Funding provides for SATCOM terminal upgrades, enhancement of baseband throughput capabilities, technology insertion and upgrades which enhance decision support capabilities, allowing for full utilization of Wideband Global SATCOM (WGS) capabilities. Both the Wideband SATCOM Operational Management System (WSOMS) and the Enterprise Wideband SATCOM Terminal System (EWSTS) Capability Production Documents (CPDs) contain Netcentric-Ready Key Performance Parameters (NR-KPPs) as required by CJCSI 6212.01C. Netcentric efforts are required to facilitate the migration from the current trunk-based communications systems to Internet Protocol (IP) based systems and to engineer, test and integrate IP based capabilities into EWSTS and WSOMS systems. Studies, risk mitigation, system integration and advanced demonstrations for netcentric baseband and policy based control will accommodate technology insertion, data sharing, remote operations, architecture efforts and use of commercial technology, thus ensuring the life of the Defense Enterprise Wideband System (DEWSS) terminal family beyond 2025 and reducing lifecycle costs and enterprise requirements on the WGS and Defense Satellite Communication System (DSCS) satellites in the future.

Exhibit R-2A, RDT&E Project Justification: PB 2017 Army		Date: February 2016
Appropriation/Budget Activity 2040 / 7	**R-1 Program Element (Number/Name)** PE 0303142A / *SATCOM Ground Environment (SPACE)*	**Project (Number/Name)** 253 / *Dscs-Dcs (Phase II)*

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2017 Army			Date: February 2016
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303142A / *SATCOM Ground Environment (SPACE)*	Project (Number/Name) 253 / *Dscs-Dcs (Phase II)*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2015 Cost	FY 2015 Award Date	FY 2016 Cost	FY 2016 Award Date	FY 2017 Base Cost	FY 2017 Base Award Date	FY 2017 OCO Cost	FY 2017 OCO Award Date	FY 2017 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Netcentric SE Studies and Analysis	MIPR	CERDEC : APG, MD	2.684	1.000		0.594		0.350		-		0.350	0	4.628	0
Conduct Analysis of WSOMS Database Consolidation	MIPR	CERDEC : APG, MD	2.152	0.950		-		-		-		-	0	3.102	0
Protected SATCOM Modems	MIPR	CERDEC : APG, MD	0.918	0.587		0.210		3.514		-		3.514	0	5.229	0
		Subtotal	5.754	2.537		0.804		3.864		-		3.864	0.000	12.959	0.000

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2015 Cost	FY 2015 Award Date	FY 2016 Cost	FY 2016 Award Date	FY 2017 Base Cost	FY 2017 Base Award Date	FY 2017 OCO Cost	FY 2017 OCO Award Date	FY 2017 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
In house Support	Allot	PdM WESS : Ft. Belvoir, VA	0.929	0.480		0.290		0.600		-		0.600	0	2.299	0
Contractor Support	C/CPFF	ACC-APG : APG, MD	1.697	1.050	Jul 2015	0.500	Nov 15	0.700	Nov 2016	-		0.700	0	3.947	0
		Subtotal	2.626	1.530		0.790		1.300		-		1.300	0.000	6.246	0.000

	Prior Years	FY 2015 Cost	FY 2015 Award Date	FY 2016 Cost	FY 2016 Award Date	FY 2017 Base Cost	FY 2017 Base Award Date	FY 2017 OCO Cost	FY 2017 OCO Award Date	FY 2017 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	8.380	4.067		1.594		5.164		-		5.164	0.000	19.205	0.000

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2017 Army		Date: February 2016
Appropriation/Budget Activity 2040 / 7	**R-1 Program Element (Number/Name)** PE 0303142A / *SATCOM Ground Environment (SPACE)*	**Project (Number/Name)** 253 / *Dscs-Dcs (Phase II)*

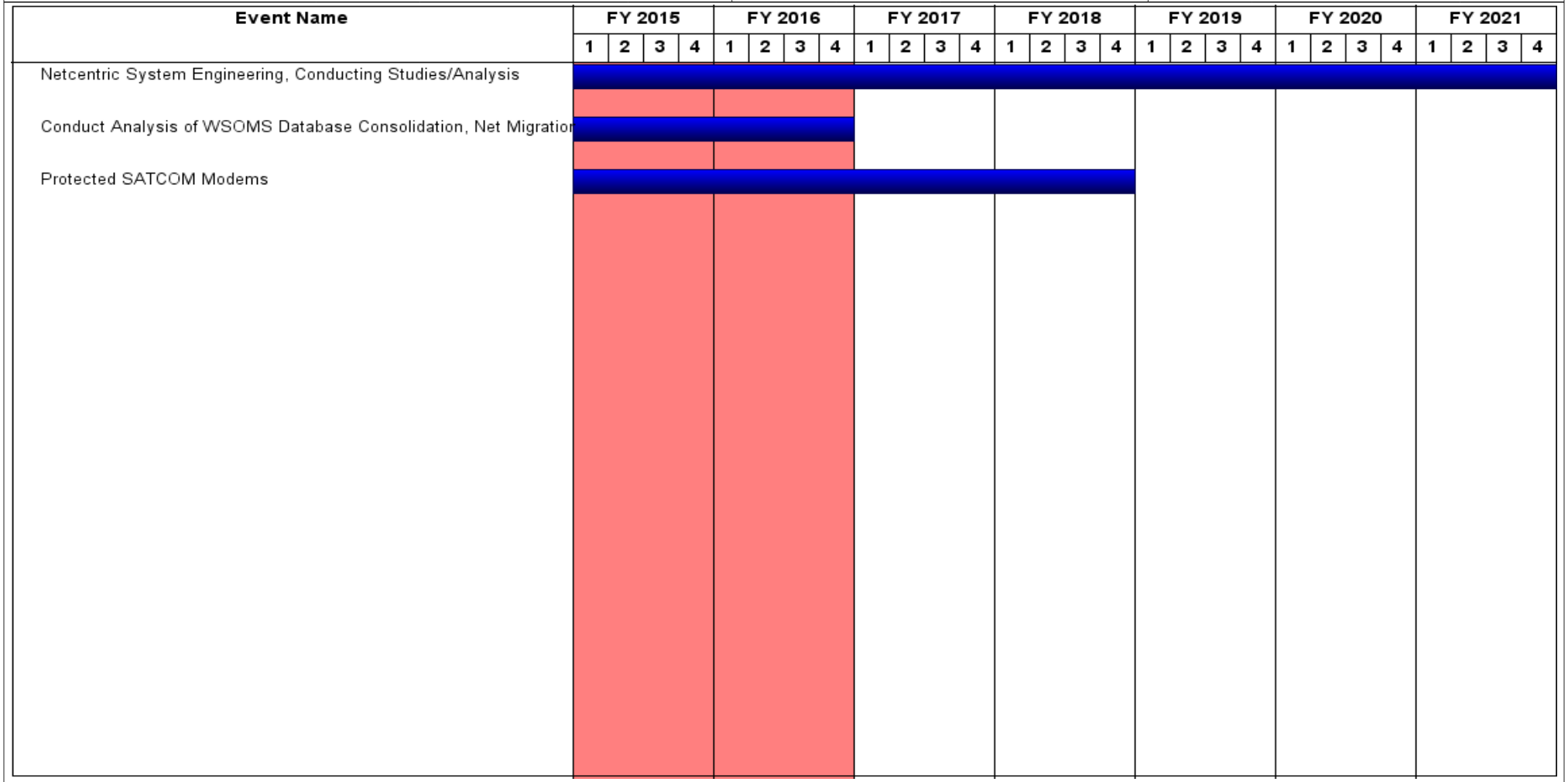

Exhibit R-4A, RDT&E Schedule Details: PB 2017 Army		Date: February 2016
Appropriation/Budget Activity 2040 / 7	**R-1 Program Element (Number/Name)** PE 0303142A / *SATCOM Ground Environment (SPACE)*	**Project (Number/Name)** 253 / *Dscs-Dcs (Phase II)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Netcentric System Engineering, Conducting Studies/Analysis	1	2006	4	2021
Conduct Analysis of WSOMS Database Consolidation, Net Migration	1	2014	4	2016
Protected SATCOM Modems	1	2015	4	2018

Exhibit R-2A, RDT&E Project Justification: PB 2017 Army			Date: February 2016
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303142A / *SATCOM Ground Environment (SPACE)*	Project (Number/Name) 456 / *MILSATCOM System Engineering*	

COST ($ in Millions)	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
456: *MILSATCOM System Engineering*	-	2.871	0.926	4.287	-	4.287	4.051	3.136	3.125	2.332	0.000	20.728
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Military Satellite Communications (MILSATCOM)System Engineering (SE) assures that tactical Army Satellite Communications (SATCOM) and SATCOM On-The-Move (SOTM) systems are engineered to legally and efficiently operate worldwide. MILSATCOM SE shapes Joint SATCOM systems' design efforts, standards development and planning processes. MILSATCOM SE represents the Army's tactical interests within DoD, Commercial & International forums to ensure affordable and scalable future SATCOM capabilities for maneuver forces. These efforts, performed by MILSATCOM SE, lead to savings for the overall Army in the out years.

FY 17 funds support the continued systems engineering required to support technology maturation, systems analysis, and planning associated with joint SATCOM development efforts including the outcomes of the Protected SATCOM communications Systems (PSCS) Analysis of Alternatives (AoA), the follow-on Wideband AoA, and ofther efforts that have impact on tactical Army use of military and commercial satellite constellations. These efforts have a direct impact in reducing technical and progammatic risk for the acquisition efforts for tactical Army SATCOM systems using these constellations.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2015	FY 2016	FY 2017
Title: Protected Communications System Engineering	1.646	0.463	2.354
Description: Protected Communications System Engineering ***FY 2015 Accomplishments:*** Protected Communications System Engineering ***FY 2016 Plans:*** Protected Communications System Engineering ***FY 2017 Plans:*** Protected Communications System Engineering			
Title: Wideband Global SATCOM (WGS) Communications System Engineering	1.225	0.463	1.833
Description: WGS Communications System Engineering ***FY 2015 Accomplishments:*** WGS Communications System Engineering to improve Ku/Ka antenna SWAP ***FY 2016 Plans:***			

Exhibit R-2A, RDT&E Project Justification: PB 2017 Army		Date: February 2016
Appropriation/Budget Activity 2040 / 7	**R-1 Program Element (Number/Name)** PE 0303142A / *SATCOM Ground Environment (SPACE)*	**Project (Number/Name)** 456 / *MILSATCOM System Engineering*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2015	FY 2016	FY 2017
WGS Communications System Engineering to improve Ku/Ka antenna SWAP ***FY 2017 Plans:*** WGS Communications System Engineering to improve Ku/Ka antenna SWAP			
Title: Experimentation, development, testing and certification of critical SATCOM and Satellite-On-The-Move (SOTM) communication and network technologies. ***Description:*** Experimentation, development, testing and certification of critical SATCOM and SOTM communication and network technologies. ***FY 2017 Plans:*** Experimentation, development, testing and certification of critical SATCOM and SOTM communication and network technologies.	-	-	0.100
Accomplishments/Planned Programs Subtotals	2.871	0.926	4.287

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

This project funds advanced systems engineering, research, development, test and evaluation of new and emerging technologies to optimize terminal performance and communications control. Once the technologies are mature and deemed feasible, funding and management responsibility for implementation of the technology will transition to WIN-T and related PoRs.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2017 Army			Date: February 2016
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303142A / *SATCOM Ground Environment (SPACE)*	Project (Number/Name) 456 / *MILSATCOM System Engineering*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2015 Cost	FY 2015 Award Date	FY 2016 Cost	FY 2016 Award Date	FY 2017 Base Cost	FY 2017 Base Award Date	FY 2017 OCO Cost	FY 2017 OCO Award Date	FY 2017 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Oversight	MIPR	PM WIN T : PEO C3T	2.914	0.100		-		-		-		-	0.000	3.014	0.000
Advanced Architecture/ Advanced Wideband System Architecture	MIPR	MIT Lincoln Labs : Lexington , MA	11.474	-		-		-		-		-	0	11.474	0
		Subtotal	14.388	0.100		-		-		-		-	0.000	14.488	0.000

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2015 Cost	FY 2015 Award Date	FY 2016 Cost	FY 2016 Award Date	FY 2017 Base Cost	FY 2017 Base Award Date	FY 2017 OCO Cost	FY 2017 OCO Award Date	FY 2017 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Protected Communications and WGS Communications SE	TBD	Various : APG, MD	74.231	0.300		-		1.151		-		1.151	0	75.682	Continuing
FCC/ITU SOTM Regulatory Proposals/ Analyses/Modifications	MIPR	John Hopkins Universtiy Applied Physics Lab : Laurel, MD	2.655	-		-		-		-		-	0.000	2.655	0.000
T2C2 Development Analysis of AoA activity, market research, MS C	TBD	PEO C3T PM WIN-T : APG, MD	2.444	-		-		-		-		-	0	2.444	Continuing
		Subtotal	79.330	0.300		-		1.151		-		1.151	0.000	80.781	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2015 Cost	FY 2015 Award Date	FY 2016 Cost	FY 2016 Award Date	FY 2017 Base Cost	FY 2017 Base Award Date	FY 2017 OCO Cost	FY 2017 OCO Award Date	FY 2017 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Engineering (In House)	MIPR	PM WIN T : APG, MD	26.988	1.220		0.300		1.200		-		1.200	Continuing	Continuing	Continuing
Engineering Contractors Support	C/CPFF	PM WIN-T : APG, MD	38.935	0.500		0.626		1.136		-		1.136	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2017 Army			Date: February 2016
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303142A / *SATCOM Ground Environment (SPACE)*	Project (Number/Name) 456 / *MILSATCOM System Engineering*	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2015 Cost	FY 2015 Award Date	FY 2016 Cost	FY 2016 Award Date	FY 2017 Base Cost	FY 2017 Base Award Date	FY 2017 OCO Cost	FY 2017 OCO Award Date	FY 2017 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
System Architecture & Analysis	Various	CERDEC PM WIN-T : APG, MD	17.501	-		-		0.200		-		0.200	Continuing	Continuing	Continuing
T2C2 preparation for Milestone C; Request for Proposal and solcitation preparation	TBD	PEO C3T PM WIN T : APG, MD	0.500	-		-		-		-		-	0	0.500	0
		Subtotal	83.924	1.720		0.926		2.536		-		2.536	-	-	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2015 Cost	FY 2015 Award Date	FY 2016 Cost	FY 2016 Award Date	FY 2017 Base Cost	FY 2017 Base Award Date	FY 2017 OCO Cost	FY 2017 OCO Award Date	FY 2017 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Terminal Testing and Evaluation System Engineering	FFRDC	PEO C3T WIN T : TBD	2.304	0.200		-		0.200		-		0.200	Continuing	Continuing	Continuing
Test Support	MIPR	MATRIX : PM WIN T	22.387	0.200		-		0.200		-		0.200	Continuing	Continuing	Continuing
Testing, Certification	MIPR	Support Technical Testing : PM WIN T	6.650	0.351		-		0.200		-		0.200	Continuing	Continuing	Continuing
Test support to study the feasibility of moving small terminal activity from COMSATCOMO to MILSATCOM	C/CPFF	PEO C3T : PM WIN-T	0.400	-		-		-		-		-	0	0.400	0
T2C2 complete Intitial Operational Test and Evaluation	TBD	PEO C3T : PM WIN-T	1.960	-		-		-		-		-	0	1.960	0
		Subtotal	33.701	0.751		-		0.600		-		0.600	-	-	-

	Prior Years	FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	211.343	2.871		0.926		4.287		-		4.287	-	-	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2017 Army			Date: February 2016
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303142A / *SATCOM Ground Environment (SPACE)*	Project (Number/Name) 456 / *MILSATCOM System Engineering*	

	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2017 Army		Date: February 2016
Appropriation/Budget Activity 2040 / 7	**R-1 Program Element (Number/Name)** PE 0303142A / *SATCOM Ground Environment (SPACE)*	**Project (Number/Name)** 456 / *MILSATCOM System Engineering*

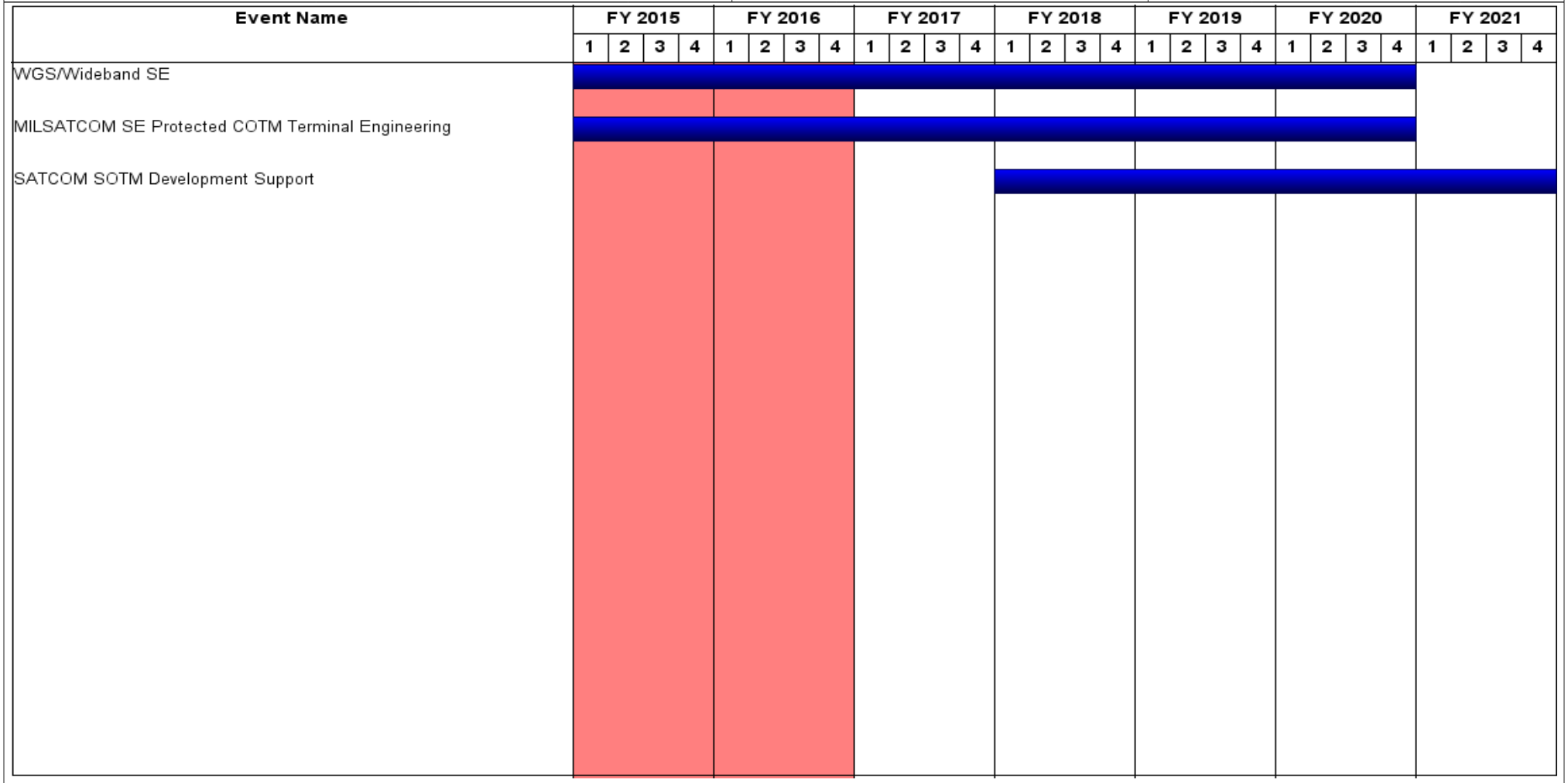

Exhibit R-4A, RDT&E Schedule Details: PB 2017 Army		Date: February 2016
Appropriation/Budget Activity 2040 / 7	**R-1 Program Element (Number/Name)** PE 0303142A / *SATCOM Ground Environment (SPACE)*	**Project (Number/Name)** 456 / *MILSATCOM System Engineering*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
WGS/Wideband SE	1	2004	4	2020
MILSATCOM SE Protected COTM Terminal Engineering	1	2015	4	2020
SATCOM SOTM Development Support	1	2018	4	2021

Exhibit R-2A, RDT&E Project Justification: PB 2017 Army			Date: February 2016
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303142A / *SATCOM Ground Environment (SPACE)*	Project (Number/Name) EA3 / *Transportable Tactical Cmd Comms (T2C2)*	

COST ($ in Millions)	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
EA3: *Transportable Tactical Cmd Comms (T2C2)*	-	3.040	3.885	3.652	-	3.652	0.000	0.000	0.000	0.000	0.000	10.577
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Transportable Tactical Command Communications (T2C2) extends the Warfighter Information Network Tactical (WIN-T) network to small company and team sized early entry units. The T2C2 system is based on combat proven capabilities and provides robust voice and data communication capabilities. The T2C2 systems will also integrate users into the higher capacity WIN-T network and extend that network to the tactical edge; T2C2 also enables warfighters in select small Command Posts (CP) (typically Company level) and select Army teams to send and receive time sensitive Situational Awareness (SA), Intelligence, and Mission Command (MC) information while At-the-Halt (ATH) in support of all Joint determined and defined operational phases. These phases span from the initial Shaping Phase, designed to dissuade or deter adversaries and assure mission friends, to Deterrence, Initiative Seizure and Domination phases culminating with post maneuver Stabilization and Enabling of Civil Authorities enabling legitimate civil governance in safe and secure environment. FY17 funds are in support of T2C2 systems (Light and Heavy) Initial Operational Test & Evaluation (IOT&E) in support a Full Rate Production (FRP) decision scheduled for FY18.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2015	FY 2016	FY 2017
Title: T2C2 Testing ***Description:*** Testing requirements to achieve FRP. ***FY 2015 Accomplishments:*** Supported the completion of Milestone C and initial testing requirements to support efforts to achieve FRP. ***FY 2016 Plans:*** Supports testing requirements including Electromagnetic testing, Enviornmental testing, AIC testing, a Network test and Joint Interoperability Testing Command (JITC) Certification. ***FY 2017 Plans:*** Initial Operational Test & Evaluation at the Network Integration Event (NIE) 17.2 (May 2017).	2.731	3.885	3.652
Title: T2C2 Testing Articles and Transportation ***Description:*** Procurement of testing articles and the transportation of assets to the testing location. ***FY 2015 Accomplishments:*** Transportation of test assets to the testing location.	0.309	-	-
Accomplishments/Planned Programs Subtotals	3.040	3.885	3.652

Exhibit R-2A, RDT&E Project Justification: PB 2017 Army		Date: February 2016
Appropriation/Budget Activity 2040 / 7	**R-1 Program Element (Number/Name)** PE 0303142A / *SATCOM Ground Environment (SPACE)*	**Project (Number/Name)** EA3 / *Transportable Tactical Cmd Comms (T2C2)*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
• Transportable Tactical Command Comm: *Transportable Tactical Command Communications (T2C2) (B85800)*	10.847	50.722	36.580	-	36.580	62.600	62.988	78.444	79.022	Continuing	Continuing

Remarks

D. Acquisition Strategy

The Transportable Tactical Command Communications (T2C2) program Acquisition Strategy (AS) is based on integration of existing Commercial-Off-the-Shelf (COTS)/ Non-Developmental Items (NDI) into new integrated systems fielded in the needed configuration for small teams or small unit Command Posts (CP) to allow these units to receive and transmit data. T2C2 will provide a high bandwidth tactical network extension for small unit CPs operating beyond line-of-sight from their higher headquarters and for teams operating outside the full tactical network architecture. A competitive award using an existing IDIQ contract will take advantage of the competitive forces of the commercial marketplace which will result in lower prices, better quality, and reduced time from requirements identification to award. The systems will be improved over time through technology insertions/refreshments via new competitions every three to five years. T2C2 will utilize a two-level maintenance concept, will be Soldier-maintained, and initially supported by Interim Contractor Support. An analysis will be conducted to determine the ultimate supportability path. This strategy will allow a capability to be integrated and delivered quickly to support a limited deployment of Low Rate Initial Production (LRIP) units in FY17 required for Production Verification and the Initial Operational Test and Evaluation, with FRP planned for FY18.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2017 Army			Date: February 2016
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303142A / *SATCOM Ground Environment (SPACE)*	Project (Number/Name) EA3 / *Transportable Tactical Cmd Comms (T2C2)*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2015 Cost	FY 2015 Award Date	FY 2016 Cost	FY 2016 Award Date	FY 2017 Base Cost	FY 2017 Base Award Date	FY 2017 OCO Cost	FY 2017 OCO Award Date	FY 2017 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
T2C2 Testing	TBD	Various : Various	0.000	2.731		3.885		3.652		-		3.652	0	10.268	0
T2C2 Testing Articles and Transportation	TBD	Various : Various	0.000	0.309		-		-		-		-	0	0.309	0
		Subtotal	0.000	3.040		3.885		3.652		-		3.652	0.000	10.577	0.000

	Prior Years	FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	3.040		3.885		3.652		-		3.652	0.000	10.577	0.000

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2017 Army		Date: February 2016
Appropriation/Budget Activity 2040 / 7	**R-1 Program Element (Number/Name)** PE 0303142A / *SATCOM Ground Environment (SPACE)*	**Project (Number/Name)** EA3 / *Transportable Tactical Cmd Comms (T2C2)*

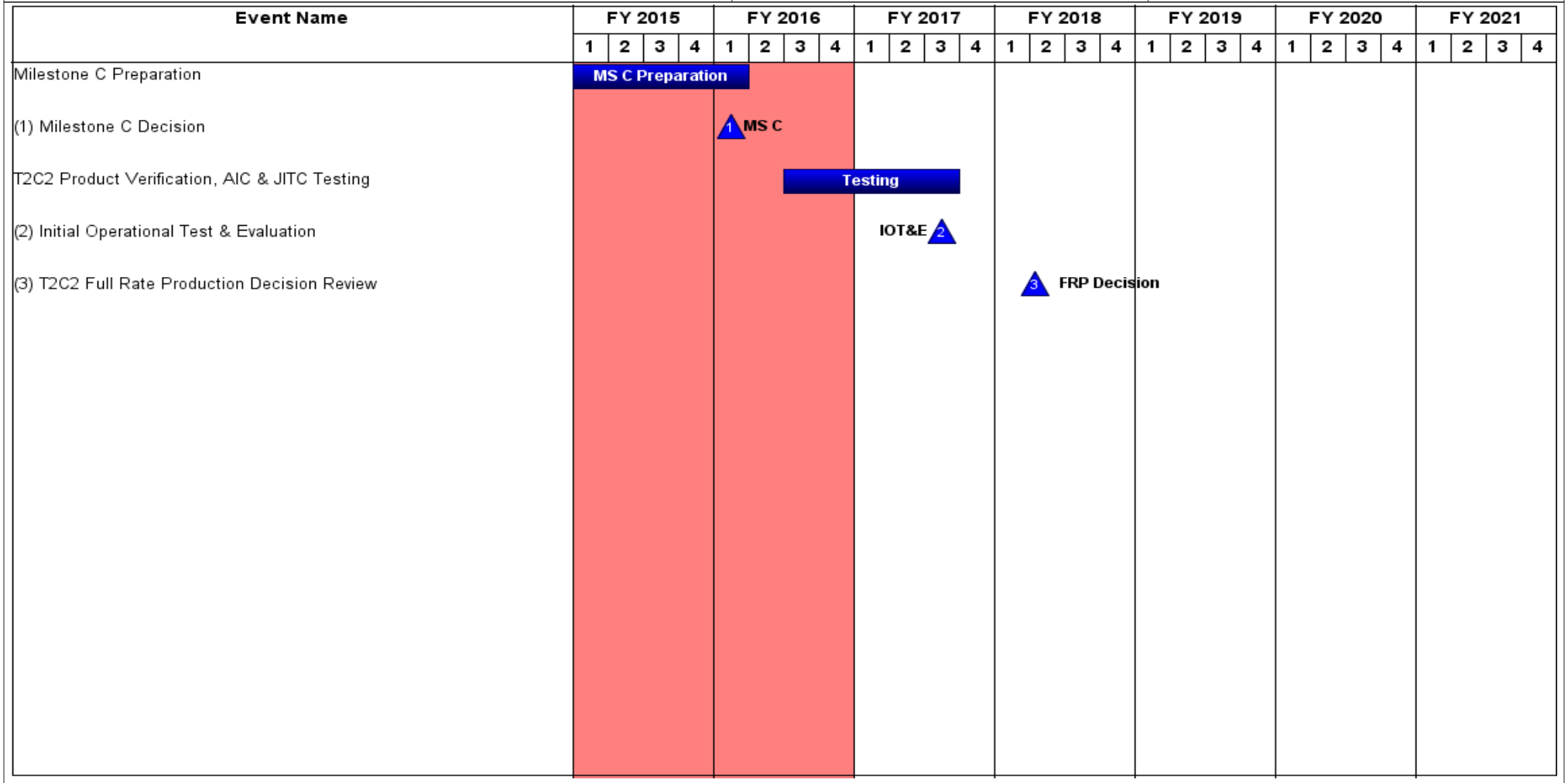

Exhibit R-4A, RDT&E Schedule Details: PB 2017 Army		Date: February 2016
Appropriation/Budget Activity 2040 / 7	**R-1 Program Element (Number/Name)** PE 0303142A / *SATCOM Ground Environment (SPACE)*	**Project (Number/Name)** EA3 / *Transportable Tactical Cmd Comms (T2C2)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Milestone C Preparation	3	2014	1	2016
Milestone C Decision	1	2016	1	2016
T2C2 Product Verification, AIC & JITC Testing	3	2016	3	2017
Initial Operational Test & Evaluation	3	2017	3	2017
T2C2 Full Rate Production Decision Review	2	2018	2	2018

Exhibit R-2A, RDT&E Project Justification: PB 2017 Army			Date: February 2016
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303142A / *SATCOM Ground Environment (SPACE)*	Project (Number/Name) EK8 / *Enroute Mission Command*	

COST ($ in Millions)	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
EK8: *Enroute Mission Command*	-	0.000	2.950	5.712	-	5.712	0.000	0.000	0.000	0.000	0.000	8.662
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

Funds in this program element are for testing requirements.

A. Mission Description and Budget Item Justification

Enroute Mission Command (EMC) supports the Global Response Force (GRF) and other Army units with the requirement to conduct Airborne forced entry operations with the ability to conduct mission command, to include mission planning and rehearsal, while enroute on board US Air Force Air Mobility Command (AMC) aircraft. EMC provides a modernization to enroute communications to enable broadband reach-back data capability utilizing military or commercial networks with adequate bandwidth support required by Mission Command and Intelligence applications. EMC will provide commanders with the ability to obtain and share near real-time information regarding intelligence, situational awareness and command and control information while enroute to their objective. The ability to adjust plans and strategize utilizing the latest Intel data will give the GRF the information dominance needed to execute their mission once they arrive at their objective. FY17 funding will support test by the Army Test and Evaluation Command (ATEC) during Operational Assessment (OA). The OA supports the Milestone Decision Authority (MDA) Disposition Decision (FY18) to continue procurement and fielding.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2015	FY 2016	FY 2017
Title: EMC Testing	-	2.950	5.712
Description: EMI/EMC, Flight Test and Operational Asessment			
FY 2016 Plans: Flight Test and EMI/EMC Testing			
FY 2017 Plans: Operational Asessment			
Accomplishments/Planned Programs Subtotals	-	2.950	5.712

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

Exhibit R-2A, RDT&E Project Justification: PB 2017 Army		Date: February 2016
Appropriation/Budget Activity 2040 / 7	**R-1 Program Element (Number/Name)** PE 0303142A / *SATCOM Ground Environment (SPACE)*	**Project (Number/Name)** EK8 / *Enroute Mission Command*

D. Acquisition Strategy

The continued procurement of the EMC full operational capability follows DoDI 5000.02, 7 Jan 2015, Enclosure 13, Rapid Fielding of Capabilities. The Milestone Decision Authority (MDA) and project manager will tailor and streamline program strategy based on the required timelines to meet urgent need capability requirements. The Army Executive Agent signed an Acquisition Decision Memorandum (ADM) on 27 April 2015 delegating MDA to PEO C3T. The MDA signed an ADM on 11 May 2015 selecting the KuKa Antenna and Radome for the Full Operational Capability. An ADM was signed on 20 May 2015 granting approval to enter into production and deployment phase.

Due to rephasing of FY17 OPA funding into FY18/19, program has been restructured. Initial Operational Capability met in May 2015 with modification of five C-17s with satellite antennae and installation kits, and roll-on/roll-off, battalion level, Key Leader Node (KEN). Full Operational Capability (FOC) is 35 C-17s, seven KENs, and 21 company level Dependent Airborne Nodes (DAN), and an airborne command post suite (CASPAN). FOC is currently projected for FY20. Planning to field an interim capability and conduct an Operational Assessment in FY17.

FY17 RDT&E funding will support test by the Army Test and Evaluation Command (ATEC) during Operational Assessment (OA). The OA supports the Milestone Decision Authority (MDA) Disposition Decision (FY18) to continue procurement and fielding.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2017 Army			Date: February 2016
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303142A / *SATCOM Ground Environment (SPACE)*	Project (Number/Name) EK8 / *Enroute Mission Command*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2015 Cost	FY 2015 Award Date	FY 2016 Cost	FY 2016 Award Date	FY 2017 Base Cost	FY 2017 Base Award Date	FY 2017 OCO Cost	FY 2017 OCO Award Date	FY 2017 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
EMC Testing	MIPR	Aberdeen Proving Ground, MD : ATEC	0.000	-		2.950		5.712		-		5.712	0	8.662	0
		Subtotal	0.000	-		2.950		5.712		-		5.712	0.000	8.662	0.000

	Prior Years	FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	-		2.950		5.712		-		5.712	0.000	8.662	0.000

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2017 Army		Date: February 2016
Appropriation/Budget Activity 2040 / 7	**R-1 Program Element (Number/Name)** PE 0303142A / *SATCOM Ground Environment (SPACE)*	**Project (Number/Name)** EK8 / *Enroute Mission Command*

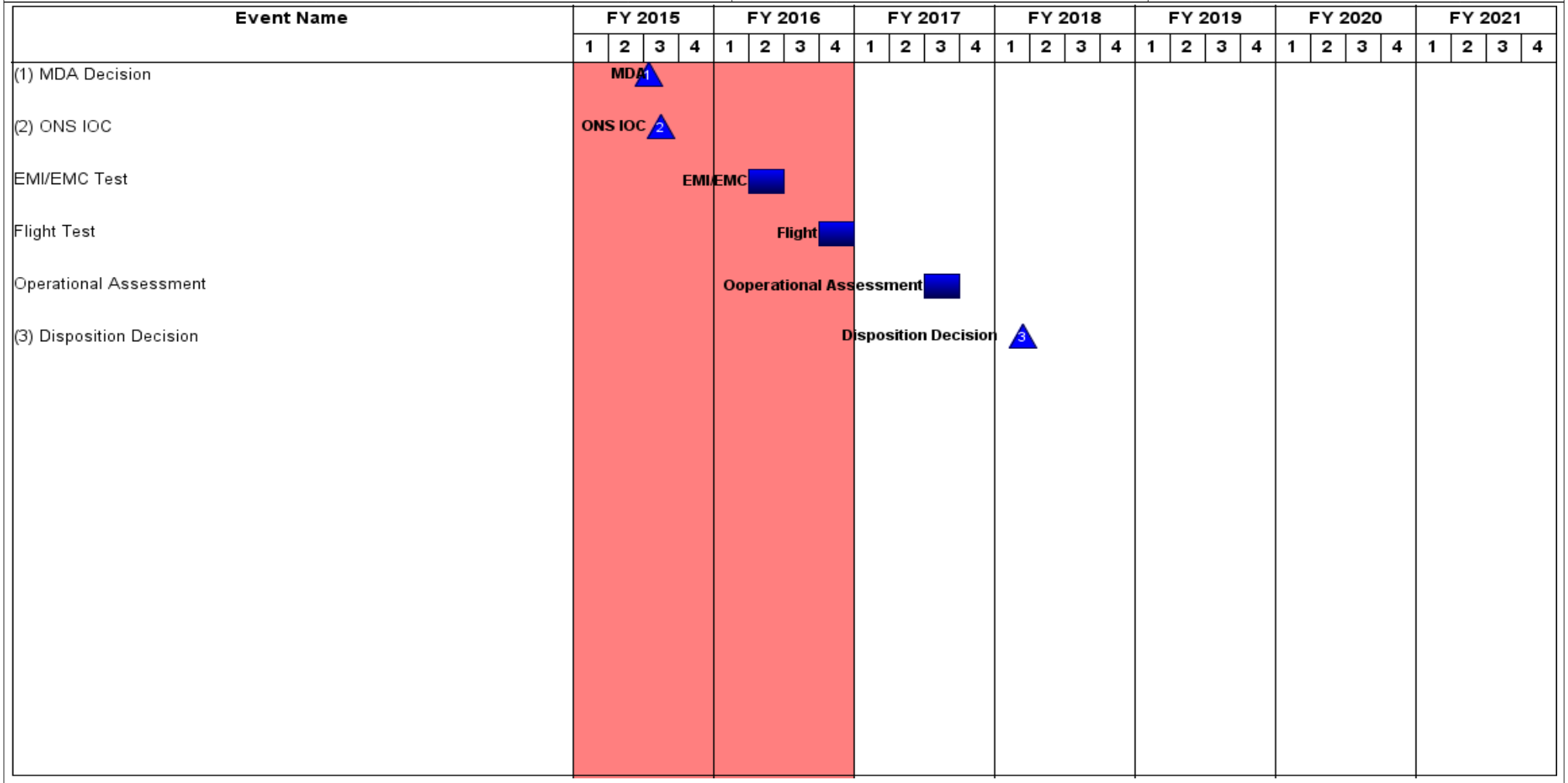

Exhibit R-4A, RDT&E Schedule Details: PB 2017 Army		Date: February 2016
Appropriation/Budget Activity 2040 / 7	**R-1 Program Element (Number/Name)** PE 0303142A / *SATCOM Ground Environment (SPACE)*	**Project (Number/Name)** EK8 / *Enroute Mission Command*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
MDA Decision	3	2015	3	2015
ONS IOC	3	2015	3	2015
EMI/EMC Test	2	2016	2	2016
Flight Test	4	2016	4	2016
Operational Assessment	3	2017	3	2017
Disposition Decision	1	2018	1	2018

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