Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Army											Date: February 2015	
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 2014**	**FY 2015**	**FY 2016 Base**	**FY 2016 OCO**	**FY 2016 Total**	**FY 2017**	**FY 2018**	**FY 2019**	**FY 2020**	**Cost To Complete**	**Total Cost**
Total Program Element	-	17.644	11.006	9.355	-	9.355	17.748	11.051	9.341	9.385	Continuing	Continuing
253: *Dscs-Dcs (Phase II)*	-	5.404	4.177	1.594	-	1.594	7.423	6.812	6.029	6.093	Continuing	Continuing
456: *MILSATCOM System Engineering*	-	12.240	2.951	0.926	-	0.926	4.536	4.239	3.312	3.292	Continuing	Continuing
EA3: *Transportable Tactical Cmd Comms (T2C2)*	-	-	3.878	3.885	-	3.885	-	-	-	-	-	7.763
EK8: *Enroute Mission Command*	-	-	-	2.950	-	2.950	5.789	-	-	-	-	8.739

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 2016 Army					Date: February 2015
Appropriation/Budget Activity 2040: *Research, Development, Test & Evaluation, Army* / BA 7: *Operational Systems Development*			R-1 Program Element (Number/Name) PE 0303142A / *SATCOM Ground Environment (SPACE)*		
B. Program Change Summary ($ in Millions)	**FY 2014**	**FY 2015**	**FY 2016 Base**	**FY 2016 OCO**	**FY 2016 Total**
Previous President's Budget	18.188	11.011	12.131	-	12.131
Current President's Budget	17.644	11.006	9.355	-	9.355
Total Adjustments	-0.544	-0.005	-2.776	-	-2.776
• Congressional General Reductions	-	-0.005			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.544	-			
• Adjustments to Budget Years	-	-	-2.776	-	-2.776

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army			Date: February 2015
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 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
253: *Dscs-Dcs (Phase II)*	-	5.404	4.177	1.594	-	1.594	7.423	6.812	6.029	6.093	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 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Title: Netcentric System Engineering and Analysis ***Description:*** Funding is provided for the following effort: ***FY 2014 Accomplishments:*** Fund analysis for Digital IF. ***FY 2015 Plans:*** Fund analysis for Netcentric System Engineering ***FY 2016 Base Plans:*** Fund analysis for Netcentric System Engineering.	2.014	1.516	0.243	-	0.243
Title: Jam Resistant Secure Communications (JRSC) ***Description:*** Funding is provided for the following effort: ***FY 2014 Accomplishments:*** Fund Jam Resistant Secure Communications (JRSC) risk migitation.	1.818	-	-	-	-
Title: Future analysis of Wideband SATCOM Operational Management System (WSOMS) database consolidation effort.	1.572	1.123	0.308	-	0.308

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army		Date: February 2015
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 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Description: Funding is provided for the following effort: ***FY 2014 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. ***FY 2015 Plans:*** 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. ***FY 2016 Base Plans:*** 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.					
Title: Protected SATCOM Modem ***Description:*** Funding is provided for the following effort: ***FY 2015 Plans:*** Fund modem pilot program to address Anti-Jam (AJ) and Anti-Scintillation (AS) for the WGS constellation. ***FY 2016 Base Plans:*** To investigate the possibility of integrating anti-jam features into current Commercial Off-The-Shelf (COTS), Network Management System (NMS).	-	1.538	1.043	-	1.043
Accomplishments/Planned Programs Subtotals	5.404	4.177	1.594	-	1.594

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army		Date: February 2015
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)*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
• 22: *Defense Enterprise Wideband SATCOM Systems (DEWSS) (BB8500)*	57.725	118.085	196.306	-	196.306	144.890	134.373	178.020	170.297	Continuing	Continuing

Remarks

D. Acquisition Strategy

FY2016 funding in the amount of $1.594 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.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Army		Date: February 2015
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 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Netcentric SE Studies and Analysis	MIPR	CERDEC : APG, MD	1.293	1.391	Aug 2014	1.110	Feb 2015	0.348	Feb 2016	-		0.348	-	4.142	-
Jam Resistant Secure Communications (JRSC)	MIPR	CERDEC : APG, MD	0.750	1.413		-		-		-		-	-	2.163	-
Conduct Analysis of WSOMS Database Consolidation	MIPR	CERDEC : APG, MD	0.934	1.218	Feb 2014	0.950	Feb 2015	0.246	Feb 2016	-		0.246	-	3.348	-
Protected SATCOM Modems	MIPR	CERDEC : APG, MD	0.918	-		0.587	Feb 2015	0.210	Feb 2016	-		0.210	-	1.715	-
		Subtotal	3.895	4.022		2.647		0.804		-		0.804	-	11.368	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
In house Support	Allot	PdM WESS : Ft. Belvoir, VA	0.459	0.470		0.480		0.290		-		0.290	-	1.699	-
Contractor Support	C/CPFF	ACC-RI : Rock Island, IL	0.785	0.912	Jul 2014	1.050	Jul 2015	0.500	Jul 2016	-		0.500	-	3.247	-
		Subtotal	1.244	1.382		1.530		0.790		-		0.790	-	4.946	-

	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	5.139	5.404		4.177		1.594		-		1.594	-	16.314	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Army		Date: February 2015
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)*

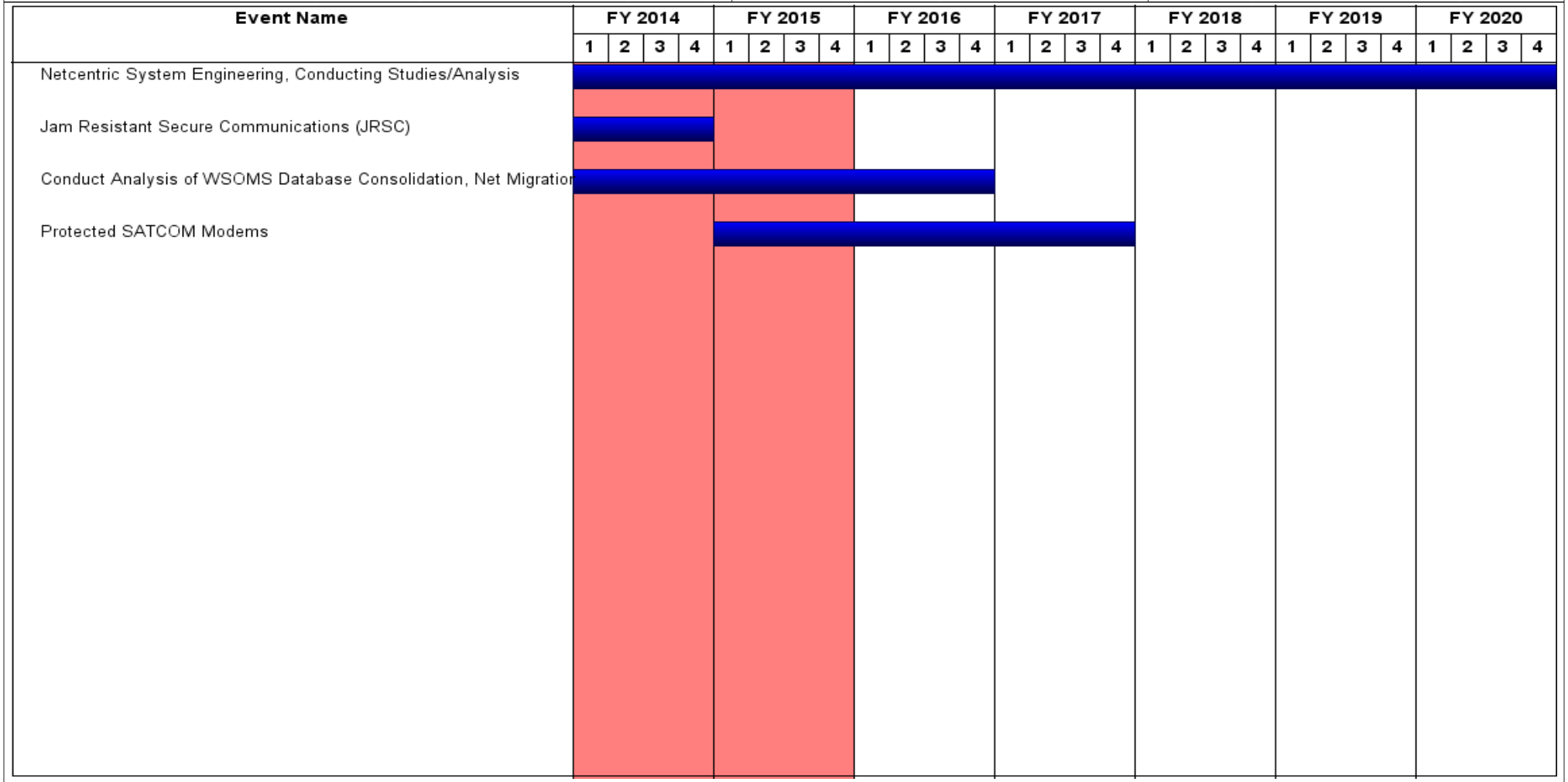

Exhibit R-4A, RDT&E Schedule Details: PB 2016 Army		Date: February 2015
Appropriation/Budget Activity 2040 / 7	**R-1 Program Element (Number/Name)** PE 0303142A / *SATCOM Ground Environment (SPACE)*	**Project (Number/Name)** 253 / *Dscs-Dcs (Phase II)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Netcentric System Engineering, Conducting Studies/Analysis	1	2006	4	2021
Jam Resistant Secure Communications (JRSC)	1	2014	4	2014
Conduct Analysis of WSOMS Database Consolidation, Net Migration	1	2014	4	2016
Protected SATCOM Modems	1	2015	4	2017

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army			Date: February 2015
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 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
456: *MILSATCOM System Engineering*	-	12.240	2.951	0.926	-	0.926	4.536	4.239	3.312	3.292	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Military Satellite Communications (MILSATCOM) System Engineering (SE) provides centralized funding for US Army participation in the joint development of MILSATCOM programs. This includes engineering, technical and cost related analyses supporting architecture, payloads, network and terminal requirement and design decisions across all MILSATCOM programs.

FY16 funds support the continued systems engineering required to mature technology options that demonstrate potential based on the results of the AoA and BAA studies. These efforts have a direct impact on the ability of the WIN-T Military Wideband SATCOM, commercial SATCOM, and Protected SATCOM on the move for WIN-T with minimal development and programmatic risk.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Title: Protected Communications System Engineering	1.975	1.726	0.463	-	0.463
Description: Protected Communications System Engineering ***FY 2014 Accomplishments:*** Protected Advanced EHF (AEHF) Communications System Engineering ***FY 2015 Plans:*** Protected Communications System Engineering ***FY 2016 Base Plans:*** Protected Communications System Engineering					
Title: Wideband Global SATCOM (WGS) Communications System Engineering	1.725	1.225	0.463	-	0.463
Description: Wideband Global SATCOM (WGS) Communications System Engineering ***FY 2014 Accomplishments:*** Wideband Global SATCOM (WGS) Communications System Engineering and Intelligence, Surveillance, Reconnaissance (ISR) Migration ***FY 2015 Plans:***					

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army		Date: February 2015
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 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Wideband Global SATCOM (WGS) Communications System Engineering to improve Ku/Ka antenna SWAP ***FY 2016 Base Plans:*** Wideband Global SATCOM (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 2014 Accomplishments:*** Experimentation, development, testing and certification of critical SATCOM and SOTM communication and network technologies.	2.511	-	-	-	-
Title: Federal Communications Commission/ International Telecommunciations Union (FCC/ITU) Satellite Communications On the Move (SOTM) Regulatory Proposals/Analyses/Modifications ***Description:*** Federal Communications Commission/ International Telecommunciations Union (FCC/ITU) SOTM Regulatory Proposals/Analyses/Modifications ***FY 2014 Accomplishments:*** Federal Communications Commission/ International Telecommunciations Union (FCC/ITU) SOTM Regulatory Proposals/Analyses/Modifications	0.600	-	-	-	-
Title: Protected Terminal COTM and Wide Area Network (WAN) Prototyping ***Description:*** Protected Wide Area Network (WAN) and Terminal Prototyping ***FY 2014 Accomplishments:*** Protected Terminal COTM and Wide Area Network (WAN) Prototyping	1.225	-	-	-	-
Title: Transportable Tactical Command Communications (T2C2) ***Description:*** T2C2 Development: Achieve Materiel Development Decision (MDD), Conduct Analysis of Alternatives (AoA), Preparation for Milestone C, procure Low Rate Initial Production (LRIP), conduct Initial Operational Testing and Evaluation (IOT&E), Support Full Rate Production Decision ***FY 2014 Accomplishments:***	4.204	-	-	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army		Date: February 2015
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 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
T2C2: Preparation for Milestone C, procure Low Rate Initial Production (LRIP), conduct Initial Operational Testing and Evaluation (IOT&E), Support Full Rate Production Decision					
Accomplishments/Planned Programs Subtotals	12.240	2.951	0.926	-	0.926

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 2016 Army			Date: February 2015
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 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Oversight	MIPR	PM WIN T : PEO C3T	2.414	0.500		0.100		-		-		-	Continuing	Continuing	Continuing
Advanced Architecture/ Advanced Wideband System Architecture	MIPR	MIT Lincoln Labs : Lexington , MA	11.474	-		-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	13.888	0.500		0.100		-		-		-	-	-	-

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Protected Communications and WGS Communications SE	TBD	PM WIN-T : Various	26.820	1.050		0.300		-		-		-	Continuing	Continuing	Continuing
Experimentation, development, testing & certification of SATCOM & SOTM communciation & networking.	MIPR	PM WIN-T : Various	23.201	1.285		-		-		-		-	Continuing	Continuing	Continuing
FCC/ITU SOTM Regulatory Proposals/ Analyses/Modifications	MIPR	John Hopkins Universtiy Applied Physics Lab : Laurel, MD	2.055	0.600		-		-		-		-	Continuing	Continuing	Continuing
Protected COTM Tactical Reference Terminal Prototyping and Protected Wide Area Network Prototyping	TBD	PEO C3T PM WIN-T : Various	19.750	0.961		-		-		-		-	Continuing	Continuing	Continuing
Purchase of prototype hardware and engineering studies	C/CPFF	PEO C3T : PM WIN-T	1.164	-		-		-		-		-	Continuing	Continuing	Continuing
T2C2 Development Analysis of AoA activity associated with the	TBD	PEO C3T : PM WIN-T	0.400	-		-		-		-		-	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Army		Date: February 2015
Appropriation/Budget Activity 2040 / 7	**R-1 Program Element (Number/Name)** PE 0303142A / *SATCOM Ground Environment (SPACE)*	**Project (Number/Name)** 456 / *MILSATCOM System Engineering*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
evaluation and award of T2C2 contract															
Includes conducting market research on T2C2 candidate technologies	TBD	PEO C3T : PM WIN-T	0.100	0.250		-		-		-		-	-	0.350	0.100
T2C2 preparation of Milestone C Documentation	TBD	PEO C3T : PM WIN T	0.000	1.694		-		-		-		-	-	1.694	-
		Subtotal	73.490	5.840		0.300		-		-		-	-	-	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Engineering (In House)	MIPR	PM WIN T : Core, Matrix	25.288	1.700		1.300		0.300		-		0.300	Continuing	Continuing	Continuing
Engineering Contractors Support	C/CPFF	PM WIN-T : Contractor TBD	38.335	0.600		0.500		0.626		-		0.626	Continuing	Continuing	Continuing
System Architecture & Analysis	Various	CERDEC : PM WIN T	17.336	0.165		-		-		-		-	Continuing	Continuing	Continuing
T2C2 preparation for Milestone C; Request for Proposal and solcitation preparation	TBD	PEO C3T PM WIN T : Various	0.200	0.300		-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	81.159	2.765		1.800		0.926		-		0.926	-	-	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Army			Date: February 2015
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303142A / *SATCOM Ground Environment (SPACE)*	Project (Number/Name) 456 / *MILSATCOM System Engineering*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Terminal Testing and Evaluation System Engineering	FFRDC	PEO C3T WIN T : TBD	2.004	0.300		0.200		-		-		-	Continuing	Continuing	Continuing
Test Support	MIPR	MATRIX : PM WIN T	22.012	0.375		0.200		-		-		-	Continuing	Continuing	Continuing
Testing, Certification	MIPR	Support Technical Testing : PM WIN T	6.150	0.500		0.351		-		-		-	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	-		-		-		-		-	Continuing	Continuing	Continuing
T2C2 complete Intitial Operational Test and Evaluation	TBD	PEO C3T : PM WIN-T	0.000	1.960		-		-		-		-	-	1.960	-
		Subtotal	30.566	3.135		0.751		-		-		-	-	-	-

	Prior Years	FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	199.103	12.240		2.951		0.926		-		0.926	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Army		Date: February 2015
Appropriation/Budget Activity 2040 / 7	**R-1 Program Element (Number/Name)** PE 0303142A / *SATCOM Ground Environment (SPACE)*	**Project (Number/Name)** 456 / *MILSATCOM System Engineering*

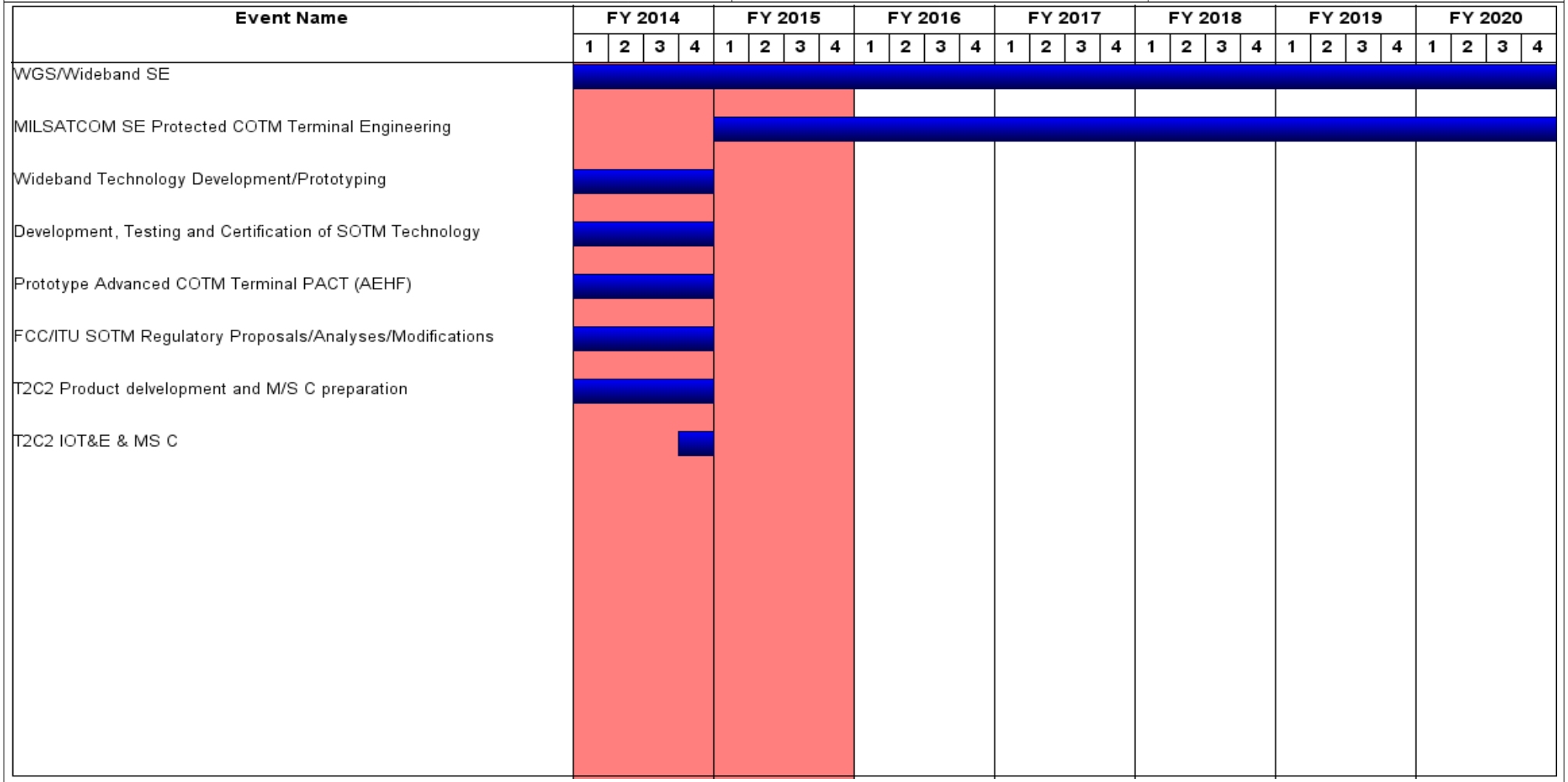

Exhibit R-4A, RDT&E Schedule Details: PB 2016 Army		Date: February 2015
Appropriation/Budget Activity 2040 / 7	**R-1 Program Element (Number/Name)** PE 0303142A / *SATCOM Ground Environment (SPACE)*	**Project (Number/Name)** 456 / *MILSATCOM System Engineering*

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
Wideband Technology Development/Prototyping	1	2004	4	2014
Development, Testing and Certification of SOTM Technology	1	2012	4	2014
Prototype Advanced COTM Terminal PACT (AEHF)	1	2010	4	2014
FCC/ITU SOTM Regulatory Proposals/Analyses/Modifications	1	2009	4	2014
T2C2 Product delvelopment and M/S C preparation	3	2013	4	2014
T2C2 IOT&E & MS C	4	2014	4	2014

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army			Date: February 2015
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 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
EA3: *Transportable Tactical Cmd Comms (T2C2)*	-	-	3.878	3.885	-	3.885	-	-	-	-	-	7.763
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. FY16 funding will be used for FY16/17 testing of the T2C2 systems (Light and Heavy) to support a Full Rate Production (FRP) decision scheduled for 2018. These testing events include Product Verification Testing and Army Interoperability Certification (AIC) scheduled for FY2016 and Initial Operational Test & Evaluation (IOT&E) and Joint Integration Test Command (JITC) Certification in FY2017.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Title: T2C2 Testing ***Description:*** Testing requirements to achieve Full Rate Production (FRP). ***FY 2015 Plans:*** Initial testing requirements to support efforts to achieve FRP. ***FY 2016 Base Plans:*** Testing requirements to achieve FRP, including Electromagnetic testing, Enviornmental testing, AIC testing, a Network test and Joint Interoperability Testing Command (JITC) Certification.	-	0.309	3.885	-	3.885
Title: T2C2 Testing Articles and Transportation ***Description:*** Procurement of testing articles and the transportation of assets to the testing location. ***FY 2015 Plans:*** Transportation of test assets to the testing location.	-	3.569	-	-	-
Accomplishments/Planned Programs Subtotals	-	3.878	3.885	-	3.885

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army		Date: February 2015
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 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
• Transportable Tactical Command Comm: *Transportable Tactical Command Communications (T2C2) (B85800)*	-	13.999	44.998	5.724	50.722	49.232	62.849	62.962	78.456	-	318.220

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 Initial Operational Capability testing, with FRP planned for FY18. Fielding completion for all T2C2 systems will be in FY28.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Army			Date: February 2015
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 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
T2C2 Testing	TBD	TBD : TBD	0.000	-		0.309		3.885		-		3.885	-	4.194	-
T2C2 Testing Articles and Transportation	TBD	TBD : TBD	0.000	-		3.569		-		-		-	-	3.569	-
		Subtotal	0.000	-		3.878		3.885		-		3.885	-	7.763	-

	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	-		3.878		3.885		-		3.885	-	7.763	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Army		Date: February 2015
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)*

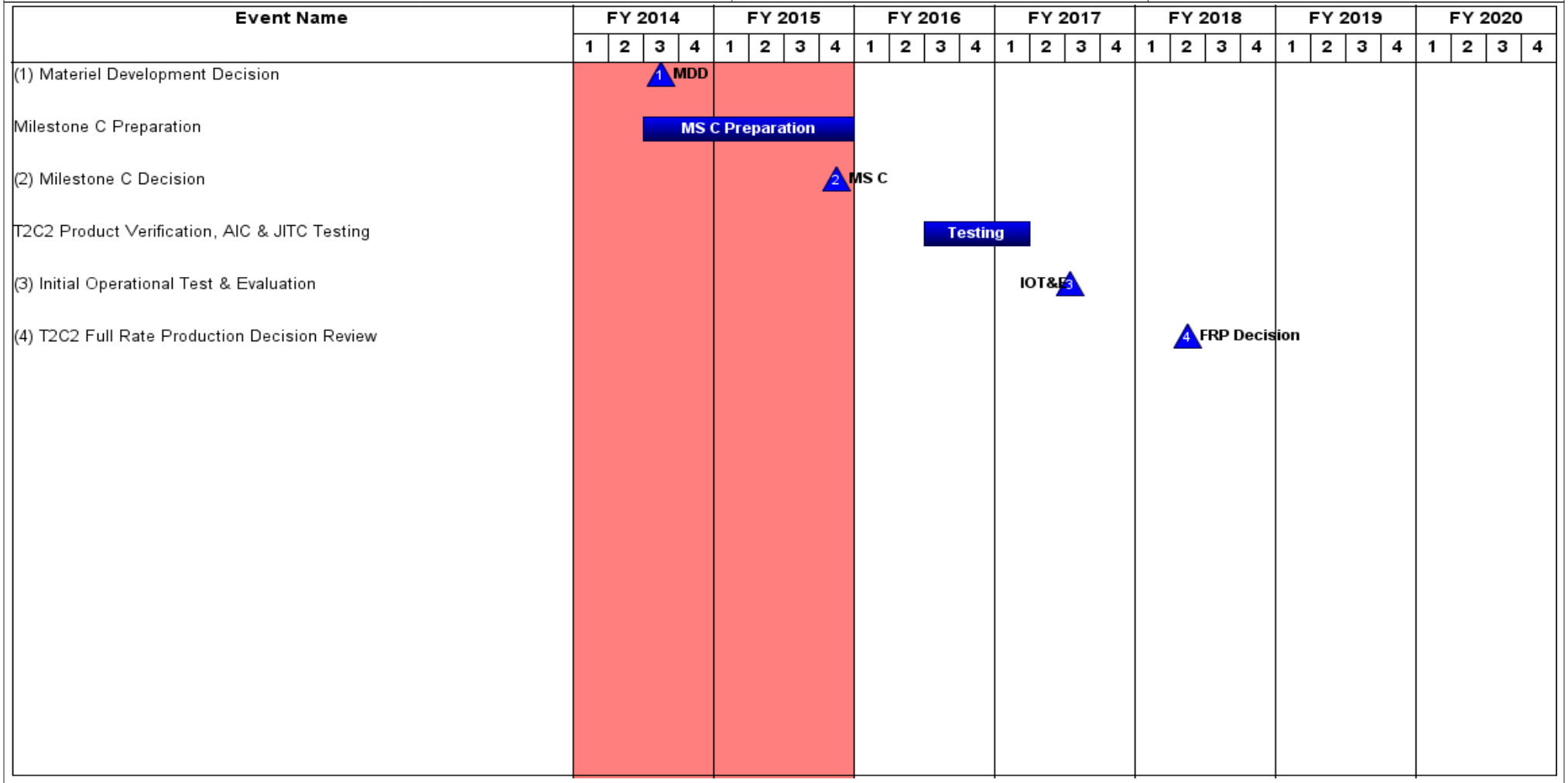

Exhibit R-4A, RDT&E Schedule Details: PB 2016 Army		Date: February 2015
Appropriation/Budget Activity 2040 / 7	**R-1 Program Element (Number/Name)** PE 0303142A / *SATCOM Ground Environment (SPACE)*	**Project (Number/Name)** EA3 / *Transportable Tactical Cmd Comms (T2C2)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Materiel Development Decision	3	2014	3	2014
Milestone C Preparation	3	2014	4	2015
Milestone C Decision	4	2015	4	2015
T2C2 Product Verification, AIC & JITC Testing	3	2016	1	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 2016 Army			Date: February 2015
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 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
EK8: *Enroute Mission Command*	-	-	-	2.950	-	2.950	5.789	-	-	-	-	8.739
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

This project element is a new start. 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 forcible 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. EMC2 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. FY16 Funding will be used for Electromagnetic Interference/Electromagnetic Compatibility (EMI/EMC), Flight Test and preparation for Post Fielding Assessment.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Title: EMC Testing ***Description:*** EMI/EMC, Flight Test and Post Fielding Assessment. ***FY 2016 Base Plans:*** Testing to include EMI/EMC, Flight Test and Post Fielding Assessment.	-	-	2.950	-	2.950
Accomplishments/Planned Programs Subtotals	-	-	2.950	-	2.950

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

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 MDA and project manager will tailor and streamline program strategy based on the required timelines to meet urgent need capability requirements. Milestone Decision Authority (MDA) delegation (2QFY15) will yield an Acquisition Decision Memorandum (ADM) which approves the continued procurement.

Exhibit R-2A, RDT&E Project Justification: PB 2016 Army		Date: February 2015
Appropriation/Budget Activity 2040 / 7	**R-1 Program Element (Number/Name)** PE 0303142A / *SATCOM Ground Environment (SPACE)*	**Project (Number/Name)** EK8 / *Enroute Mission Command*

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Army			Date: February 2015
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 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
EMC Testing	TBD	Aberdeen Proving Ground, MD : ATEC	0.000	-		-		2.950		-		2.950	-	2.950	-
		Subtotal	0.000	-		-		2.950		-		2.950	-	2.950	-

	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	-		-		2.950		-		2.950	-	2.950	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Army		Date: February 2015
Appropriation/Budget Activity 2040 / 7	**R-1 Program Element (Number/Name)** PE 0303142A / *SATCOM Ground Environment (SPACE)*	**Project (Number/Name)** EK8 / *Enroute Mission Command*

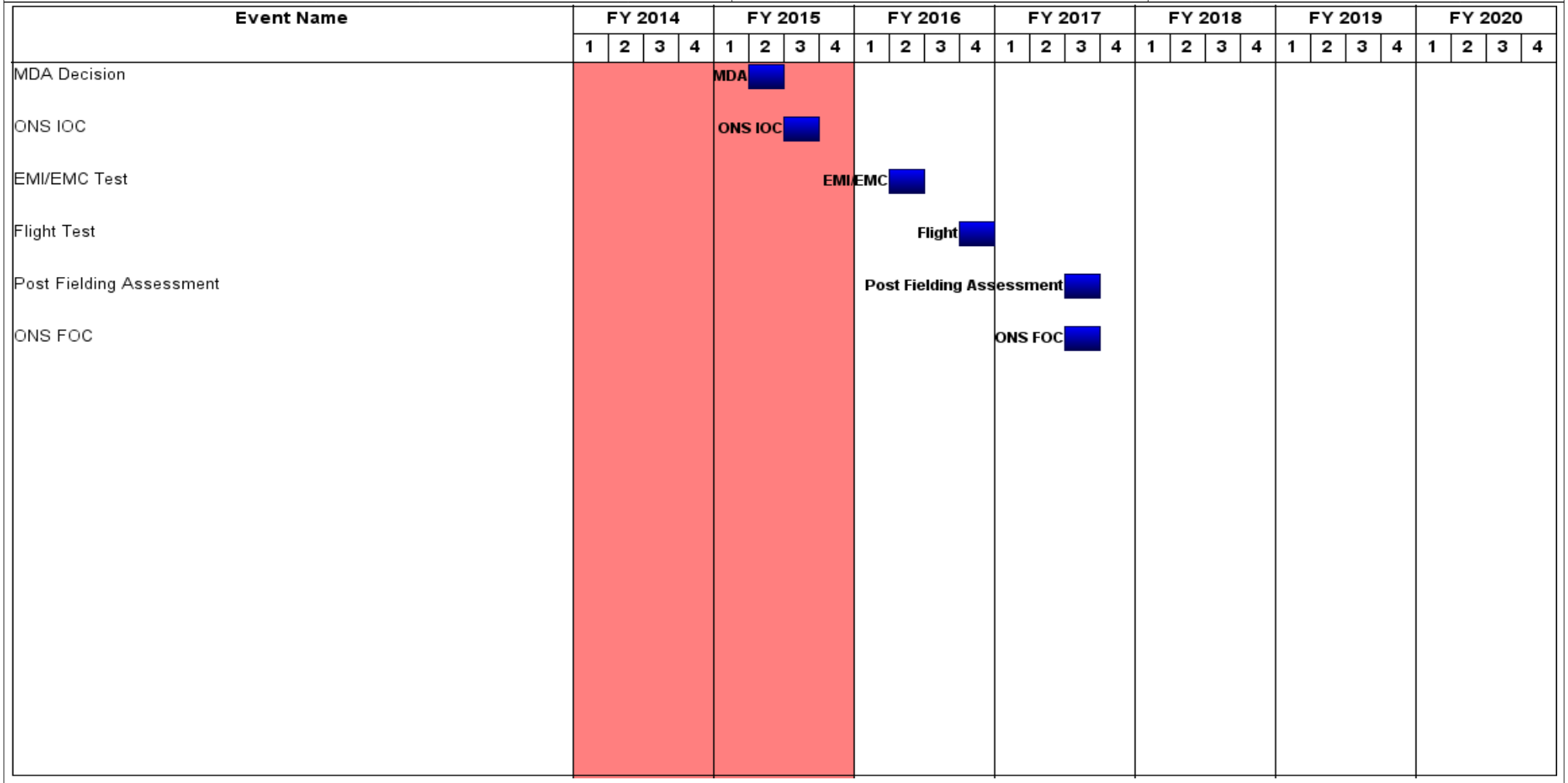

Exhibit R-4A, RDT&E Schedule Details: PB 2016 Army		Date: February 2015
Appropriation/Budget Activity 2040 / 7	**R-1 Program Element (Number/Name)** PE 0303142A / *SATCOM Ground Environment (SPACE)*	**Project (Number/Name)** EK8 / *Enroute Mission Command*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
MDA Decision	2	2015	2	2015
ONS IOC	3	2015	3	2015
EMI/EMC Test	2	2016	2	2016
Flight Test	4	2016	4	2016
Post Fielding Assessment	3	2017	3	2017
ONS FOC	3	2017	3	2017