Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Army											Date: February 2018	
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 2017**	**FY 2018**	**FY 2019 Base**	**FY 2019 OCO**	**FY 2019 Total**	**FY 2020**	**FY 2021**	**FY 2022**	**FY 2023**	**Cost To Complete**	**Total Cost**
Total Program Element	-	18.761	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	18.761
253: *Dscs-Dcs (Phase II)*	-	5.008	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	5.008
456: *MILSATCOM System Engineering*	-	5.750	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	5.750
EA3: *Transportable Tactical Cmd Comms (T2C2)*	-	3.511	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	3.511
EK8: *Enroute Mission Command*	-	4.492	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	4.492

Note

FY 2018 and out funding realigned to OSD PE 1203142A to reflect new Major Force Program 12 (MFP12) Space configuration.

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. 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 2019 Army					Date: February 2018
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 2017**	**FY 2018**	**FY 2019 Base**	**FY 2019 OCO**	**FY 2019 Total**
Previous President's Budget	18.815	0.000	0.000	-	0.000
Current President's Budget	18.761	0.000	0.000	-	0.000
Total Adjustments	-0.054	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-0.054	-	-	-	-

Change Summary Explanation

FY18 funding realigned to OSD PE 1203142A to reflect new Major Force Program 12 (MFP12) Space configuration.

Exhibit R-2A, RDT&E Project Justification: PB 2019 Army			Date: February 2018
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 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
253: *Dscs-Dcs (Phase II)*	-	5.008	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	5.008
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

FY 2018 and out funding realigned to OSD PE 1203142A to reflect new Major Force Program 12 (MFP12) Space configuration.

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 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Title: SATCOM Terminal Digital IF Implementation Analysis ***Description:*** SATCOM Terminal Digital IF Implementation Analysis	3.801	-	-	-	-
Title: Electromagnetic Interference Mitigation Analysis ***Description:*** Electromagnetic Interference Mitigation Analysis	1.207	-	-	-	-
Accomplishments/Planned Programs Subtotals	5.008	-	-	-	-

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
• BB8500: *Defense Enterprise Wideband SATCOM Systems (DEWSS) (BB8500)*	143.805	161.383	108.133	-	108.133	111.000	99.480	118.628	108.253	Continuing	Continuing

Remarks

Exhibit R-2A, RDT&E Project Justification: PB 2019 Army		Date: February 2018
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)*

D. Acquisition Strategy

As result of the new Major Force Program 12 (MFP12) Space Configuration, OSD directed this funding line transition to OSD PE 1203142/FE1 in FY 2018 and beyond.

This effort 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 2019 Army		Date: February 2018
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 2017 Cost	FY 2017 Award Date	FY 2018 Cost	FY 2018 Award Date	FY 2019 Base Cost	FY 2019 Base Award Date	FY 2019 OCO Cost	FY 2019 OCO Award Date	FY 2019 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
SATCOM Terminal Digital IF Implementation Analysis	MIPR	CERDEC : APG, MD	6.730	2.503		-		-		-		-	Continuing	Continuing	Continuing
Electromagnetic Interference Mitigation Analysis	MIPR	CERDEC : APG, MD	4.946	1.207		-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	11.676	3.710		-		-		-		-	Continuing	Continuing	N/A

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2017 Cost	FY 2017 Award Date	FY 2018 Cost	FY 2018 Award Date	FY 2019 Base Cost	FY 2019 Base Award Date	FY 2019 OCO Cost	FY 2019 OCO Award Date	FY 2019 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
In house Support	Allot	PdM WESS : Ft. Belvoir, VA	1.699	0.600		-		-		-		-	Continuing	Continuing	Continuing
Contractor Support	C/CPFF	ACC-APG : APG, MD	3.247	0.698	Mar 2017	-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	4.946	1.298		-		-		-		-	Continuing	Continuing	N/A

	Prior Years	FY 2017 Cost	FY 2017 Award Date	FY 2018 Cost	FY 2018 Award Date	FY 2019 Base Cost	FY 2019 Base Award Date	FY 2019 OCO Cost	FY 2019 OCO Award Date	FY 2019 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	16.622	5.008		0.000		-		-		-	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2019 Army		Date: February 2018
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)*

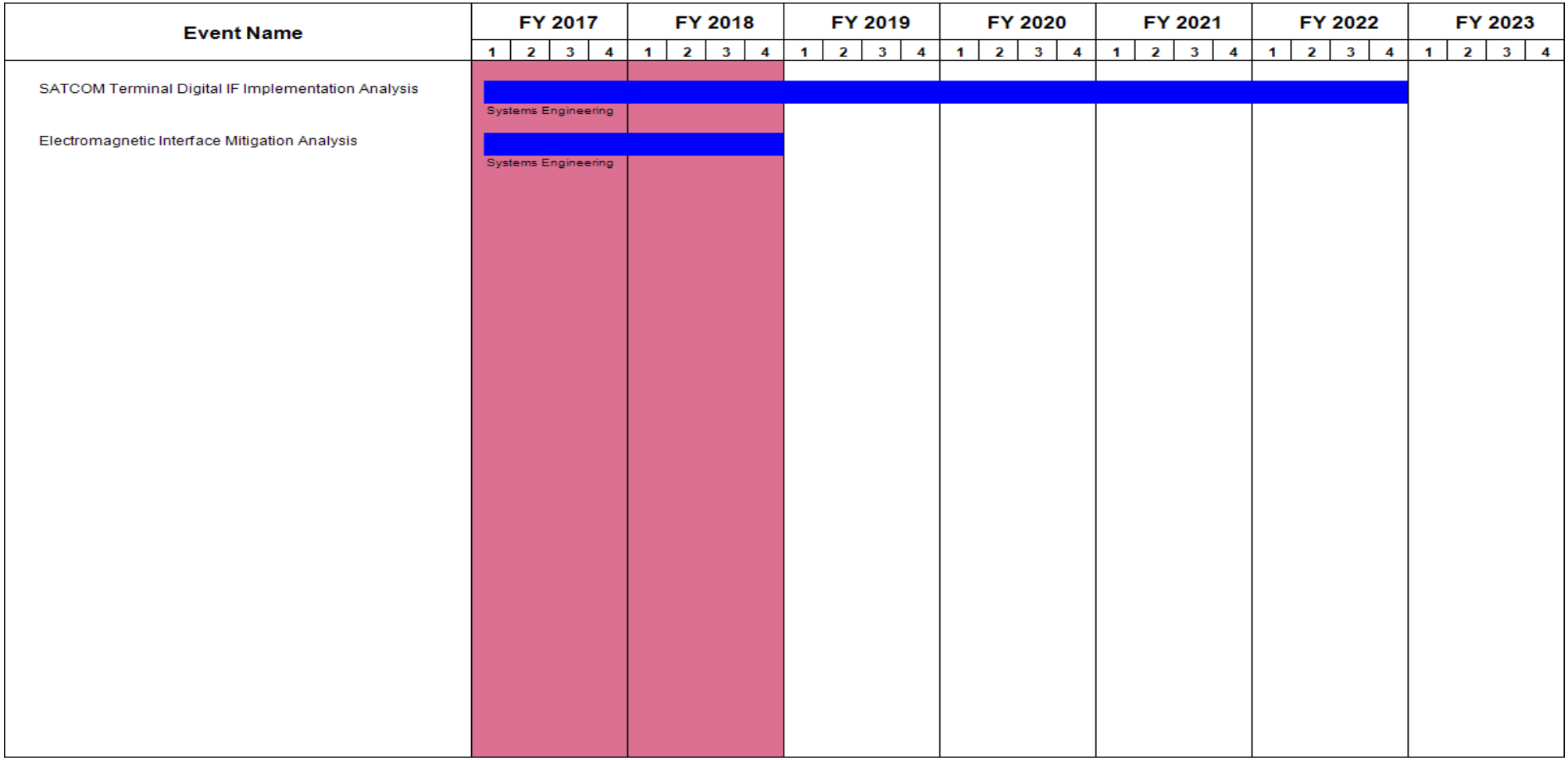

Exhibit R-4A, RDT&E Schedule Details: PB 2019 Army		Date: February 2018
Appropriation/Budget Activity 2040 / 7	**R-1 Program Element (Number/Name)** PE 0303142A / *SATCOM Ground Environment (SPACE)*	**Project (Number/Name)** 253 / *Dscs-Dcs (Phase II)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
SATCOM Terminal Digital IF Implementation Analysis	1	2016	4	2022
Electromagnetic Interface Mitigation Analysis	1	2016	4	2018

Exhibit R-2A, RDT&E Project Justification: PB 2019 Army			Date: February 2018
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 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
456: *MILSATCOM System Engineering*	-	5.750	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	5.750
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

FY 2018 and out funding realigned to OSD PE 1203142A to reflect new Major Force Program 12 (MFP12) Space configuration.

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 2017 funds support the continued systems engineering required to support technology maturation, systems analysis, and planning associated with joint SATCOM development efforts including complying with the outcome of the Protected SATCOM communications Systems (PSCS) Analysis of Alternatives (AoA), the follow-on Wideband AoA, and other efforts that have impact on tactical Army use of military and commercial satellite constellations. These efforts have a direct impact in reducing technical and programmatic risk for the acquisition efforts for tactical Army SATCOM systems using these constellations.

FY 2018 and out funding will be realigned to 1203142A/FE2 to reflect the new Major Force Program 12 (MFP12) Space configuration.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Title: Protected Communications System Engineering ***Description:*** Protected Communications System Engineering	2.207	-	-	-	-
Title: Wideband Global SATCOM (WGS) Communications System Engineering ***Description:*** WGS Communications System Engineering	1.833	-	-	-	-
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.	0.100	-	-	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2019 Army		Date: February 2018
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 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Title: Data Rights	1.610	-	-	-	-
Accomplishments/Planned Programs Subtotals	5.750	-	-	-	-

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

FY 2018 and out funding will be realigned to 1203142A/FE2 to reflect the new Major Force Program 12 (MFP12) Space configuration.

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 2019 Army			Date: February 2018
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 2017 Cost	FY 2017 Award Date	FY 2018 Cost	FY 2018 Award Date	FY 2019 Base Cost	FY 2019 Base Award Date	FY 2019 OCO Cost	FY 2019 OCO Award Date	FY 2019 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Oversight	MIPR	PM WIN T : PEO C3T	3.014	-		-		-		-		-	0.000	3.014	-
Advanced Architecture/ Advanced Wideband System Architecture	MIPR	MIT Lincoln Labs : Lexington , MA	11.474	-		-		-		-		-	0.000	11.474	-
		Subtotal	14.488	-		-		-		-		-	0.000	14.488	N/A

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2017 Cost	FY 2017 Award Date	FY 2018 Cost	FY 2018 Award Date	FY 2019 Base Cost	FY 2019 Base Award Date	FY 2019 OCO Cost	FY 2019 OCO Award Date	FY 2019 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Protected Communications and WGS Communications SE	TBD	Various : APG, MD	74.531	1.151		-		-		-		-	Continuing	Continuing	Continuing
FCC/ITU SOTM Regulatory Proposals/ Analyses/Modifications	MIPR	John Hopkins Universtiy Applied Physics Lab : Laurel, MD	2.655	-		-		-		-		-	Continuing	Continuing	Continuing
T2C2 Development Analysis of AoA activity, market research, MS C	TBD	PEO C3T PM WIN-T : APG, MD	2.444	-		-		-		-		-	Continuing	Continuing	Continuing
Software Data Rights	MIPR	Contractor : Md	-	1.463		-		-		-		-	1.463	2.926	1.463
		Subtotal	79.630	2.614		-		-		-		-	Continuing	Continuing	N/A

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2017 Cost	FY 2017 Award Date	FY 2018 Cost	FY 2018 Award Date	FY 2019 Base Cost	FY 2019 Base Award Date	FY 2019 OCO Cost	FY 2019 OCO Award Date	FY 2019 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Engineering (In House)	MIPR	PM WIN T : APG, MD	28.508	1.200	Nov 2016	-		-		-		-	Continuing	Continuing	Continuing
Engineering Contractors Support	C/CPFF	PM WIN-T : APG, MD	40.043	1.136	Mar 2017	-		-		-		-	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Army			Date: February 2018
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 2017 Cost	FY 2017 Award Date	FY 2018 Cost	FY 2018 Award Date	FY 2019 Base Cost	FY 2019 Base Award Date	FY 2019 OCO Cost	FY 2019 OCO Award Date	FY 2019 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	Jan 2017	-		-		-		-	Continuing	Continuing	Continuing
T2C2 preparation for Milestone C; Request for Proposal and solcitation preparation	TBD	PEO C3T PM WIN T : APG, MD	0.500	-		-		-		-		-	0.000	0.500	-
		Subtotal	86.552	2.536		-		-		-		-	Continuing	Continuing	N/A

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2017 Cost	FY 2017 Award Date	FY 2018 Cost	FY 2018 Award Date	FY 2019 Base Cost	FY 2019 Base Award Date	FY 2019 OCO Cost	FY 2019 OCO Award Date	FY 2019 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Terminal Testing and Evaluation System Engineering	FFRDC	PEO C3T WIN T : TBD	2.504	0.200	Jan 2017	-		-		-		-	Continuing	Continuing	Continuing
Test Support	MIPR	MATRIX : PM WIN T	22.587	0.200	Jan 2017	-		-		-		-	Continuing	Continuing	Continuing
Testing, Certification	MIPR	Support Technical Testing : PM WIN T	7.001	0.200	Jan 2017	-		-		-		-	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	-		-		-		-		-	0.000	0.400	-
T2C2 complete Intitial Operational Test and Evaluation	TBD	PEO C3T : PM WIN-T	1.960	-		-		-		-		-	0.000	1.960	-
		Subtotal	34.452	0.600		-		-		-		-	Continuing	Continuing	N/A

	Prior Years	FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	215.122	5.750		0.000		-		-		-	Continuing	Continuing	N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Army			Date: February 2018
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 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2019 Army		Date: February 2018
Appropriation/Budget Activity 2040 / 7	**R-1 Program Element (Number/Name)** PE 0303142A / *SATCOM Ground Environment (SPACE)*	**Project (Number/Name)** 456 / *MILSATCOM System Engineering*

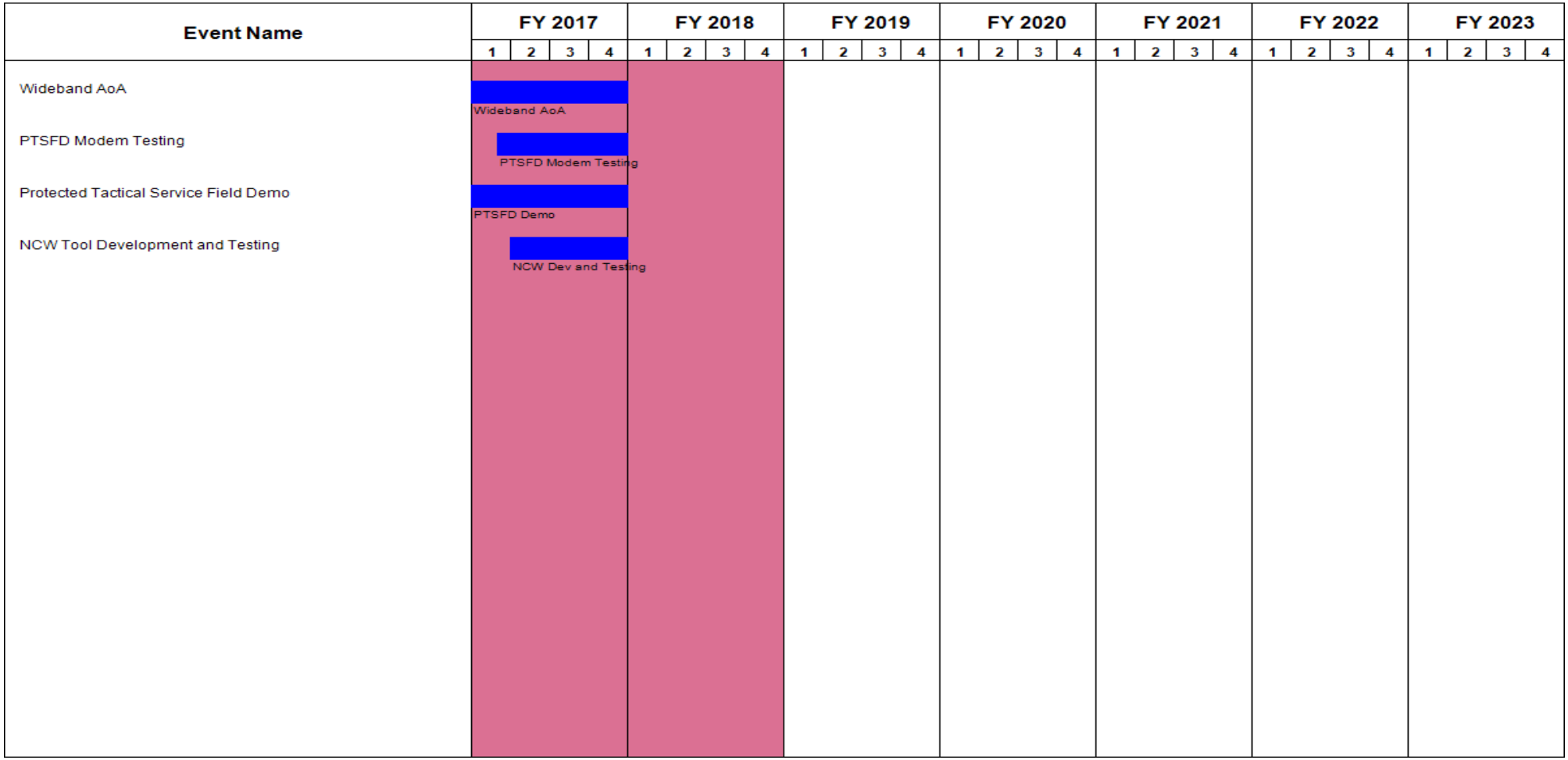

Exhibit R-4A, RDT&E Schedule Details: PB 2019 Army		Date: February 2018
Appropriation/Budget Activity 2040 / 7	**R-1 Program Element (Number/Name)** PE 0303142A / *SATCOM Ground Environment (SPACE)*	**Project (Number/Name)** 456 / *MILSATCOM System Engineering*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Wideband AoA	4	2016	4	2017
PTSFD Modem Testing	1	2017	4	2017
Protected Tactical Service Field Demo	4	2015	4	2017
NCW Tool Development and Testing	1	2015	4	2017

Exhibit R-2A, RDT&E Project Justification: PB 2019 Army			Date: February 2018
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 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
EA3: *Transportable Tactical Cmd Comms (T2C2)*	-	3.511	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	3.511
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

FY 2018 and out funding realigned to OSD PE 1203142A to reflect new Major Force Program 12 (MFP12) Space configuration.

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) to inform a Full Rate Production (FRP) decision scheduled for 4Q FY17 (on track).

B. Accomplishments/Planned Programs ($ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Title: T2C2 Testing ***Description:*** Testing requirements to achieve FRP.	3.511	-	-	-	-
Accomplishments/Planned Programs Subtotals	3.511	-	-	-	-

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
• B85800: *Transportable Tactical Command Communications (T2C2)*	36.580	62.600	56.737	7.100	63.837	77.680	73.146	74.625	75.551	Continuing	Continuing

Remarks

Exhibit R-2A, RDT&E Project Justification: PB 2019 Army		Date: February 2018
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)*

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. The acquisition strategy leverages an existing Small Business Innovation Research (SBIR) Phase III Indefinite Delivery Indefinite Quantity (IDIQ) contract supporting the commercialization of the preceding SBIR efforts. 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 (IOT&E), with Full-Rate Production (FRP) planned for 4Q FY17.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Army			Date: February 2018
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 2017 Cost	FY 2017 Award Date	FY 2018 Cost	FY 2018 Award Date	FY 2019 Base Cost	FY 2019 Base Award Date	FY 2019 OCO Cost	FY 2019 OCO Award Date	FY 2019 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
T2C2 Testing	TBD	Various : Various	4.894	3.511	Oct 2016	-		-		-		-	0.000	8.405	-
T2C2 Testing Articles and Transportation	TBD	Various : Various	0.309	-		-		-		-		-	0.000	0.309	-
		Subtotal	5.203	3.511		-		-		-		-	0.000	8.714	N/A

	Prior Years	FY 2017 Cost	FY 2017 Award Date	FY 2018 Cost	FY 2018 Award Date	FY 2019 Base Cost	FY 2019 Base Award Date	FY 2019 OCO Cost	FY 2019 OCO Award Date	FY 2019 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	5.203	3.511		0.000		-		-		-	0.000	8.714	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2019 Army		Date: February 2018
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)*

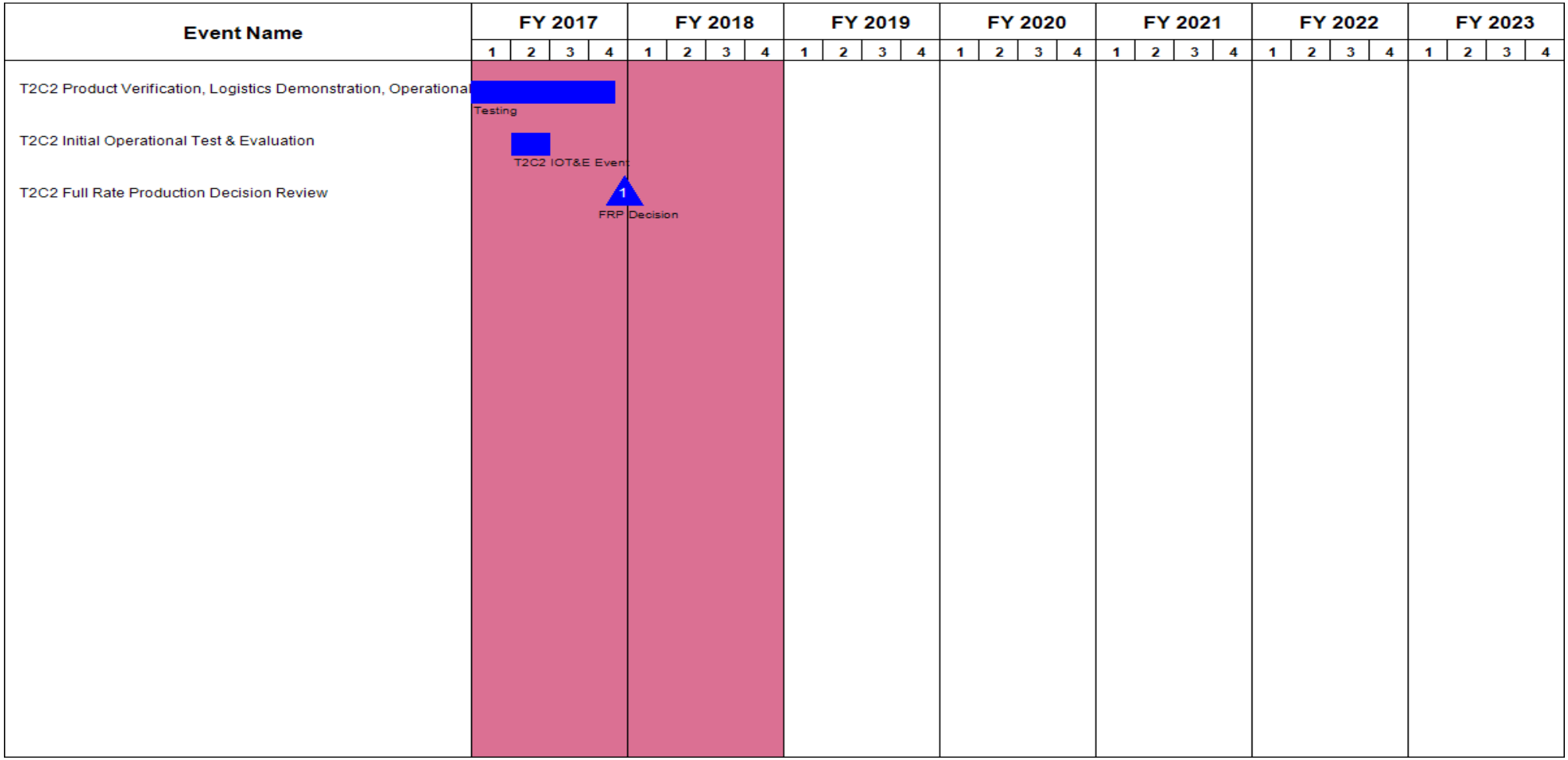

Exhibit R-4A, RDT&E Schedule Details: PB 2019 Army		Date: February 2018
Appropriation/Budget Activity 2040 / 7	**R-1 Program Element (Number/Name)** PE 0303142A / *SATCOM Ground Environment (SPACE)*	**Project (Number/Name)** EA3 / *Transportable Tactical Cmd Comms (T2C2)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Milestone C Preparation	3	2014	1	2016
T2C2 Product Verification, Logistics Demonstration, Operational Test & Reports	4	2016	4	2017
T2C2 Initial Operational Test & Evaluation	2	2017	2	2017
T2C2 Full Rate Production Decision Review	4	2017	4	2017

Exhibit R-2A, RDT&E Project Justification: PB 2019 Army			Date: February 2018
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 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
EK8: *Enroute Mission Command*	-	4.492	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	4.492
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

FY 2018 and out funding realigned to OSD PE 1203142A to reflect new Major Force Program 12 (MFP12) Space configuration.

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 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Title: EMC Testing ***Description:*** EMI/EMC, Flight Test and Operational Assessment	4.492	-	-	-	-
Accomplishments/Planned Programs Subtotals	4.492	-	-	-	-

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
• B08400: *Enroute Mission Command*	-	21.667	37.401	-	37.401	8.653	-	-	-	0.000	67.721

Remarks

Exhibit R-2A, RDT&E Project Justification: PB 2019 Army		Date: February 2018
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 (FOC). 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 supports test by the Army Test and Evaluation Command (ATEC) during Operational Assessment (OA). The OA supports the Milestone Decision Authority (MA) Disposition Decision (FY18) to continue procurement and fielding.

E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Army			Date: February 2018
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 2017 Cost	FY 2017 Award Date	FY 2018 Cost	FY 2018 Award Date	FY 2019 Base Cost	FY 2019 Base Award Date	FY 2019 OCO Cost	FY 2019 OCO Award Date	FY 2019 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
EMC Testing	MIPR	Aberdeen Proving Ground, MD : ATEC	1.361	4.492		-		-		-		-	0.000	5.853	-
		Subtotal	1.361	4.492		-		-		-		-	0.000	5.853	N/A

	Prior Years	FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	1.361	4.492		0.000		-		-		-	0.000	5.853	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2019 Army		Date: February 2018
Appropriation/Budget Activity 2040 / 7	**R-1 Program Element (Number/Name)** PE 0303142A / *SATCOM Ground Environment (SPACE)*	**Project (Number/Name)** EK8 / *Enroute Mission Command*

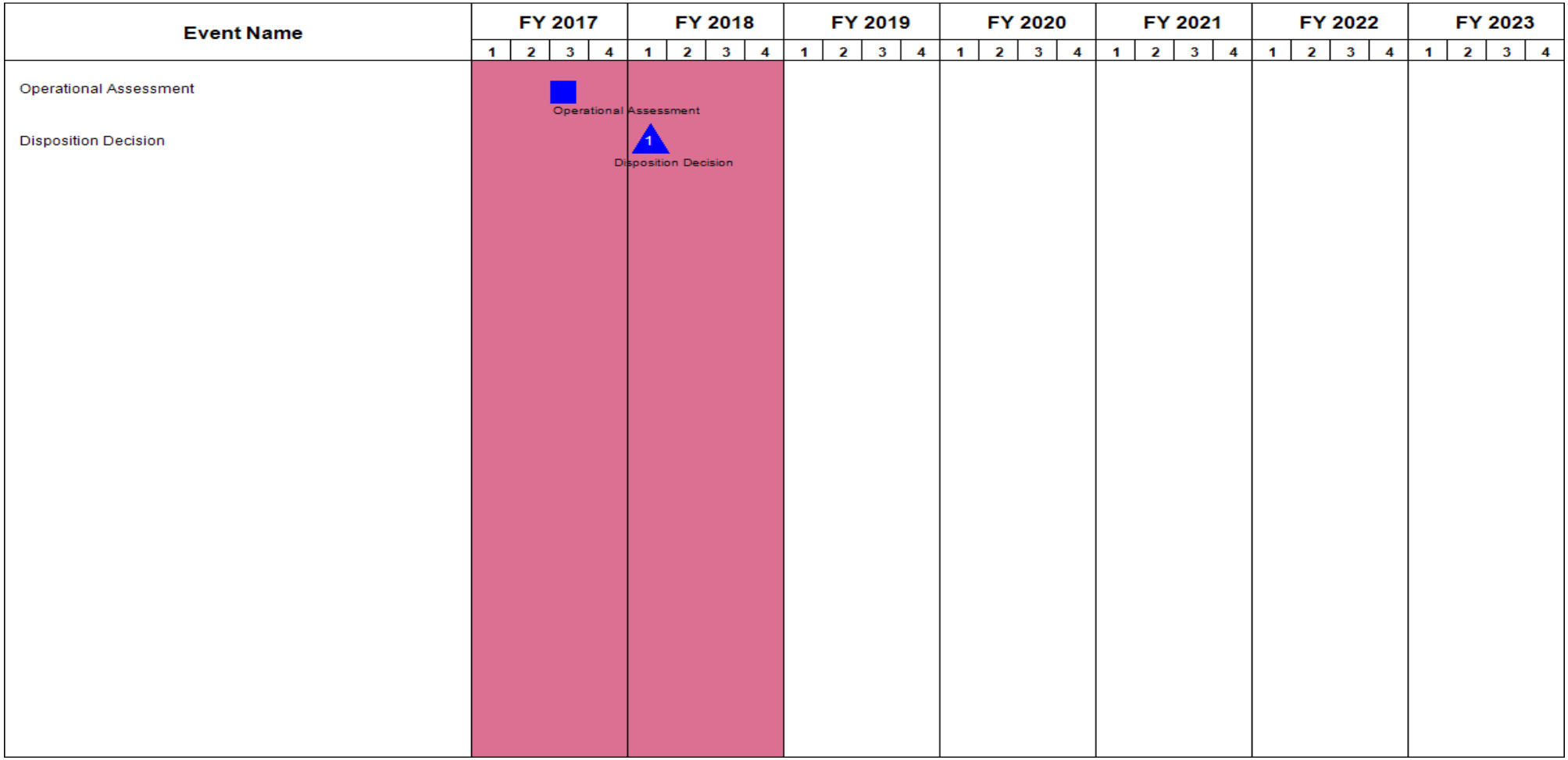

Exhibit R-4A, RDT&E Schedule Details: PB 2019 Army		Date: February 2018
Appropriation/Budget Activity 2040 / 7	**R-1 Program Element (Number/Name)** PE 0303142A / *SATCOM Ground Environment (SPACE)*	**Project (Number/Name)** EK8 / *Enroute Mission Command*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
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