Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army Date: March 2014

Appropriation/Budget Activity

R-1 Program Element (Number/Name)

2040: Research, Development, Test & Evaluation, Army I BA 7: Operational

PE 0303142A I SATCOM Ground Environment (SPACE)

Systems Development

COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO <sup>#</sup>	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
Total Program Element	-	14.101	18.188	11.011	-	11.011	12.131	13.724	13.683	13.883	Continuing	Continuing
253: Dscs-Dcs (Phase II)	-	5.139	5.556	4.179	-	4.179	5.287	5.375	5.494	6.160	Continuing	Continuing
456: MILSATCOM System Engineering	-	8.962	12.632	2.952	-	2.952	2.959	5.441	8.189	7.723	Continuing	Continuing
EA3: Transportable Tactical Cmd Comms (T2C2)	-	-	-	3.880	-	3.880	3.885	2.908	-	-	-	10.673

<sup>&</sup>lt;sup>#</sup> The FY 2015 OCO Request will be submitted at a later date.

#### 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.

This program is designated as a DoD Space Program.

PE 0303142A: SATCOM Ground Environment (SPACE)

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Date: March 2014

Appropriation/Budget Activity

R-1 Program Element (Number/Name)

2040: Research, Development, Test & Evaluation, Army I BA 7: Operational Systems Development

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army

PE 0303142A / SATCOM Ground Environment (SPACE)

B. Program Change Summary (\$ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	15.756	18.197	18.428	-	18.428
Current President's Budget	14.101	18.188	11.011	-	11.011
Total Adjustments	-1.655	-0.009	-7.417	-	-7.417
<ul> <li>Congressional General Reductions</li> </ul>	-	-			
<ul> <li>Congressional Directed Reductions</li> </ul>	-	-			
<ul> <li>Congressional Rescissions</li> </ul>	-	-			
<ul> <li>Congressional Adds</li> </ul>	-	-			
<ul> <li>Congressional Directed Transfers</li> </ul>	-	-			
<ul> <li>Reprogrammings</li> </ul>	-	-			
<ul> <li>SBIR/STTR Transfer</li> </ul>	-	-			
<ul> <li>Adjustments to Budget Years</li> </ul>	-1.655	-0.009	-7.417	-	-7.417

Exhibit R-2A, RDT&E Project Ju		Date: March 2014										
Appropriation/Budget Activity 2040 / 7	PE 030314	am Elemen 12A / SATC 1nt (SPACE)	OM Ground	,	Project (Number/Name) 253 / Dscs-Dcs (Phase II)							
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO <sup>#</sup>	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
253: Dscs-Dcs (Phase II)	-	5.139	5.556	4.179	-	4.179	5.287	5.375	5.494	6.160	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

<sup>\*</sup> The FY 2015 OCO Request will be submitted at a later date.

### 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, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Netcentric System Engineering and Analysis	5.139	2.014	1.518
Articles:	-	-	-
Description: Funding is provided for the following effort:			
FY 2013 Accomplishments: Conducted Netcentric System Engineering and Analysis			
FY 2014 Plans: Fund analysis for Netcentric System Engineering			
FY 2015 Plans:			
Fund analysis for Netcentric System Engineering			
Title: Jam Resistant Secure Communications (JRSC)	-	1.970	-
Articles:	-	-	-
Description: Funding is provided for the following effort:			
FY 2014 Plans:			

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Exhibit R-2A, RDT&E Project Justi	fication: PB	2015 Army							Date: N	larch 2014			
Appropriation/Budget Activity 2040 / 7				PE 03		ment (Numb ATCOM Grou CE)			Project (Number/Name) 253 / Dscs-Dcs (Phase II)				
B. Accomplishments/Planned Prog	grams (\$ in N	Millions, Art	icle Quantit	ties in Each	)				FY 2013	FY 2014	FY 2015		
Fund Jam Resistant Secure Commu	nications (JR	SC) risk mig	itation.		<u> </u>								
Title: Future analysis of Wideband SATCOM Operational Management System (WSOMS) database consolidation effort.  Artic  Description: Funding is provided for the following effort:										1.572 -	1.12		
<b>Description:</b> Funding is provided for	r the following	effort:											
WSOMS database consolidation effort subsystem. The result of the analysis desired impact will be to reduce total shorten logistics trail with associated	is will be to de cost of owne	efine a struc ership for mu	ture of a cor Itiple subsys	solidated da	ıtabase alon	g with a tran	sition plan.  1	The					
FY 2015 Plans: WSOMS database consolidation efformation subsystem. The result of the analysis desired impact will be to reduce total shorten logistics trail with associated	is will be to de cost of owne	efine a struc ership for mu	ture of a cor Itiple subsys	solidated da	itabase alon	g with a tran	sition plan. 1	The					
Title: Protected SATCOM Modem									-	-	1.53		
<b>Description:</b> Funding is provided for	r the following	effort:											
FY 2015 Plans: Fund modem pilot program to address	ss Anti-Jam (	AJ) and Anti	-Scintillation	(AS) for the	WGS const	ellation.							
				Accon	nplishment	s/Planned P	rograms Su	btotals	5.139	5.556	4.17		
C. Other Program Funding Summa	ary (\$ in Milli	ons)											
<u>Line Item</u> • 24: Defense Enterprise	FY 2013 151.435	<b>FY 2014</b> 57.725	FY 2015 Base 118.085	FY 2015 OCO	FY 2015 Total 118.085	<b>FY 2016</b> 129.187	<b>FY 2017</b> 137.606	<b>FY 20</b> ′ 110.38	_	Cost To Complete Continuing	Total Cos		
Wideband SATCOM Systems (DEWSS) (BB8500)													
<u>Remarks</u>													

PE 0303142A: *SATCOM Ground Environment (SPACE)* Army

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
2040 / 7	` ` ,	,	umber/Name) -Dcs (Phase II)

### D. Acquisition Strategy

FY15 funding finances Project Manager, Defense Communications and Army Transmission Systems (PM DCATS) netcentric systems engineering, modern 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
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PE 0303142A: SATCOM Ground Environment (SPACE) Army

hibit R-4, RDT&E Schedule Profile: PB 2015 A	arriy				-			D 1 D	)roar	ram	Elom	oni	F/NI	mho	r/NI-	mal		Dro	vioct		Date: March 2014					
propriation/Budget Activity 40 / 7													roject (Number/Name) 53 / Dscs-Dcs (Phase II)													
		FY	2013	3		FY 2	2014	,	F	Y 20	15		FY	201	6		FY	2017	7		FY 2	2018		F	Y 20	19
	1	2	3	4	1	2	3	4	1	2	3 4	•	1 2	3	4	1	2	3	4	1	2	3	4	1	2 :	3
Netcentric System Engineering																										
Conduct System Engineering Studies/Analysis																										
Advanced Demonstrations for Baseband and Policy Based Control																										
Jam Resistant Secure Communications (JRSC)																										
Conduct Analysis of WSOMS Database Consolidation																										
WSOMS Net Migration																										
Protected SATCOM Modems																										

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army			Date: March 2014
2040 / 7	,	, ,	umber/Name) -Dcs (Phase II)

# Schedule Details

	St	End		
Events	Quarter	Year	Quarter	Year
Netcentric System Engineering	1	2006	4	2019
Conduct System Engineering Studies/Analysis	1	2006	4	2019
Advanced Demonstrations for Baseband and Policy Based Control	1	2010	4	2019
Jam Resistant Secure Communications (JRSC)	1	2014	4	2014
Conduct Analysis of WSOMS Database Consolidation	1	2014	4	2015
WSOMS Net Migration	1	2016	4	2016
Protected SATCOM Modems	1	2015	4	2016

Exhibit R-2A, RDT&E Project Ju		Date: March 2014										
Appropriation/Budget Activity 2040 / 7							t (Number/ OM Ground )	Project (Number/Name) 456 I MILSATCOM System Engineering				
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
456: MILSATCOM System Engineering	-	8.962	12.632	2.952	-	2.952	2.959	5.441	8.189	7.723	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

<sup>\*</sup> The FY 2015 OCO Request will be submitted at a later date.

#### 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.

Develop Protected Communications on the Move (PCOTM) terminals by participating in the FY14 Department of Defense Analysis of Alternatives/USAF Broad Agency Announcement (BAA) and applying the study results and leverage/transition low profile Ka/Q band antenna technology to satisfy the Army's PCOTM requirement. Provides technology maturation and risk reduction for capability insertion into Project Manager Warfighter Information Network – Tactical (PM WIN-T) program of record and insures interoperability with Joint satellite constellations.

Develop a low size, weight and power (SWaP) Ku/Ka band SATCOM antennas for Army's Wideband Global SATCOM (WGS) on the move requirement and reduce programmatic technical risk for WIN-T Program of Record (PoR) integration. Leverage tech base development efforts of multiband, low cost, low profile antennas for a lower cost capability for current and future heavy combat vehicles (M-1, Bradley).

FY15 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, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Protected Communications System Engineering	1.811	2.075	1.727
Articles:	-	-	-
Description: Protected Communications System Engineering			
FY 2013 Accomplishments: Protected Advanced EHF (AEHF) Communications System Engineering			
FY 2014 Plans: Protected Advanced EHF (AEHF) Communications System Engineering			
FY 2015 Plans:			

PE 0303142A: SATCOM Ground Environment (SPACE)

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UNC	CLASSIFIED				
Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: N	larch 2014	
2040 / 7	R-1 Program Element (Number/Name) PE 0303142A / SATCOM Ground Environment (SPACE)	• •	Number/N SATCOM	lame) System Engil	neering
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in	Each)	F	Y 2013	FY 2014	FY 2015
Protected Communications System Engineering					
Title: Wideband Global SATCOM (WGS) Communications System Engineering		icles:	1.901	1.725	1.225 -
<b>Description:</b> Wideband Global SATCOM (WGS) Communications System Engi	ineering				
FY 2013 Accomplishments: Wideband Global SATCOM (WGS) Communications System Engineering and In Migration	ntelligence, Surveillance, Reconnaissance (IS	SR)			
FY 2014 Plans: Wideband Global SATCOM (WGS) Communications System Engineering and Ir Migration	ntelligence, Surveillance, Reconnaissance (IS	SR)			
FY 2015 Plans: Wideband Global SATCOM (WGS) Communications System Engineering to imp	orove Ku/Ka antenna SWAP				
<b>Title:</b> Experimentation, development, testing and certification of critical SATCON communication and network technologies.	M and Satellite-On-The-Move (SOTM)		1.338 -	2.553	
	Art	icles:			
<b>Description:</b> Experimentation, development, testing and certification of critical Stechnologies.	SATCOM and SOTM communication and net	work			
FY 2013 Accomplishments:  Experimentation, development, testing and certification of critical SATCOM and	SOTM communication and network technolog	gies.			
FY 2014 Plans: Experimentation, development, testing and certification of critical SATCOM and	SOTM communication and network technolog	gies.			
<i>Title:</i> Federal Communications Commission/ International Telecommunciations the Move (SOTM) Regulatory Proposals/Analyses/Modifications	Union (FCC/ITU) Satellite Communications C	)n	0.605	0.600	
	Art	icles:			
<b>Description:</b> Federal Communications Commission/ International Telecommuno Proposals/Analyses/Modifications	ciations Union (FCC/ITU) SOTM Regulatory				
FY 2013 Accomplishments:					

PE 0303142A: SATCOM Ground Environment (SPACE)

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: N	March 2014				
Appropriation/Budget Activity 2040 / 7	` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` ` `	Project (Number/Name) 456 I MILSATCOM System Engineering					
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantitie	s in Each)	FY 2013	FY 2014	FY 2015			
Federal Communications Commission/ International Telecommunciations Unallyses/Modifications	nion (FCC/ITU) SOTM Regulatory Proposals/						
FY 2014 Plans: Federal Communications Commission/ International Telecommunciations Unanalyses/Modifications	nion (FCC/ITU) SOTM Regulatory Proposals/						
Title: Protected Terminal COTM and Wide Area Network (WAN) Prototyping	Artic	0.425 cles: -	1.475 -				
Description: Protected Wide Area Network (WAN) and Terminal Prototypin	g						
FY 2013 Accomplishments: Protected Terminal COTM and Wide Area Network (WAN) Prototyping							
FY 2014 Plans: Protected Terminal COTM and Wide Area Network (WAN) Prototyping							
Title: Transportable Tactical Command Communications (T2C2)	Artic	2.882 cles: -	4.204 -				
<b>Description:</b> T2C2 Development: Achieve Materiel Development Decision (Preparation for Milestone C, procure Low Rate Initial Production (LRIP), con (IOT&E), Support Full Rate Production Decision							
FY 2013 Accomplishments: T2C2 Development: Achieve Material Development Decision (MDD), Condu Milestone C, Support Full Rate Production Decision	ct Analysis of Alternatives (AoA), Preparation for						
FY 2014 Plans: T2C2: Preparation for Milestone C, procure Low Rate Initial Production (LRI (IOT&E), Support Full Rate Production Decision	P), conduct Initial Operational Testing and Evalua	ion					
	Accomplishments/Planned Programs Subto	otals 8.962	12.632	2.9			

C. Other Program Funding Summary (\$ in Millions)

N/A

Remarks

PE 0303142A: *SATCOM Ground Environment (SPACE)* Army

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303142A I SATCOM Ground Environment (SPACE)	- 3 (	umber/Name) SATCOM System Engineering
D. A. and Miles Office on			

### 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

PE 0303142A: *SATCOM Ground Environment (SPACE)* Army

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

R-1 Program Element (Number/Name)

Project (Number/Name)

Appropriation/Budget Activity 2040 / 7

PE 0303142A / SATCOM Ground

456 I MILSATCOM System Engineering

Date: March 2014

Environment (SPACE)

Management Service	es (\$ in M	illions)		FY 2	2013	FY 2	014	FY 2 Ba	2015 se		2015 CO	FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To	Total Cost	Target Value of Contract
Program Oversight	MIPR	PM WIN T : PEO C3T	1.914	0.500		0.500		0.100		-		0.100	Continuing	Continuing	Continuing
Advanced Architecture/ Advanced Wideband System Architecture	MIPR	MIT Lincoln Labs : Lexington , MA	11.474	-		-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	13.388	0.500		0.500		0.100		-		0.100	-	-	-

Product Developmen	t (\$ in M	illions)		FY 2	013	FY 2	014		2015 ise		2015 CO	FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To	Total Cost	Target Value of Contract
Protected Communications and WGS Communications SE	TBD	PM WIN-T : Various	25.720	1.100		1.050		0.300		-		0.300	Continuing	Continuing	Continuing
Experimentation, development, testing & certification of SATCOM & SOTM communciation & networking.	MIPR	PM WIN-T : Various	22.051	1.150		1.438		-		-		-	Continuing	Continuing	g Continuing
FCC/ITU SOTM Regulatory Proposals/ Analyses/Modifications	MIPR	John Hopkins Universtiy Applied Physics Lab : Laurel, MD	1.450	0.605		0.600		-		-		-	Continuing	Continuing	Continuing
Protected COTM Tactical Reference Terminal Prototyping and Protected Wide Area Network Prototyping	TBD	PEO C3T PM WIN- T : Various	19.450	0.300		1.000		-		-		-	Continuing	Continuing	Continuing
Purchase of prototype hardware and engineering studies	C/CPFF	PEO C3T : PM WIN-T	0.000	1.164		-		-		-		-	Continuing	Continuing	Continuing
T2C2 Development Analysis of AoA activity associated with the	TBD	PEO C3T : PM WIN-T	0.000	0.400		-		-		-		-	Continuing	Continuing	Continuing

PE 0303142A: SATCOM Ground Environment (SPACE) Army

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

Date: March 2014 R-1 Program Element (Number/Name)

Appropriation/Budget Activity 2040 / 7

PE 0303142A / SATCOM Ground

Project (Number/Name)

Environment (SPACE)

456 I MILSATCOM System Engineering

Product Developmer	nt (\$ in Mi	llions)		FY 2	FY 2013		FY 2014		2015 ise	FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To	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	0.000	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	68.671	4.819		6.032		0.300		-		0.300	-	-	-

Support (\$ in Million	ıs)			FY 2	2013	FY 2	014	FY 2 Ba		FY 2	2015 CO	FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To	Total Cost	Target Value of Contract
Engineering (In House)	MIPR	PM WIN T : Core, Matrix	24.038	1.250		1.900		1.300		-		1.300	Continuing	Continuing	Continuing
Engineering Contractors Support	C/CPFF	PM WIN-T : Contractor TBD	37.635	0.700		0.600		0.500		-		0.500	Continuing	Continuing	Continuing
System Architecture & Analysis	Various	CERDEC : PM WIN T	17.193	0.143		0.165		-		-		-	Continuing	Continuing	Continuing
T2C2 preparation for Milestone C; Request for Proposal and solcitation preparation	TBD	PEO C3T PM WIN T : Various	0.000	0.200		0.300		-		-		-	Continuing	Continuing	Continuing
		Subtotal	78.866	2.293		2.965		1.800		-		1.800	-	-	-

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

1.350

29.216

Subtotal

Date: March 2014

Appropriation/Budget Activity

R-1 Program Element (Number/Name)

Project (Number/Name)

0.752

2040 / 7

PE 0303142A / SATCOM Ground Environment (SPACE)

0.752

456 I MILSATCOM System Engineering

Test and Evaluation	(\$ in Milli	ons)		FY 2	FY 2013		FY 2014		FY 2015 Base		2015 CO	FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To	Total Cost	Target Value of Contract
Terminal Testing and Evaluation System Engineering	FFRDC	PEO C3T WIN T : TBD	1.704	0.300		0.300		0.200		-		0.200	Continuing	Continuing	Continuing
Test Support	MIPR	MATRIX : PM WIN T	21.762	0.250		0.375		0.200		-		0.200	Continuing	Continuing	Continuing
Testing, Certification	MIPR	Support Technical Testing : PM WIN T	5.750	0.400		0.500		0.352		-		0.352	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	0.000	0.400		-		-		-		-	Continuing	Continuing	Continuing
T2C2 complete Intitial Operational Test and	TBD	PEO C3T : PM WIN-	0.000	-		1.960		-		-		-	-	1.960	-

	Prior Years	FY 2	013	FY 2	2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	Cost To	Total Cost	Target Value of Contract
Project Cost Totals	190.141	8.962		12.632		2.952	-	2.952	-	-	-

3.135

Remarks

Evaluation

PE 0303142A: SATCOM Ground Environment (SPACE) Army

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ibit R-4, RDT&E Schedule Profile: PB 201	5 Arn	ny														_			Date				4	
opriation/Budget Activity / 7							PE (	0303	gram E 3142A / ment (S	SAT	COI			lam	ne)	<b>Pro</b> 450	ojec 6 / <i>N</i>	t (No	umbe ATC	er/N OM	Syst	e) tem	Engir	eerin
		FY	2013	3	F	Y 201	14		FY 201	5		FY 2	016		FY	201	7		FY 2	:018	3		FY 20	19
W00Mil.   105		1 2	3	4	1	2 3	4	1	2 3	4	1	2	3 4	4	1 2	3	4	1	2	3	4	1	2	3 4
WGS/Wideband SE																								
Development, Testing and Certification of SOTM Technology								I																
Wideband Technology Development/ Prototyping																								
Prototype Advanced COTM Terminal PACT (AEHF)								I																
MILSATCOM SE Protected COTM Terminal Engineering																								
FCC/ITU SOTM Regulatory Proposals/ Analyses/Modifications																								
T2C2 Product delvelopment and M/S C preparation								1																
T2C2 IOT&E & MS C																								
								•																

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army			Date: March 2014
2040 / 7	' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' '	(	umber/Name) ATCOM System Engineering

# Schedule Details

	Sta	art	End			
Events	Quarter	Year	Quarter	Year		
WGS/Wideband SE	1	2004	4	2019		
Development, Testing and Certification of SOTM Technology	1	2012	4	2014		
Wideband Technology Development/Prototyping	1	2004	4	2014		
Prototype Advanced COTM Terminal PACT (AEHF)	1	2010	4	2014		
MILSATCOM SE Protected COTM Terminal Engineering	1	2015	4	2019		
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 Ju	stification	: PB 2015 A	Army							Date: Mare	ch 2014	
Appropriation/Budget Activity 2040 / 7						am Elemen 2A / SATCO nt (SPACE)	OM Ground	umber/Name) sportable Tactical Cmd Comms				
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO <sup>#</sup>	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
EA3: Transportable Tactical Cmd Comms (T2C2)	-	-	-	3.880	-	3.880	3.885	2.908	-	-	-	10.673
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

<sup>\*</sup> The FY 2015 OCO Request will be submitted at a later date.

#### Note

Army

Funds in this program element are a reallignment of funds from the MILSATCOM System Engineering line (PE 0303142A, PROJECT 456) for more efficient, effective program management. The T2C2 efforts were previously funded under PE 0303142A, PROJECT 456 in FY13 & FY14. This project element is not a new start.

#### A. Mission Description and Budget Item Justification

Transportable Tactical Command Communications (T2C2) extends the WIN-T Network to small company and team sized early entry units that don't have organic WIN-T. T2C2 provides robust voice and data communications capabilities in the early phases of Joint operations. T2C2 will also integrate these users into the higher capacity Warfighter Information Network Tactical (WIN-T) network and extend that network to the tactical edge. Funding will be used for testing the T2C2 systems (Lite & Heavy) in preparation of Full Material Release (FMR) and Full-Rate Production (FRP) scheduled for FY2017, along with T2C2, with testing in FY2013-2016, specifically Interoperability certification, Environmental testing and network testing FY2015/2016, and Initial Operational Test & Evaluation (IOT&E) and Joint Integration Test Command (JITC) certification in FY2016.

T2C2 Lite (formerly Variant 1) enables small team reporting and situational awareness for early entry and initial phases of Joint operations.

T2C2 Heavy (formerly Variant 2) supports the small command post in phases three through five of Joint operations.

ed Programs (\$ in Millions) FY 2014 FY 2015	FY 2013 FY 2014 FY 2	B. Accomplishments/Planned Programs (\$ in Millions)
3.80		Title: T2C2 Testing
( )	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	<b>Description:</b> Testing requirements to achieve Full Rate Production (FRP), including Electromagnetic testing, Environmental testing, Army Interoperability Certification (AIC) testing, a Network test and Initial Operational Test & Evaluation (IOT&E).
eve FRP, including Electromagnetic testing, Enviornmental testing, AIC testing, a Network test and	tic testing, Enviornmental testing, AIC testing, a Network test and	FY 2015 Plans: Testing requirements to achieve FRP, including Electromagnetic testing, Environmental testing, AIC testing, a Network test and IOT&E.
Equipment 0.0		Title: T2C2 Transportation of Equipment
of test assets to the testing location.	on.	Description: Transportation of test assets to the testing location.
		FY 2015 Plans:
Certification (AIC) testing, a Network test and Initial Operational Test & Evaluation (IOT&E).  eve FRP, including Electromagnetic testing, Enviornmental testing, AIC testing, a Network test and  Equipment	tic testing, Enviornmental testing, AIC testing, a Network test and	testing, Army Interoperability Certification (AIC) testing, a Network test and Initial Operational Test & Evaluation (IOT&E).  FY 2015 Plans: Testing requirements to achieve FRP, including Electromagnetic testing, Enviornmental testing, AIC testing, a Network test and IOT&E.  Title: T2C2 Transportation of Equipment  Description: Transportation of test assets to the testing location.

PE 0303142A: SATCOM Ground Environment (SPACE)

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303142A / SATCOM Ground	Project (Number/Name) EA3 / Transportable Tactical Cmd Comms
204077	Environment (SPACE)	(T2C2)

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2013	FY 2014	FY 2015
Transportation of test assets to the testing location.			
Accomplishments/Planned Programs Subtotals	-	-	3.880

## C. Other Program Funding Summary (\$ in Millions)

			FY 2015	FY 2015	FY 2015					Cost To	
<u>Line Item</u>	FY 2013	FY 2014	<u>Base</u>	OCO	<u>Total</u>	FY 2016	FY 2017	FY 2018	FY 2019	<b>Complete</b>	<b>Total Cost</b>
<ul> <li>Transportable Tactical</li> </ul>	1.819	0.598	13.999	-	13.999	40.372	46.754	44.047	63.521	-	211.110

Command Comm: Transportable

Tactical Command

Communications (T2C2) (B85800)

### Remarks

### D. Acquisition Strategy

Funding will be used for testing the T2C2 systems (Lite & Heavy) in preparation of Full Material Release (FMR) and Full-Rate Production (FRP) anticipated 2QTR FY2017.

### E. Performance Metrics

N/A

PE 0303142A: *SATCOM Ground Environment (SPACE)* Army

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity	R-1 Program Element (Number/Name)	Project (Number/Name)
2040 / 7	PE 0303142A I SATCOM Ground	EA3 I Transportable Tactical Cmd Comms
	Environment (SPACE)	(T2C2)

Test and Evaluation	(\$ in Milli	ions)		FY 2	2013	FY 2	2014	FY 2 Ba			2015 CO	FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
T2C2 Testing	TBD	TBD : TBD	0.000	-		-		3.869		-		3.869	-	3.869	-
T2C2 Transportation of Equipment	TBD	TBD : TBD	0.000	-		-		0.011		-		0.011	-	0.011	-
		Subtotal	0.000	-		-		3.880		-		3.880	-	3.880	-
			Prior					FY 2	0015	EV	2015	FY 2015	Cost To	Total	Target

	Prior Years	FY 2	2013	FY 2	2014	FY 2 Bas	 FY 2	FY 2015 Total	Cost To	Total Cost	Target Value of Contract
Project Cost Totals	0.000	-		-		3.880	-	3.880	-	3.880	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PE	3 2015 Army	′																				I	Dat	e: M	1arcl	n 20	)14		
Appropriation/Budget Activity 2040 / 7	/Budget Activity  R-1 Program Element (Number/Name PE 0303142A / SATCOM Ground Environment (SPACE)								<del>)</del>	Project (Number/Name) EA3 I Transportable Tactical Cmd Co (T2C2)							Comr												
		FY	2013		l	FY	2014	4		F	Y 201	5	T	F	Y 201	6		F١	<b>20</b>	17			FY	2018	8	$\top$	FY	201	9
	1	2	3	4	1	2	3	4	1	1	2 3	4	1	1	2 3	4	1	2	2 3	3 4	1	1	2	3	4	1	2	3	4
T2C2 Milestone C Preparation																													
T2C2 Milestone C																													
Initial Operational Capability																													
T2C2 Equipment Testing																													
T2C2 Full Material Release																													
T2C2 Full Rate Production																													

Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army			Date: March 2014
		- 3 (	umber/Name) sportable Tactical Cmd Comms

# Schedule Details

	St	art	E	nd
Events	Quarter	Year	Quarter	Year
T2C2 Milestone C Preparation	1	2014	3	2015
T2C2 Milestone C	3	2015	3	2015
Initial Operational Capability	4	2016	4	2016
T2C2 Equipment Testing	4	2015	4	2016
T2C2 Full Material Release	2	2017	2	2017
T2C2 Full Rate Production	2	2017	2	2017