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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Army **Date:** May 2017

Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army / BA 5: System Development & Demonstration (SDD)					R-1 Program Element (Number/Name) PE 0605030A / Joint Tactical Network Center (JTNC)							
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	-	12.834	15.041	15.877	-	15.877	5.857	5.963	6.080	6.087	Continuing	Continuing
EA8: Joint Tactical Network Center (JTNC)	-	12.834	15.041	15.877	-	15.877	5.857	5.963	6.080	6.087	Continuing	Continuing

Note

JTNC funding for FY2015 and beyond is executed from Army PE 0605030. Under the Joint budget strategy, each Military Department (MILDEP) budgets for approximately one-third of the total program RDT&E funds for joint efforts. Out year funding is held in PE 0605030 by the Army, Navy and Air Force. FY2016-FY2018 reflects the full JTNC requirement with the consolidated funding from the other Services.

A. Mission Description and Budget Item Justification

The JTNC is responsible for ensuring interoperable, secure, and affordable waveform and wireless communications by recommending standards, conducting compliance and certification analyses in accordance with Department of Defense (DoD) policies, and maintaining a DoD Waveform Information Repository (IR). The JTNC provides: (1) DoD Waveform IR management and configuration control, (2) DoD waveform standards and Software Communications Architecture (SCA), (3) technical analyses of DoD Waveform IR products, and (4) serves as Technical Advisor to the JTNC Board of Directors (BoD).

This mission is executed in conjunction with other government agencies to include the National Security Agency (NSA), the Joint Interoperability Test Command (JITC), and the National Telecommunication and Information Administration (NTIA), as well as the Services. Particular attention is paid to ensuring that interagency work is collaborative and eliminates duplicative capability. The JTNC enables a common software baseline that is hardware agnostic leading to increased competition for Software Defined Radios.

B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	13.357	15.041	5.393	-	5.393
Current President's Budget	12.834	15.041	15.877	-	15.877
Total Adjustments	-0.523	0.000	10.484	-	10.484
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.523	-			
• Adjustments to Budget Years	0.000	0.000	10.484	-	10.484

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<u>Change Summary Explanation</u> FY18 increase of \$10.484 million reflects other services funding realigned into the program in the Budget Year to meet approved JTNC requirement with consolidated funding from the other Services.		

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Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0605030A / Joint Tactical Network Center (JTNC)				Project (Number/Name) EA8 / Joint Tactical Network Center (JTNC)			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
EA8: Joint Tactical Network Center (JTNC)	-	12.834	15.041	15.877	-	15.877	5.857	5.963	6.080	6.087	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

JTNC funding for FY2015 and beyond is executed from Army PE 0605030. Under the Joint budget strategy, each Military Department (MILDEP) budgets for approximately one-third of the total program RDT&E funds for joint efforts. Out year funding is held in PE 0605030 by the Army, Navy and Air Force. FY2016-FY2017 reflects the full JTNC requirement with the consolidated funding from the other Services. FY2018 and out reflects only the Army portion of the JTNC budget.

A. Mission Description and Budget Item Justification

The JTNC is responsible for ensuring interoperable, secure, and affordable waveform and wireless communications by recommending standards, conducting compliance and certification analyses in accordance with Department of Defense (DoD) policies, and maintaining a DoD Waveform Information Repository (IR). The JTNC provides: (1) DoD Waveform IR management and configuration control, (2) DoD waveform standards and Software Communications Architecture (SCA), (3) technical analyses of DoD Waveform IR products, and (4) serves as Technical Advisor to the JTNC Board of Directors (BoD).

This mission is executed in conjunction with other government agencies to include the National Security Agency (NSA), the Joint Interoperability Test Command (JITC), and the National Telecommunication and Information Administration (NTIA), as well as the Services. Particular attention is paid to ensuring that interagency work is collaborative and eliminates duplicative capability. The JTNC enables a common software baseline that is hardware agnostic leading to increased competition for Software Defined Radios.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2016	FY 2017	FY 2018
Title: JTNC IR Engineering Development and Program Management Support	12.834	15.041	15.877
Description: Joint Tactical Networking Center (JTNC) aligns with the JTNC BoD, USD(AT&L), DoD CIO, Joint Staff, the Services, and other key stakeholders for those JTNC chartered processes that ensure interoperable, secure, and affordable waveform and wireless communications. The JTNC: (1) Facilitates the reuse of waveform and wireless communications and fosters product capability improvements by making government owned waveform and wireless communications products available to developers, (2) provides open architecture DoD Waveform Standards in support of service, multi-service, and coalition forces, (3) provides certification recommendations on wireless communications products in support of service, multiservice, and coalition forces.			
FY 2016 Accomplishments: Completed analyses on three waveforms to include: Single Channel Ground and Airborne Radio System (SINCGARS) v2.0, Mobile User Objective System (MUOS) v3.1.3 and Wideband Networking Waveform (WNW) v4.2. Initiated analysis of Link 16 v1.05.0.1. Validated requirements for Highband Networking Waveform (HNW) 3.0 in preparation for analysis in FY17. Evolved			

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B. Accomplishments/Planned Programs (\$ in Millions)										FY 2016	FY 2017	FY 2018
DoD Waveform Standards to facilitate common development, interoperability and re-use. Supported export requests and analyses of products for exportability.												
FY 2017 Plans: Completed analyses on three waveforms to include: Link 16 v1.05.0.1, Highband Networking Waveform (HNW) v3.0, and Soldier Radio Waveform (SRW) v1.2.2.1. Began analysis of Wideband Networking Waveform (WNW) v4.2.2. Evolved DoD Waveform Standards to facilitate common development, interoperability and re-use. Supported export requests and analyses of products for exportability.												
FY 2018 Plans: Complete analyses of WNW v4.2.2 and three additional waveforms to be determined by the JTNC Board of Directors. The JTNC will commence collecting relevant software, technical documentation, cataloging and inducting other DoD Communication Waveforms listed in the DoD Communication Waveform Inventory. The JTNC will continue to enhance DoD Waveform IR capability and Software Communications Architecture (SCA) 4.1 promulgation. The JTNC will continue to evolve DoD Waveform Standards to facilitate common development, interoperability and re-use. The JTNC will support export requests and analyses of products for exportability.												
Accomplishments/Planned Programs Subtotals										12.834	15.041	15.877
C. Other Program Funding Summary (\$ in Millions)												
Line Item	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost	
• 0605030N: 0605030N: JTNC, RDTE,N	-	-	-	-	-	4.591	4.682	4.788	4.883	Continuing	Continuing	
• 0605030F: 0605030F: JTNC, RDTE,F	-	-	-	-	-	5.857	5.963	6.080	6.087	Continuing	Continuing	
Remarks												
The Joint Tactical Networking Center is funded by all the Services. The Joint Funding Strategy requires each of the three Service Military Departments (MILDEPs) to budget for one-third of the total program approved requirement.												
Other Funding: 0605030N represents Navy allocated funding for JTNC from FY2019-2022. 0605030F represents Air Force allocated funding for JTNC from FY2019-2022. FY2016-FY2018 amounts are zero due to Joint Funding Strategy. Prior to the year of execution, the JTNC funding is consolidated in Army PE 0605030A for execution. In accordance with the Joint Tactical Networking Center Charter updated and approved on 29 March 2016, the JTNC will remain under a Joint Budget Strategy funded by the three MILDEPs.												

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Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605030A / <i>Joint Tactical Network Center (JTNC)</i>	Project (Number/Name) EA8 / <i>Joint Tactical Network Center (JTNC)</i>
<p><u>D. Acquisition Strategy</u></p> <p>Joint Tactical Networking Center (JTNC) is classified as a Joint Support Program to Acquisition, Technology & Logistics (AT&L), DoD Chief Information Officer (CIO), and the Services. JTNC core functions as defined in the JTNC Acquisition Decision Memorandum and Charter signed on 20 January 2014 and re-approved on 29 March 2016 include: Department of Defense (DoD) Waveform Information Repository (IR) management and configuration control, DoD waveform standards and Software Communications Architecture (SCA), technical analyses of DoD Waveform IR products. The services derived from these core functions reinforce an acquisition environment where wireless communications products are interoperable, secure, and affordable.</p> <p>The FY2018 Budget supports continued development/maturation of the DoD Waveform IR, analysis of directed software and artifacts, support of the National Security Agency (NSA) Commercial Communications Security (COMSEC) Evaluation Program (CCEP), and the JTNC Standards Interface Control Working Group (ICWG).</p> <p><u>E. Performance Metrics</u></p> <p>Performance metrics are tracked and reported as part of the JTNC annual management plan. The goals, objectives, actions, targets and measurements are coordinated with stakeholders. Results are reported at regular intervals. Final accomplishments are reported to the JTNC Board of Directors.</p>		

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Exhibit R-3, RDT&E Project Cost Analysis: FY 2018 Army												Date: May 2017			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0605030A / Joint Tactical Network Center (JTNC)				Project (Number/Name) EA8 / Joint Tactical Network Center (JTNC)					
Management Services (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 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
Program Management Support	Various	Multiple Contract Awards : Various	6.190	0.211	Oct 2015	0.244	Oct 2016	0.294	Oct 2017	-		0.294	Continuing	Continuing	Continuing
Program Management Support	C/CPFF	G2 Software Systems 01/04 : San Diego, CA	0.426	0.736	Nov 2015	0.849	Nov 2016	0.960	Nov 2017	-		0.960	Continuing	Continuing	Continuing
Program Management Support	Allot	Aberdeen Proving Grounds : Aberdeen. MD	0.178	0.343	Oct 2015	0.403	Oct 2016	0.173	Oct 2017	-		0.173	Continuing	Continuing	Continuing
Program Management Support	MIPR	SSC PACIFIC : San Diego, CA	0.092	0.125	Oct 2015	0.147	Oct 2016	-		-		-	0.000	0.364	0.000
Program Management Support	FFRDC	MITRE : McLean, VA	0.000	-		0.058	Dec 2016	-		-		-	0.000	0.058	0.058
Subtotal			6.886	1.415		1.701		1.427		-		1.427	-	-	-
Product Development (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 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
JTNC Product Development Support	MIPR	SSC PACIFIC : San Diego, CA	0.662	1.335	Nov 2015	1.542	Nov 2016	0.822	Nov 2017	-		0.822	Continuing	Continuing	Continuing
JTNC Product Development Support	C/CPFF	G2 Software Systems 01 : San Diego, CA	0.000	1.212	Oct 2015	1.441	Oct 2016	2.950	Oct 2017	-		2.950	Continuing	Continuing	Continuing
JTNC Product Development Support	MIPR	SSC ATLANTIC : Charleston, SC	0.000	-		-		0.053	Nov 2017	-		0.053	Continuing	Continuing	Continuing
JTNC Product Development Support	MIPR	Various : Aberdeen. MD	0.000	-		-		1.160	Nov 2017	-		1.160	Continuing	Continuing	Continuing
JTNC Product Development Support	C/CPFF	G2 Software Systems 04 : San Diego, CA	0.562	1.097	Oct 2015	1.285	Nov 2016	-		-		-	0.000	2.944	2.988

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Product Development (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 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
JTNC Product Development	C/CPFF	Booz Allen Hamilton : San Diego, CA	1.184	-		-		-		-		-	0.000	1.184	1.184
JTNC Product Development - Other	Allot	Aberdeen Proving Grounds : Aberdeen, MD	0.382	-		-		-		-		-	0.000	0.382	0.382
Joint Tactical Networks (JTN) Legacy Development - MIPR	MIPR	Various : Various	19.868	-		-		-		-		-	0.000	19.868	19.868
Joint Tactical Networks (JTN) Legacy Development - Contracts	C/CPIF	Various : Various	24.890	-		-		-		-		-	0.000	24.890	24.890
Subtotal			47.548	3.644		4.268		4.985		-		4.985	-	-	-
Support (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 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
JTNC Engineering/ Technical Support	C/CPFF	G2 Software Systems 01/04 : San Diego, CA	1.214	1.486	Oct 2015	1.795	Oct 2016	0.975	Oct 2017	-		0.975	Continuing	Continuing	Continuing
JTNC Engineering/ Technical Support	FFRDC	MITRE Corporation : McLean, VA	0.357	0.143	Oct 2015	0.167	Oct 2016	0.159	Oct 2017	-		0.159	Continuing	Continuing	Continuing
JTNC Engineering/ Technical Support	MIPR	Aberdeen Proving Grounds : Aberdeen, MD	0.274	0.465	Oct 2015	0.545	Oct 2016	0.741	Oct 2017	-		0.741	Continuing	Continuing	Continuing
JTNC Engineering/ Technical Support	MIPR	SSC PACIFIC : San Diego, CA	0.000	0.595	Nov 2015	0.639	Nov 2016	0.605	Nov 2017	-		0.605	Continuing	Continuing	Continuing
JTNC Engineering/ Technical Support	MIPR	Various : San Diego, CA	0.000	-		-		0.877	Nov 2017	-		0.877	0.000	0.877	0.877
JTNC Engineering/ Technical Support	C/CPFF	Booz Allen Hamilton : San Diego	14.965	-		-		-		-		-	0.000	14.965	14.965

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Support (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 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
Subtotal			16.810	2.689		3.146		3.357		-		3.357	-	-	-
Test and Evaluation (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 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
Development/Test & Evaluation	MIPR	SSC PACIFIC : San Diego, CA	1.286	1.266	Oct 2015	1.476	Oct 2016	1.477	Oct 2017	-		1.477	Continuing	Continuing	Continuing
Development/Test & Evaluation	C/CPFF	G2 Software Systems 01 : San Diego, CA	0.000	0.892	Oct 2015	1.032	Oct 2016	4.315	Oct 2017	-		4.315	Continuing	Continuing	Continuing
Development/Test & Evaluation	C/CPFF	Multiple Awards : Various	0.221	0.449	Oct 2015	0.526	Oct 2016	0.144	Oct 2017	-		0.144	Continuing	Continuing	Continuing
Development/Test & Evaluation	MIPR	National Security Agency : Ft. Meade, MD	0.000	0.277	Dec 2015	0.326	Nov 2016	0.172	Nov 2017	-		0.172	Continuing	Continuing	Continuing
Development/Test & Evaluation	C/CPFF	G2 Software Systems 04 : San Diego, CA	0.471	2.129	Nov 2015	2.479	Nov 2016	-		-		-	0.000	5.079	5.163
Development/Test & Evaluation	MIPR	SSC ATLANTIC : Charleston, SC	0.000	0.073	Dec 2015	0.087	Nov 2016	-		-		-	0.000	0.160	0.164
Development/Test & Evaluation	C/CPFF	Booz Allen Hamilton : San Diego, CA	1.242	-		-		-		-		-	0.000	1.242	1.242
Subtotal			3.220	5.086		5.926		6.108		-		6.108	-	-	-
			Prior Years	FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			74.464	12.834		15.041		15.877		-		15.877	-	-	-
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: FY 2018 Army																								Date: May 2017															
Appropriation/Budget Activity 2040 / 5												R-1 Program Element (Number/Name) PE 0605030A / Joint Tactical Network Center (JTNC)												Project (Number/Name) EA8 / Joint Tactical Network Center (JTNC)															
Event Name												FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022			
												1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Waveform and Wireless Communication Product Compliance and Certification																				JTNC Waveform and Wireless Certification																			
DoD Waveform Information Repository																				JTNC Information Repository																			
Evolve Waveform Standards and Software Communications Architecture																				JTNC Standards and SCA																			
Analyze Waveforms and Associated Artifacts																				JTNC Analyses																			

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Exhibit R-4A, RDT&E Schedule Details: FY 2018 Army			Date: May 2017
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605030A / <i>Joint Tactical Network Center (JTNC)</i>	Project (Number/Name) EA8 / <i>Joint Tactical Network Center (JTNC)</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Waveform and Wireless Communication Product Compliance and Certification	1	2016	4	2022
DoD Waveform Information Repository	1	2016	4	2022
Evolve Waveform Standards and Software Communications Architecture (SCA)	1	2016	4	2022
Analyze Waveforms and Associated Artifacts	1	2016	4	2022