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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Army **Date:** February 2018

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 Networking Center							
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	-	14.463	15.877	15.889	-	15.889	5.723	5.834	5.836	5.491	Continuing	Continuing
EA8: Joint Tactical Networking Center	-	14.463	15.877	15.889	-	15.889	5.723	5.834	5.836	5.491	Continuing	Continuing

Note

Joint Tactical Networking Center (JTNC) is funded using a Joint budget strategy. Each Military Department (MILDEP) budgets for approximately one-third of the total program RDT&E requirements for joint efforts with the funding annually consolidated into the Army Program Element (PE) for execution. Fiscal Year (FY) 2017 to FY 2019 funding reflects the full JTNC requirement with the consolidated funding from the other Services, while FY 2020 and beyond reflects the Army one-third portion of total program RDT&E funds. Out year funding is held in PE 0605030A by the Army, PE 0605030N by the Navy and PE 0605030F by the Air Force.

A. Mission Description and Budget Item Justification

The JTNC is responsible for ensuring interoperable, secure, and cost effective 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. JTNC ensures that interagency work is collaborative and eliminates duplicative capability. The JTNC enables a common software baseline that is hardware agnostic, facilitating hardware and operating system independent capability-based applications, and provides for increased competition for Software Defined Radios.

B. Program Change Summary (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	15.041	15.877	5.857	-	5.857
Current President's Budget	14.463	15.877	15.889	-	15.889
Total Adjustments	-0.578	0.000	10.032	-	10.032
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.571	-			
• Adjustments to Budget Years	-0.007	-	10.032	-	10.032

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<p><u>Change Summary Explanation</u></p> <p>FY17 reduction of \$.007 million attributed to Federally Funded Research and Development Centers. FY19 increase (+\$10,032) is due to the consolidation of funding previously held by the other Services into the Army program element for execution to meet the full JTNC requirement.</p>		

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Army										Date: February 2018		
Appropriation/Budget Activity 2040 / 5					R-1 Program Element (Number/Name) PE 0605030A / Joint Tactical Networking Center				Project (Number/Name) EA8 / Joint Tactical Networking Center			
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
EA8: Joint Tactical Networking Center	-	14.463	15.877	15.889	-	15.889	5.723	5.834	5.836	5.491	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

JTNC is funded using a Joint budget strategy. Each Military Department (MILDEP) budgets for approximately one-third of the total program RDT&E requirements for joint efforts with the funding consolidated annually into the Army PE for execution. FY2017-FY2019 reflects the full JTNC requirement with the consolidated funding from the other Services, while FY2020 and beyond reflects the Army one-third portion of total program RDT&E funds. Out year funding is held in PE 0605030A by the Army, PE 0605030N by the Navy and PE 0605030F by the Air Force.

A. Mission Description and Budget Item Justification

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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. JTNC ensures that interagency work is collaborative and eliminates duplicative capability. The JTNC enables a common software baseline that is hardware agnostic, facilitating hardware and operating system independent capability-based applications, and provides for increased competition for Software Defined Radios.

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

	FY 2017	FY 2018	FY 2019
Title: DoD Waveform IR Support, Waveform Standards Evolution and Compliance & Certification Analysis	14.463	15.877	15.889
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 cost effective 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, multiservice, and coalition forces, (3) provides certification recommendations on wireless communications products in support of service, multiservice, and coalition forces.			
FY 2018 Plans: Conducting analyses of Wideband Networking Waveform v4.2.2; and initiated analyses of Multifunction Advanced Data Link (MADL) and Uniform Minimum Essential Emergency Communications Network (MEECN) Code (UMM). The JTNC will initiate			

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Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605030A / <i>Joint Tactical Networking Center</i>	Project (Number/Name) EA8 / <i>Joint Tactical Networking Center</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2017	FY 2018
<p>collection of 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 supports export requests and analyses of products for exportability.</p> <p>FY 2019 Plans: The JTNC will conduct analysis of three waveforms to include: Mobile User Objective System (MUOS) v3.1.5, Link 16 Concurrent Multi-Net (CMN4), and Second-Generation Anti-Jam Tactical UHF Radio for North Atlantic Treaty Organization (NATO) (SATURN). The JTNC will continue 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) evolution and 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.</p> <p>FY 2018 to FY 2019 Increase/Decrease Statement: Increase between FY18 and FY19 is due to inflation adjustments.</p>			
Accomplishments/Planned Programs Subtotals		14.463	15.877
C. Other Program Funding Summary (\$ in Millions)			
N/A			
Remarks			
<p>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. Army funding in FY20 and beyond reflects only approximately one-third of total funding. Other funding is as follows:</p> <p>Navy RDTE: 0605030N, 3077. FY20 = 4,536 // FY21 = 4,644 // FY22 = 4,741 // FY23 = 4,835 Air Force RDTE: 0605030F, 655068. FY20 = 5,588 // FY21 = 5,700 // FY22 = 5,814 // FY 23 = 5,930</p> <p>Due to Joint Funding Strategy, there is no prior year funding for JTNC in the other Service lines. 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 re-validated on 29 March 2016, the JTNC will remain under a Joint Budget Strategy funded by the three MILDEPs.</p>			

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<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-validated 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 cost effective.</p> <p>The FY2019 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: PB 2019 Army												Date: February 2018			
Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0605030A / Joint Tactical Networking Center				Project (Number/Name) EA8 / Joint Tactical Networking Center					
Management Services (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 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	6.401	0.244	Oct 2016	0.294	Oct 2017	0.210	Oct 2018	-		0.210	Continuing	Continuing	Continuing
Program Management Support	C/CPFF	G2 Software Systems : San Diego, CA	1.162	0.848	Nov 2016	0.960	Nov 2017	0.890	Nov 2018	-		0.890	Continuing	Continuing	Continuing
Program Management Support	Allot	Aberdeen Proving Grounds : Aberdeen. MD	0.521	0.163	Oct 2016	0.173	Oct 2017	0.255	Oct 2018	-		0.255	Continuing	Continuing	Continuing
Program Management Support	MIPR	SSC PACIFIC : San Diego, CA	0.217	0.147	Oct 2016	-		-		-		-	0.000	0.364	0.364
Program Management Support	FFRDC	MITRE : McLean, VA	-	0.058	Dec 2016	-		-		-		-	0.000	0.058	0.058
Subtotal			8.301	1.460		1.427		1.355		-		1.355	Continuing	Continuing	N/A
Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 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	1.997	1.210	Nov 2016	0.822	Nov 2017	0.572	Nov 2018	-		0.572	Continuing	Continuing	Continuing
JTNC Product Development Support	C/CPFF	G2 Software Systems : San Diego, CA	2.871	2.724	Oct 2016	2.950	Oct 2017	3.055	Oct 2018	-		3.055	Continuing	Continuing	Continuing
JTNC Product Development Support	MIPR	SSC ATLANTIC : Charleston, SC	-	-		0.053	Oct 2017	0.151	Oct 2018	-		0.151	Continuing	Continuing	Continuing
JTNC Product Development Support	MIPR	Various : Aberdeen. MD	-	-		1.160	Oct 2017	1.153	Oct 2018	-		1.153	Continuing	Continuing	Continuing
JTNC Product Development	C/CPFF	Booz Allen Hamilton : San Diego, CA	1.184	-		-		-		-		-	0.000	1.184	1.184

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Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 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 - 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			51.192	3.934		4.985		4.931		-		4.931	Continuing	Continuing	N/A
Support (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 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 : San Diego, CA	2.700	1.794	Oct 2016	0.975	Oct 2017	0.771	Oct 2018	-		0.771	Continuing	Continuing	Continuing
JTNC Engineering/ Technical Support	FFRDC	MITRE Corporation : McLean, VA	0.500	0.167	Oct 2016	0.159	Oct 2017	0.151	Oct 2018	-		0.151	Continuing	Continuing	Continuing
JTNC Engineering/ Technical Support	MIPR	Aberdeen Proving Grounds : Aberdeen, MD	0.739	0.545	Oct 2016	0.741	Oct 2017	0.778	Oct 2018	-		0.778	Continuing	Continuing	Continuing
JTNC Engineering/ Technical Support	MIPR	SSC PACIFIC : San Diego, CA	0.595	0.639	Nov 2016	0.605	Nov 2017	0.706	Nov 2018	-		0.706	Continuing	Continuing	Continuing
JTNC Engineering/ Technical Support	MIPR	Various : San Diego, CA	-	-		0.877	Nov 2017	0.785	Nov 2018	-		0.785	Continuing	Continuing	Continuing
JTNC Engineering/ Technical Support	C/CPFF	Booz Allen Hamilton : San Diego	14.965	-		-		-		-		-	0.000	14.965	14.965
Subtotal			19.499	3.145		3.357		3.191		-		3.191	Continuing	Continuing	N/A

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Appropriation/Budget Activity 2040 / 5						R-1 Program Element (Number/Name) PE 0605030A / Joint Tactical Networking Center				Project (Number/Name) EA8 / Joint Tactical Networking Center					
Test and Evaluation (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 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	2.552	1.475	Oct 2016	1.477	Oct 2017	2.124	Oct 2018	-		2.124	Continuing	Continuing	Continuing
Development/Test & Evaluation	C/CPFF	G2 Software Systems 01 : San Diego, CA	0.892	1.032	Oct 2016	4.315	Oct 2017	3.837	Oct 2018	-		3.837	Continuing	Continuing	Continuing
Development/Test & Evaluation	C/CPFF	Multiple Awards - JITC : Various	0.670	0.526	Oct 2016	0.144	Oct 2017	0.171	Oct 2018	-		0.171	Continuing	Continuing	Continuing
Development/Test & Evaluation	C/CPFF	Booz Allen Hamilton - NSA : Ft. Meade, MD	-	-		-		0.280	Dec 2018	-		0.280	Continuing	Continuing	Continuing
Development/Test & Evaluation	MIPR	National Security Agency : Ft. Meade, MD	0.277	0.326	Nov 2016	0.172	Nov 2017	-		-		-	0.000	0.775	0.775
Development/Test & Evaluation	C/CPFF	G2 Software Systems 04 : San Diego, CA	2.600	2.478	Nov 2016	-		-		-		-	0.000	5.078	5.078
Development/Test & Evaluation	MIPR	SSC ATLANTIC : Charleston, SC	0.073	0.087	Nov 2016	-		-		-		-	0.000	0.160	0.160
Development/Test & Evaluation	C/CPFF	Booz Allen Hamilton : San Diego, CA	1.242	-		-		-		-		-	0.000	1.242	1.242
Subtotal			8.306	5.924		6.108		6.412		-		6.412	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			87.298	14.463		15.877		15.889		-		15.889	Continuing	Continuing	N/A
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 Army			Date: February 2018		
Appropriation/Budget Activity 2040 / 5		R-1 Program Element (Number/Name) PE 0605030A / <i>Joint Tactical Networking Center</i>		Project (Number/Name) EA8 / <i>Joint Tactical Networking Center</i>	

Event Name	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023			
	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																												
	JTNC Waveform and Wireless Certification																											
DoD Waveform Information Repository																												
	JTNC Information Repository																											
Evolve Waveform Standards and Software Communications Arch																												
	JTNC Standards and SCA																											
Analyze Waveforms and Associated Artifacts																												
	JTNC Analyses																											

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 Army			Date: February 2018
Appropriation/Budget Activity 2040 / 5	R-1 Program Element (Number/Name) PE 0605030A / <i>Joint Tactical Networking Center</i>	Project (Number/Name) EA8 / <i>Joint Tactical Networking Center</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Waveform and Wireless Communication Product Compliance and Certification	1	2017	4	2023
DoD Waveform Information Repository	1	2017	4	2023
Evolve Waveform Standards and Software Communications Architecture (SCA)	1	2017	4	2023
Analyze Waveforms and Associated Artifacts	1	2017	4	2023