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Exhibit R-2, RDT&E Budget Item Justification: PB 2017 Defense Information Systems Agency **Date:** February 2016

Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0305208K / <i>Distributed Common Ground/Surface Systems</i>
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COST (\$ in Millions)	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
Total Program Element	43.571	3.328	3.239	3.030	-	3.030	3.323	3.335	3.365	3.433	Continuing	Continuing
NF1: <i>Distributed Common Ground/Surface Systems</i>	43.571	3.328	3.239	3.030	-	3.030	3.323	3.335	3.365	3.433	Continuing	Continuing

A. Mission Description and Budget Item Justification

As the sole joint interoperability certification agent, the Joint Interoperability Test Command established and maintains a Distributed Development and Test Enterprise for the Department of Defense (DoD) Distributed Common Ground/Surface System (DCGS) program, as directed by the Office of the Under Secretary of Defense (Intelligence). DCGS is an integral and critical component of the overall DoD Intelligence, Surveillance, and Reconnaissance interoperability and data integration strategy which provides world-wide capabilities to receive, process, exploit, and disseminate data from airborne and national reconnaissance sensors/platforms and commercial sources.

B. Program Change Summary (\$ in Millions)	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Previous President's Budget	3.400	3.239	3.260	-	3.260
Current President's Budget	3.328	3.239	3.030	-	3.030
Total Adjustments	-0.072	0.000	-0.230	-	-0.230
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustment	-0.072	0.000	-0.230	-	-0.230

Change Summary Explanation

The decrease of -\$0.072 in FY 2015 is attributable to reduced cost of testing.

The decrease of -\$0.230 in FY 2017 is attributable to reduced cost of testing.

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Exhibit R-2A, RDT&E Project Justification: PB 2017 Defense Information Systems Agency										Date: February 2016		
Appropriation/Budget Activity 0400 / 7					R-1 Program Element (Number/Name) PE 0305208K / <i>Distributed Common Ground/Surface Systems</i>				Project (Number/Name) NF1 / <i>Distributed Common Ground/Surface Systems</i>			
COST (\$ in Millions)	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
NF1: <i>Distributed Common Ground/Surface Systems</i>	43.571	3.328	3.239	3.030	-	3.030	3.323	3.335	3.365	3.433	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Joint Interoperability Test Command (JITC) coordinates with the Military Services and Defense Intelligence Agencies to conduct Joint/Distributed Common Ground/Surface System (DCGS) testing and analysis, including event coordination, configuration, instrumentation and integration functions on the Distributed Development and Test Enterprise (DDTE). Under the DCGS Governance, this effort, referred to as the DCGS Test and Evaluation (T&E) Focus Team (FT), is composed of three parts: the DDTE Focus Group, providing and sustaining a distributed development network; the Strategy Focus Group, looking at current and future net-enabled enterprise T&E methods; and the Execution Focus Group, which leverages the Strategy Focus Group's methodologies in executing DCGS Enterprise assessment events, such as the annual DCGS demonstration, ENTERPRISE CHALLENGE. These efforts improve systems engineering and T&E throughout all phases of the DCGS life-cycle, resulting in improved capabilities to share net-centric data and services between the DCGS Programs of Record (PoRs) and the overarching Defense Intelligence Information Enterprise (DI2E).

Operates and maintains the DDTE, providing DCGS PoRs a virtual, operationally-relevant assessment environment maintaining connectivity between Service facilities, National Agency capabilities, and Coalition partners. DDTE allows robust integration of modeling and simulation T&E capabilities across Joint DCGS events without introducing vulnerabilities to operational Command and Control networks and has enabled improvements in systems engineering, instrumentation and T&E throughout all phases of the DCGS life cycle.

DCGS PoRs and Coalition partners use the DDTE network, which supports the net-centric maturity assessment of the DCGS Enterprise under the DCGS Governance, to integrate architecture, standards, and capabilities for implementation of the DCGS Integration Backbone and support the migration to net-centricity, including DCGS Enterprise services for the Military Departments, DCGS-Special Operations Forces and the DCGS Intelligence Community. National Agency capabilities supporting DCGS include Geospatial Intelligence, Signals Intelligence, Measurement and Signature Intelligence and Human Intelligence, which are integrated and tested in the DDTE domain.

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

	FY 2015	FY 2016	FY 2017
Title: Distributed Common Ground/Surface Systems (DCGS)	3.328	3.239	3.030
FY 2015 Accomplishments:			
Continued to support DDTE and provided enhanced functionality with expanding T&E capability, with a focus on increasingly automated evaluations of net-centric data and web services. To further DCGS Enterprise capabilities, established procedures and conducted compliance testing of services against established standards prior to making them available and accessible in a "storefront" that enhances the sharing of net-centric data and services and promotes reuse of capabilities. Established and			

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

	FY 2015	FY 2016	FY 2017
<p>hosted initial “Testing as a Service” capabilities that enabled DCGS entities to test for standards compliance early and often during the development and acquisition processes. Enterprise T&E support continued to include Enterprise-level assessment events such as Enterprise Challenge and Unified Vision for the DCGS PoRs, National Agencies and Coalition Partners. Continued development and instrumentation for data collection and testing support on the DCGS network domains and enclaves. Collected data during the assessment efforts which was included in the EMM and documented in an annual DCGS Enterprise Assessment Report.</p> <p>FY 2016 Plans: Continuing to support DDTE and to provide enhanced functionality with expanding T&E capability, with a focus on increasingly automated evaluations of net-centric data and web services. Incorporating new technologies such as cloud computing, mobile technology, and “big data” in assessment methodologies and practices. To further DCGS Enterprise and associated Defense Intelligence Information Enterprise (DI2E) capabilities, conducting compliance testing of data, metadata, and services against established standards to enhance the sharing and promote reuse of net centric capabilities. Enhancing “Testing as a Service” (TaaS) capabilities that enable DCGS entities and other communities of interest (COIs), such as industry partners, to test for standards compliance early and often during the development and acquisition processes. Enterprise T&E support continues to include enterprise-level assessment events such as ENTERPRISE CHALLENGE for the DCGS PoRs, National Agencies and Coalition Partners. Continuing development and instrumentation for data collection and testing support on the DCGS network domains and enclaves; with the number of active DDTE nodes increasing from 19 to 21 as the DCGS PoRs participate in assessment venues with other DI2E entities. Developing and implementing passive instrumentation on operational networks that can gather data on capabilities not instantiated on the DDTE test domain to provide a more robust evaluation of the net-centric maturity of the DCGS Enterprise. Data collected by these assessment efforts are reflected in the Enterprise Maturity Model (EMM) and documented in an annual DCGS Enterprise Assessment Report.</p> <p>The decrease of -\$0.089 from FY 2015 to FY 2016 is due to testing remotely rather than on-site following automation improvements and delay of end of life hardware replacement.</p> <p>FY 2017 Plans: Continuing to support DDTE, provide enhanced functionality, expand T&E capability, and perform automated evaluations of net-centric data and web services with improved assessment methodologies and practices due to incorporating new technologies such as cloud computing, mobile technology, and “big data”. Continuing to conduct compliance testing of data, metadata, and services against established standards to enhance the sharing and promote reuse of net centric capabilities and to enhance “Testing as a Service” (TaaS) capabilities that enable DCGS entities and other communities of interest (COIs) to test for standards compliance during the development and acquisition processes. enterprise T&E support, such as enterprise-level assessment events i.e., ENTERPRISE CHALLENGE). Development of and improvements to instrumentation for data collection and testing support on the DCGS network domains and enclaves for the DCGS PoRs, National Agencies and Coalition Partners continues;</p>			

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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2015	FY 2016	FY 2017
<p>with the number of active DDTE nodes expected to increase as the DCGS Programs of Record (PoRs) participate in assessment venues with other DI2E entities. Developing and implementing passive instrumentation on operational networks that can gather data on capabilities not instantiated on the DDTE test domain to provide a more robust evaluation of the net-centric maturity of the DCGS Enterprise. Data collected by these assessment efforts are reflected in the Enterprise Maturity Model (EMM) and documented in an annual DCGS Enterprise Assessment Report.</p> <p>The decrease of -\$0.209 from FY 2016 to FY 2017 is due to reduced testing costs following automation improvements, reduction in the number of testing events and delay in end of life hardware replacement.</p>			
Accomplishments/Planned Programs Subtotals	3.328	3.239	3.030

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

N/A

Remarks

D. Acquisition Strategy

A T&E Mission Support Services (MSS) cost plus fixed fee contract provides T&E support by performing a wide range of non-personal services to encompass testing, scientific, engineering, logistic, administrative, and ancillary support of the DISA T&E missions.

E. Performance Metrics

The DCGS T&E FT performs a minimum of six DCGS Enterprise assessments per year, and the results are consolidated into the T&E FT Enterprise Assessment Report annually. The T&E FT also provides input to the DCGS Enterprise Focus Team's State of the Enterprise (SoE) Report, which includes the Enterprise Maturity Model (EMM) and shows measurable DCGS Enterprise net-centric maturity progress over time.

The T&E FT also leverages Joint Interoperability Certification testing to support the evaluation of DCGS Enterprise maturity. In FY 2015, T&E FT performed ten (10) DCGS Enterprise assessments, of the six DCGS PoR systems, three hold current Joint Staff (JS), Command, Control, Communications, & Computers/Cyber (J6) Interoperability (IOP) Certifications and continue to conduct IOP testing on emerging releases. One DCGS PoR has completed interoperability testing, and the joint IOP certification is pending. The remaining two PoRs are not required to be JS J6 certified, but the T&E FT leverages data collected during periodic IOP assessments of these programs during enterprise-level demonstrations and test events. Due to increased automation for data collection, parsing and analysis, in addition to advances in PoR and Enterprise maturity, the T&E FT increases the cumulative number of net-centric capability evaluations each year.

In FY 2016, T&E FT will perform a minimum of ten (10) DCGS Enterprise assessments. This trend is expected to continue in FY2017. This effort provides the basis for the DCGS Enterprise Assessment, allowing the Office of the Under Secretary of Defense (Intelligence) to measure the level of maturity of the DCGS Enterprise supported by the DCGS Governance across DoD.

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In FY 2017, T&E FT will perform a minimum of ten (10) DCGS Enterprise assessments.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2017 Defense Information Systems Agency												Date: February 2016			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)							
0400 / 7				PE 0305208K / Distributed Common Ground/Surface Systems				NF1 / Distributed Common Ground/Surface Systems							
Support (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 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
In-House Contracts	Various	N/A : N/A	19.063	1.000	Oct 2014	0.900	Oct 2015	1.000	Oct 2016	-		1.000	Continuing	Continuing	Continuing
Subtotal			19.063	1.000		0.900		1.000		-		1.000	-	-	-
Test and Evaluation (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 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
Engineering/Technical Services 1	C/T&M	Interop : Ft. Hua, AZ	3.763	-		-		-		-		-	0.000	3.763	3.376
Engineering/Technical Services 2	C/T&M	NGMS : Ft. Hua, AZ	12.927	-		-		-		-		-	0.000	12.927	12.927
Engineering/Technical Services 3	C/T&M	NGIT : Ft. Hua, AZ	3.612	-		-		-		-		-	0.000	3.612	3.612
Engineering/Technical Services 4	C/Various	Various : Various	0.743	0.600	Oct 2014	0.209	Oct 2015	0.291	May 2017	-		0.291	Continuing	Continuing	Continuing
Engineering/Technical Services 5	C/CPFF	TASC, Inc : Andover, MA	3.463	1.728	Oct 2014	2.130	Oct 2015	1.739	May 2017	-		1.739	-	-	-
Subtotal			24.508	2.328		2.339		2.030		-		2.030	-	-	-
Project Cost Totals			43.571	3.328		3.239		3.030		-		3.030	-	-	-
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2017 Defense Information Systems Agency			Date: February 2016
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	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021			
	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
DCGS																												
DCGS T&E IPT																												
Connectivity to Other Testbeds & Test Event Conduct																												
DDTE Operation and Maintenance Support																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2017 Defense Information Systems Agency		Date: February 2016
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Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
DCGS				
DCGS T&E IPT	1	2015	4	2021
Connectivity to Other Testbeds & Test Event Conduct	1	2015	4	2021
DDTE Operation and Maintenance Support	1	2015	4	2021