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| <b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2020 Defense Information Systems Agency | <b>Date:</b> March 2019 |
|---|-------------------------|

| <b>Appropriation/Budget Activity</b>  | <b>R-1 Program Element (Number/Name)</b>                       |                |                |                     |                    |                      |                |                |                |                |                         |                   |
|---|--|----------------|----------------|---------------------|--------------------|----------------------|----------------|----------------|----------------|----------------|-------------------------|-------------------|
| 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide / BA 7: Operational Systems Development</i> | PE 0305208K / <i>Distributed Common Ground/Surface Systems</i> |                |                |                     |                    |                      |                |                |                |                |                         |                   |
| <b>COST (\$ in Millions)</b>  | <b>Prior Years</b>   | <b>FY 2018</b> | <b>FY 2019</b> | <b>FY 2020 Base</b> | <b>FY 2020 OCO</b> | <b>FY 2020 Total</b> | <b>FY 2021</b> | <b>FY 2022</b> | <b>FY 2023</b> | <b>FY 2024</b> | <b>Cost To Complete</b> | <b>Total Cost</b> |
| Total Program Element   | 53.168   | 2.959          | 2.970          | 2.981               | -                  | 2.981                | 3.050          | 3.112          | 3.174          | 3.235          | Continuing              | Continuing        |
| NF1: <i>Distributed Common Ground/Surface Systems</i>   | 53.168   | 2.959          | 2.970          | 2.981               | -                  | 2.981                | 3.050          | 3.112          | 3.174          | 3.235          | Continuing              | Continuing        |

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

As the sole joint interoperability certification agent, the Joint Interoperability Test Command (JITC) established and maintains a Distributed Development and Test Enterprise (T&E) 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 (OUSD(I)). 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>B. Program Change Summary (\$ in Millions)</b> | <b>FY 2018</b> | <b>FY 2019</b> | <b>FY 2020 Base</b> | <b>FY 2020 OCO</b> | <b>FY 2020 Total</b> |
|---|----------------|----------------|---------------------|--------------------|----------------------|
| Previous President's Budget                       | 3.049          | 2.970          | 2.981               | -                  | 2.981                |
| Current President's Budget                        | 2.959          | 2.970          | 2.981               | -                  | 2.981                |
| Total Adjustments                                 | -0.090         | 0.000          | 0.000               | -                  | 0.000                |
| • Congressional General Reductions                | -              | -              |                     |                    |                      |
| • Congressional Directed Reductions               | -              | -              |                     |                    |                      |
| • Congressional Rescissions                       | -              | -              |                     |                    |                      |
| • Congressional Adds                              | -              | -              |                     |                    |                      |
| • Congressional Directed Transfers                | -              | -              |                     |                    |                      |
| • Reprogrammings                                  | -              | -              |                     |                    |                      |
| • SBIR/STTR Transfer                              | -0.090         | -              |                     |                    |                      |

**Change Summary Explanation**

The decrease of -\$0.090 in FY 2018 reflects a transfer of funding to Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs.

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| Exhibit R-2A, RDT&E Project Justification: PB 2020 Defense Information Systems Agency |             |         |         |              |   |               |         |         |   | Date: March 2019 |                  |            |
|---|-------------|---------|---------|--------------|---|---------------|---------|---------|---|------------------|------------------|------------|
| Appropriation/Budget Activity<br>0400 / 7   |             |         |         |              | R-1 Program Element (Number/Name)<br>PE 0305208K / <i>Distributed Common Ground/Surface Systems</i> |               |         |         | Project (Number/Name)<br>NF1 / <i>Distributed Common Ground/Surface Systems</i> |                  |                  |            |
| COST (\$ in Millions)   | Prior Years | FY 2018 | FY 2019 | FY 2020 Base | FY 2020 OCO   | FY 2020 Total | FY 2021 | FY 2022 | FY 2023   | FY 2024          | Cost To Complete | Total Cost |
| NF1: <i>Distributed Common Ground/Surface Systems</i>                                 | 53.168      | 2.959   | 2.970   | 2.981        | -   | 2.981         | 3.050   | 3.112   | 3.174   | 3.235            | 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)**

|  | <b>FY 2018</b> | <b>FY 2019</b> | <b>FY 2020</b> |
|--|----------------|----------------|----------------|
| <b>Title:</b> Distributed Common Ground/Surface Systems (DCGS)   | 2.959          | 2.970          | 2.981          |
| <b>FY 2019 Plans:</b><br>Continue to revise and evolve T&E data collection techniques and analysis strategies in support of DCGS Enterprise community members acquisition programs' interoperability as they integrate capabilities and services solutions to address the operational gaps identified in the Office of the Under Secretary of Defense for Intelligence (OUSD(I)) sponsored Distributed Common Ground/Surface System Enterprise Capabilities Based Assessment. Continue to plan, develop and execute enterprise-level |                |                |                |

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| <b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2020 Defense Information Systems Agency  |  | <b>Date:</b> March 2019  |                |
| <b>Appropriation/Budget Activity</b><br>0400 / 7  | <b>R-1 Program Element (Number/Name)</b><br>PE 0305208K / <i>Distributed Common Ground/Surface Systems</i> | <b>Project (Number/Name)</b><br>NF1 / <i>Distributed Common Ground/Surface Systems</i> |                |
| <b>B. Accomplishments/Planned Programs (\$ in Millions)</b>   |  | <b>FY 2018</b>   | <b>FY 2019</b> |
| <p>data collection during multiple yearly test events. Continue to support DDTE, provide enhanced functionality, expand T&amp;E capability, and perform automated evaluations of net-centric capabilities with improved assessment methodologies and practices due to incorporating new technologies such as cloud computing, mobile technology, and “big data”. Continue enhancement of instrumentation and automated data collection tools to support testing on multiple network domains and enclaves where the DCGS PoRs, National Agencies and Coalition Partners test and operate. Continue to develop T&amp;E methodology and tools to support testing of enterprise cybersecurity solutions to determine if they comply with standards, support interoperability between the DCGS PoRs, and meet the DCGS Enterprise cybersecurity requirements. Continue to conduct compliance testing of data, metadata, and web services against established standards to enhance the sharing and promote reuse of net centric solutions. Continuing to expand 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. All data collected by these assessment efforts are reflected in an annual DCGS Enterprise Assessment Report that delineates how well the DCGS Enterprise shows progress over time in meeting the capabilities and closing the gaps reflected in the 2016 DCGS Enterprise Initial Capabilities Document.</p> <p><b>FY 2020 Plans:</b></p> <p>Continue to revise and evolve test and evaluation (T&amp;E) data collection techniques and analysis strategies in support of DCGS Enterprise community members acquisition programs’ interoperability as they integrate capabilities and services solutions to address the operational gaps identified in the OUDS(I) sponsored Distributed Common Ground/Surface System Enterprise Capabilities Based Assessment. Continue to plan, develop and execute enterprise-level data collection during multiple yearly test events. Continue to support DDTE, provide enhanced functionality, expand T&amp;E capability, and perform automated evaluations of net-centric capabilities with improved assessment methodologies and practices due to incorporating new technologies such as cloud computing, mobile technology, and “big data”. Continue enhancement of instrumentation and automated data collection tools to support testing on multiple network domains and enclaves where the DCGS PoRs, National Agencies and Coalition Partners test and operate. Continue to develop T&amp;E methodology and tools to support testing of enterprise cybersecurity solutions to determine if they comply with standards, support interoperability between the DCGS PoRs, and meet the DCGS Enterprise cybersecurity requirements. Continue to conduct compliance testing of data, metadata, and web services against established standards to enhance the sharing and promote reuse of net centric solutions. Continuing to expand TaaS capabilities that enable DCGS entities and other COIs to test for standards compliance during the development and acquisition processes. All data collected by these assessment efforts are reflected in an annual DCGS Enterprise Assessment Report that delineates how well the DCGS Enterprise shows progress over time in meeting the capabilities and closing the gaps reflected in the 2016 DCGS Enterprise Initial Capabilities Document.</p> <p><b>FY 2019 to FY 2020 Increase/Decrease Statement:</b></p> |  |  |                |

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| <b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2020 Defense Information Systems Agency  |  | <b>Date:</b> March 2019  |                |
| <b>Appropriation/Budget Activity</b><br>0400 / 7  | <b>R-1 Program Element (Number/Name)</b><br>PE 0305208K / <i>Distributed Common Ground/Surface Systems</i> | <b>Project (Number/Name)</b><br>NF1 / <i>Distributed Common Ground/Surface Systems</i> |                |
| <b>B. Accomplishments/Planned Programs (\$ in Millions)</b>   |  | <b>FY 2018</b>   | <b>FY 2019</b> |
| An increase of +\$0.011 from FY2019 to FY 2020 is attributed to an increase in equipment refresh.   |  |  |                |
| <b>Accomplishments/Planned Programs Subtotals</b>   |  | 2.959  | 2.970          |
|   |  |  |                |
| <b>C. Other Program Funding Summary (\$ in Millions)</b><br>N/A   |  |  |                |
| <b>Remarks</b>  |  |  |                |
| <b>D. Acquisition Strategy</b><br>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. Beginning FY18, DCGS will transition to a cost plus fixed fee and firm fixed price Test, Evaluation and Certification contract (TEC).   |  |  |                |
| <b>E. Performance Metrics</b><br>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.<br><br>The T&E FT also leverages Joint Interoperability Certification testing to support the evaluation of DCGS Enterprise maturity. Of the six DCGS PoR systems, two 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. Of the three remaining PoRs, two 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.<br><br>1. Metric: T&E FT will perform a minimum of nine (9) DCGS Enterprise assessments in FY 2018 and ten (10) DCGS Enterprise Assessments in FY 2019 and FY 2020.<br><br>FY18 Target: 9 / Actual 10<br>FY19 Target: 10<br>FY20 Target: 10 |  |  |                |

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|---|-----------------------------------|---|--------------------|----------------|-------------------|--|-------------------|---------------------|-------------------|--------------------|-------------------|--|-------------------------|-------------------|---------------------------------|
| <b>Exhibit R-3, RDT&amp;E Project Cost Analysis:</b> PB 2020 Defense Information Systems Agency |                                   |   |                    |                |                   |  |                   |                     |                   |                    |                   | <b>Date:</b> March 2019  |                         |                   |                                 |
| <b>Appropriation/Budget Activity</b><br>0400 / 7  |                                   |   |                    |                |                   | <b>R-1 Program Element (Number/Name)</b><br>PE 0305208K / <i>Distributed Common Ground/Surface Systems</i> |                   |                     |                   |                    |                   | <b>Project (Number/Name)</b><br>NF1 / <i>Distributed Common Ground/Surface Systems</i> |                         |                   |                                 |
| <b>Support (\$ in Millions)</b>   |                                   |   |                    | FY 2018        |                   | FY 2019  |                   | FY 2020 Base        |                   | FY 2020 OCO        |                   | FY 2020 Total  |                         |                   |                                 |
| <b>Cost Category Item</b>   | <b>Contract Method &amp; Type</b> | <b>Performing Activity &amp; Location</b> | <b>Prior Years</b> | <b>Cost</b>    | <b>Award Date</b> | <b>Cost</b>  | <b>Award Date</b> | <b>Cost</b>         | <b>Award Date</b> | <b>Cost</b>        | <b>Award Date</b> | <b>Cost</b>  | <b>Cost To Complete</b> | <b>Total Cost</b> | <b>Target Value of Contract</b> |
| In-House Contracts  | MIPR                              | Various : Various                         | 21.963             | 1.000          | Oct 2017          | 1.000  | Oct 2018          | 1.000               | Oct 2019          | -                  |                   | 1.000  | Continuing              | Continuing        | Continuing                      |
| <b>Subtotal</b>   |                                   |   | 21.963             | 1.000          |                   | 1.000  |                   | 1.000               |                   | -                  |                   | 1.000  | Continuing              | Continuing        | N/A                             |
| <b>Test and Evaluation (\$ in Millions)</b>   |                                   |   |                    | FY 2018        |                   | FY 2019  |                   | FY 2020 Base        |                   | FY 2020 OCO        |                   | FY 2020 Total  |                         |                   |                                 |
| <b>Cost Category Item</b>   | <b>Contract Method &amp; Type</b> | <b>Performing Activity &amp; Location</b> | <b>Prior Years</b> | <b>Cost</b>    | <b>Award Date</b> | <b>Cost</b>  | <b>Award Date</b> | <b>Cost</b>         | <b>Award Date</b> | <b>Cost</b>        | <b>Award Date</b> | <b>Cost</b>  | <b>Cost To Complete</b> | <b>Total Cost</b> | <b>Target Value of Contract</b> |
| Engineering & Technical Services 1  | C/T&M                             | Interop : Ft Huachuca                     | 3.763              | -              |                   | -  |                   | -                   |                   | -                  |                   | -  | 0.000                   | 3.763             | -                               |
| Engineering & Technical Services 2  | C/T&M                             | NGMS : Ft Huachuca                        | 12.927             | -              |                   | -  |                   | -                   |                   | -                  |                   | -  | 0.000                   | 12.927            | -                               |
| Engineering & Technical Services 3  | C/T&M                             | NGIT : Ft Huachuca                        | 3.612              | -              |                   | -  |                   | -                   |                   | -                  |                   | -  | 0.000                   | 3.612             | -                               |
| Engineering & Technical Services 4  | C/Various                         | Various : Various                         | 1.843              | 0.330          | May 2018          | -  |                   | -                   |                   | -                  |                   | -  | 0.000                   | 2.173             | -                               |
| Engineering & Technical Services 5  | C/CPFF                            | TASC : Andover, MA                        | 9.060              | 0.827          | May 2018          | -  |                   | -                   |                   | -                  |                   | -  | 0.000                   | 9.887             | -                               |
| Engineering & Technical Services 6  | MIPR                              | Various : Various                         | -                  | 0.802          | Dec 2017          | 1.970  | Dec 2018          | 1.981               | Dec 2019          | -                  |                   | 1.981  | Continuing              | Continuing        | Continuing                      |
| <b>Subtotal</b>   |                                   |   | 31.205             | 1.959          |                   | 1.970  |                   | 1.981               |                   | -                  |                   | 1.981  | Continuing              | Continuing        | N/A                             |
|   |                                   |   | <b>Prior Years</b> | <b>FY 2018</b> |                   | <b>FY 2019</b>   |                   | <b>FY 2020 Base</b> |                   | <b>FY 2020 OCO</b> |                   | <b>FY 2020 Total</b>   | <b>Cost To Complete</b> | <b>Total Cost</b> | <b>Target Value of Contract</b> |
| <b>Project Cost Totals</b>  |                                   |   | 53.168             | 2.959          |                   | 2.970  |                   | 2.981               |                   | -                  |                   | 2.981  | Continuing              | Continuing        | N/A                             |
| <b>Remarks</b>  |                                   |   |                    |                |                   |  |                   |                     |                   |                    |                   |  |                         |                   |                                 |

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| Exhibit R-4, RDT&E Schedule Profile: PB 2020 Defense Information Systems Agency |  |  |  |  |  |  |  |   |  |  |  | Date: March 2019 |  |  |  |   |  |  |  |
| Appropriation/Budget Activity<br>0400 / 7                                       |  |  |  |  |  |  |  | R-1 Program Element (Number/Name)<br>PE 0305208K / Distributed Common<br>Ground/Surface Systems |  |  |  |                  |  |  |  | Project (Number/Name)<br>NF1 / Distributed Common Ground/Surface<br>Systems |  |  |  |

|   | FY 2018 |   |   |   | FY 2019 |   |   |   | FY 2020 |   |   |   | FY 2021 |   |   |   | FY 2022 |   |   |   | FY 2023 |   |   |   | FY 2024 |   |   |   |
|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|---------|---|---|---|
|   | 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 |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |
| DDT&E Operation and Maintenance Support             |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |         |   |   |   |

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| <b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2020 Defense Information Systems Agency |  |  | <b>Date:</b> March 2019 |
| <b>Appropriation/Budget Activity</b><br>0400 / 7  | <b>R-1 Program Element (Number/Name)</b><br>PE 0305208K / <i>Distributed Common Ground/Surface Systems</i> | <b>Project (Number/Name)</b><br>NF1 / <i>Distributed Common Ground/Surface Systems</i> |                         |

Schedule Details

| Events by Sub Project                               | Start   |      | End     |      |
|---|---------|------|---------|------|
|   | Quarter | Year | Quarter | Year |
| <b>DCGS</b>   |         |      |         |      |
| DCGS T&E IPT  | 1       | 2018 | 4       | 2024 |
| Connectivity to Other Testbeds & Test Event Conduct | 1       | 2018 | 4       | 2024 |
| DDT&E Operation and Maintenance Support             | 1       | 2018 | 4       | 2024 |