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Exhibit R-2, RDT&E Budget Item Justification: PB 2020 Air Force **Date:** February 2019

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| Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development</i> | R-1 Program Element (Number/Name) PE 0305208F / <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 |
|--|-------------|---------|---------|--------------|-------------|---------------|---------|---------|---------|---------|------------------|------------|
| Total Program Element | - | 38.064 | 54.054 | 25.009 | 0.000 | 25.009 | 25.443 | 25.972 | 26.447 | 26.923 | Continuing | Continuing |
| 674826: <i>Common Imagery Ground / Surface Systems</i> | - | 38.064 | 28.054 | 25.009 | 0.000 | 25.009 | 25.443 | 25.972 | 26.447 | 26.923 | Continuing | Continuing |
| 675246: <i>MQ-9 Development and Fielding</i> | - | 0.000 | 26.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Continuing | Continuing |

A. Mission Description and Budget Item Justification

Air Force Distributed Common Ground System (AF DCGS) is the Combat Air Force (CAF) weapon system architecture for planning and direction, collection, processing and exploitation, analysis and production, and dissemination (PCPAD) of data from Intelligence, Surveillance, and Reconnaissance (ISR) missions. Since AF DCGS is also a major component of the DoD DCGS, the system is designed to complement and interoperate with the DoD, Army, Navy and Marine Corps DCGS. The AF DCGS mission is to provide Joint Task Force (JTF) Commanders, Air Component Commanders, Unified Commands, and other directed organizations with global, time-sensitive ISR PCPAD across the spectrum of military operations. AF DCGS is a multi-INT network linked weapon system (AN/GSQ-272) capable of exploiting intelligence data from manned platforms, remotely piloted aircraft (RPA), non-traditional ISR platforms, national and commercial satellites, and other collection systems. AF DCGS is designed to support joint operational requirements by providing a common PCPAD means to provide time-sensitive intelligence to field commanders and in support of the Air Operations Center (AOC) mission requirements. Currently, the AF DCGS worldwide architecture is composed of two worldwide core sites, three regional core sites, two remote Air Force Forces (AF FOR) sites, four National Mission Partner (NMP) sites, three support sites, and multiple National Guard Bureau (NGB) sites. Currently, AF DCGS is supporting ongoing operations from forward deployed and in-garrison CONUS and OCONUS based locations. The system employs a concept of data distribution, information sharing and collaborative work centers. AF DCGS provides the national leadership and the warfighter with integrated and interoperable national and airborne reconnaissance by providing quality and fused Signals Intelligence (SIGINT), Measurement and Signature Intelligence (MASINT), and Geospatial Intelligence (GEOINT) tailored to the warfighter for all levels of conflict.

AF DCGS is transforming by integrating the necessary technologies and tools to provide increased capabilities and meet emerging and urgent operational needs. These efforts will also integrate commercial-off-the-shelf and government-off-the-shelf upgrades to provide current technologies and achieve necessary application services. The next series of upgrades will meet the operational need to integrate new and/or improved sensor capabilities, as well as enhance interoperability by migrating to an Open Architecture (OA) to improve data sharing ability per DoD direction.

Program management consists of five ACAT III efforts: GEOINT Transformation, SIGINT Transformation, Multi-INT, Network Infrastructure Transformation, and DCGS Reference Imagery Transition (DRT): (Note: GEOINT Baseline 4.1, System Release 3.0 and SENSORS ACAT were closed in FY18 and Sensors funding/projects were merged into GEOINT Transformation ACAT in FY19).

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| Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development</i> | R-1 Program Element (Number/Name) PE 0305208F / <i>Distributed Common Ground/Surface Systems</i> |
|--|--|

1. GEOINT Transformation: The GEOINT Transformation effort rapidly integrates new capabilities, enables quick/seamless integration of new sensors, data types, sensor planning, command and control (C2) and migrates GEOINT-specific applications & capabilities into the open architecture framework.
2. SIGINT Transformation: Rapidly integrate new capabilities, leverage mission partner methods and tools, exchange data, and migrate the SIGINT-specific applications/capabilities into the open architecture framework.
3. Multi-INT: Rapidly integrate new multi-INT capabilities/enterprise applications and facilitate enterprise-wide collaboration capabilities. Addresses program office test and evaluation activities.
4. Network Infrastructure Transformation: The Infrastructure Transformation effort modernizes the AF DCGS infrastructure to a cyber-resilient, open, scalable, cloud-enabled hybrid Platform as a Service, improving data ingest, transfer, and storage capabilities, collaboration, and content driven discovery. Initial OA DCGS Platform as a Service, along with migration to a hub-based architecture, represents the AF DCGS program's initial efforts to eventually migrate to a hybrid cloud (mix of private on-premises and public cloud) architecture
5. *DRT: The Air Force DCGS Reference Imagery Transition (DRT) effort provides data ingest, transfer, and storage capabilities for NGA reference imagery data.

NOTES:

*For FY20, this effort does not have any associated investment funding.

As directed in the FY 2018 NDAA, Sec 825, amendment to PL 114-92 FY 2016 NDAA, Sec 828 Penalty for Cost Overruns, the FY 2018 Air Force penalty total is \$14.373M. The calculated percentage reduction to each research, development, test and evaluation and procurement account will be allocated proportionally from all programs, projects, or activities under such account.

This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

| B. Program Change Summary (\$ in Millions) | FY 2018 | FY 2019 | FY 2020 Base | FY 2020 OCO | FY 2020 Total |
|---|----------------|----------------|---------------------|--------------------|----------------------|
| Previous President's Budget | 27.501 | 54.054 | 25.009 | 0.000 | 25.009 |
| Current President's Budget | 38.064 | 54.054 | 25.009 | 0.000 | 25.009 |
| Total Adjustments | 10.563 | 0.000 | 0.000 | 0.000 | 0.000 |
| • Congressional General Reductions | 0.000 | 0.000 | | | |
| • Congressional Directed Reductions | 0.000 | 0.000 | | | |
| • Congressional Rescissions | 0.000 | 0.000 | | | |
| • Congressional Adds | 10.563 | 0.000 | | | |
| • Congressional Directed Transfers | 0.000 | 0.000 | | | |
| • Reprogrammings | 0.000 | 0.000 | | | |
| • SBIR/STTR Transfer | 0.000 | 0.000 | | | |
| • Other Adjustments | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

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| Change Summary Explanation In FY18, Congress added \$10.563M in RDT&E funding for acceleration of SIGINT modernization. | | |

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| Exhibit R-2A, RDT&E Project Justification: PB 2020 Air Force | | | | | | | | | | Date: February 2019 | | |
| Appropriation/Budget Activity 3600 / 7 | | | | | R-1 Program Element (Number/Name) PE 0305208F / <i>Distributed Common Ground/Surface Systems</i> | | | | Project (Number/Name) 674826 / <i>Common Imagery 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 |
| 674826: <i>Common Imagery Ground / Surface Systems</i> | - | 38.064 | 28.054 | 25.009 | 0.000 | 25.009 | 25.443 | 25.972 | 26.447 | 26.923 | Continuing | Continuing |
| Quantity of RDT&E Articles | - | - | - | - | - | - | - | - | - | - | | |

A. Mission Description and Budget Item Justification

Program management consists of five ACAT III efforts: GEOINT Transformation, SIGINT Transformation, Multi-INT, Network Infrastructure Transformation, and DCGS Reference Imagery Transition (DRT):

1. GEOINT Transformation: The GEOINT Transformation effort rapidly integrates new capabilities, enables quick/seamless integration of new sensors, data types, sensor planning, command and control (C2) and migrates GEOINT-specific applications & capabilities into the open architecture framework.
2. SIGINT Transformation: Rapidly integrate new capabilities, leverage mission partner methods and tools, exchange data, and migrate the SIGINT-specific applications/capabilities into the open architecture framework.
3. Multi-INT: Rapidly integrate new multi-INT capabilities/enterprise applications and facilitate enterprise-wide collaboration capabilities. Addresses program office test and evaluation activities.
4. Network Infrastructure Transformation: The Infrastructure Transformation effort modernizes the AF DCGS infrastructure to a cyber-resilient, open, scalable, cloud-enabled hybrid Platform as a Service, improving data ingest, transfer, and storage capabilities, collaboration, and content driven discovery. Initial OA DCGS Platform as a Service, along with migration to a hub-based architecture, represents the AF DCGS program's initial efforts to eventually migrate to a hybrid cloud (mix of private on-premises and public cloud) architecture
5. *DRT: The Air Force DCGS Reference Imagery Transition (DRT) effort provides data ingest, transfer, and storage capabilities for NGA reference imagery data.

NOTES:

*For FY20, this effort does not have any associated RDT&E funding. The Other Procurement Air Force (OPAF) funding is exhibited in the Procurement Documentation (WSC846080, DCGS-AF).

Intelligent Modeling and Predictive Analysis of Cyberspace Targeting (IMPACT) (Formerly known as Project SUTER) effort was moved from PE 0305221F to PE 0305208F in FY19. IMPACT develops concepts, Tactics/Techniques/Procedures (TTPs) and technologies for synchronizing the capabilities of ISR and non-kinetic capabilities in a coordinated fashion with traditional kinetic weapons to prosecute targets connected together or dependent upon some form of communications network.

This program element may include necessary civilian pay expenses required to manage, execute, and deliver AF DCGS weapon system capability. The use of such program funds would be in 0605826F, 0605827F, 0605828F, 0605829F, 0605830F, 0605831F, 0605832F, 0605833, and 0605898F.

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| Exhibit R-2A, RDT&E Project Justification: PB 2020 Air Force | | Date: February 2019 |
| Appropriation/Budget Activity 3600 / 7 | R-1 Program Element (Number/Name) PE 0305208F / <i>Distributed Common Ground/Surface Systems</i> | Project (Number/Name) 674826 / <i>Common Imagery Ground / Surface Systems</i> |

| B. Accomplishments/Planned Programs (\$ in Millions) | FY 2018 | FY 2019 | FY 2020 Base | FY 2020 OCO | FY 2020 Total |
|---|----------------|----------------|---------------------|--------------------|----------------------|
| <p>Title: GEOINT Transformation</p> <p>Description: The GEOINT Transformation effort rapidly integrates new capabilities and migrates GEOINT-specific applications and capabilities into the open architecture framework. Furthermore, GEOINT Transformation provides continuous and incremental improvement to the capability for planning and direction, collection, processing and exploitation, analysis and production, and dissemination (PCPAD) of advanced imagery intelligence.</p> <p>FY 2019 Plans: Continue the Full Motion Geo-Coordinate Accuracy effort.</p> <p>FY 2020 Base Plans: Will continue High Altitude Agile Release Train (HA ART) to rapidly integrate new capabilities and migrate GEOINT-specific applications & capabilities into the OA framework.</p> <p>FY 2019 to FY 2020 Increase/Decrease Statement: Decrease is a return to normal funding. FY19 included OCO funds.</p> | 0.000 | 3.500 | 0.500 | - | 0.500 |
| <p>Title: SIGINT Transformation</p> <p>Description: The Signal Intelligence (SIGINT) Transformation effort rapidly integrates new capabilities, leverages mission partner methods and tools, improves data exchange, and migrates the SIGINT-specific applications/capabilities into the open architecture framework. The SIGINT Segment provides command and control (C2) of ISR sensors, data processing, and data distribution to the customers in near real time from connected sensors at both core and remote sites.</p> <p>FY 2019 Plans: Continue USAF SIGINT Sensor Data Ingest (SSDI) effort to enable AF DCGS to seamlessly operate with National Mission Partner (NMP); provides the ability to share intelligence products and metadata directly with the NMP processing environment for the purpose of supporting real time geolocation and target identification as well as access to NMP tools and services for near real-time streaming of sensor data; automated language and speaker ID; and analytic and reporting applications.</p> <p>FY 2020 Base Plans:</p> | 30.945 | 6.420 | 1.000 | 0.000 | 1.000 |

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| Appropriation/Budget Activity 3600 / 7 | R-1 Program Element (Number/Name) PE 0305208F / <i>Distributed Common Ground/Surface Systems</i> | Project (Number/Name) 674826 / <i>Common Imagery Ground / Surface Systems</i> |

| B. Accomplishments/Planned Programs (\$ in Millions) | FY 2018 | FY 2019 | FY 2020 Base | FY 2020 OCO | FY 2020 Total |
|--|----------------|----------------|---------------------|--------------------|----------------------|
| <p>Will continue the SIGINT Transformation Agile Release Train (SIGINT ART) to integrate new capabilities, leverage mission partner methods and tools, exchange data, and migrate SIGINT-specific capabilities into OA.</p> <p>FY 2020 OCO Plans: None</p> <p>FY 2019 to FY 2020 Increase/Decrease Statement: Decreased due to completion of SIGINT Sensor Data Ingest (SSDI) project.</p> | | | | | |
| <p>Title: Multi-INT Transformation</p> <p>Description: Provides and supports Open Architecture-based Enterprise Services, moves to commodity hardware and a virtual desktop environment, facilitates enterprise-wide collaborative tools, and integrates IMPACT capability into Open Architecture DCGS.</p> <p>FY 2019 Plans:</p> <ul style="list-style-type: none"> • Continue the Multi-Intelligence Transformation Agile Release Train (ART) effort. • Continue Data Analytics (Real Time Analytics (RTA), Content Driven Analytics (CDA), Project Maven) integration of GOTS and COTS-provided algorithms. • Continue the Enterprise Communications Capability effort to replace existing AF DCGS legacy proprietary, disparate, and end-of-life types of communications methods, hardware, tools and software applications with new, secure, accreditable, non-proprietary, open architecture enterprise hardware, tools, and applications to meet mission needs. • Continue transitioning Intelligent Modeling and Predictive Analysis of Cyberspace Targeting (IMPACT) effort to AF DCGS. <p>FY 2020 Base Plans:</p> <ul style="list-style-type: none"> • Will continue the Multi-Intelligence Transformation ART effort. • Will continue Data Analytics (RTA, CDA, and Project Maven) integration of GOTS and COTS provided algorithms. • Will continue the Enterprise Communications Capability (ECC)effort to replace existing AF DCGS legacy proprietary, disparate, and end-of-life types of communications methods, hardware, tools and software applications with new, secure, accreditable, non-proprietary, open architecture enterprise hardware, tools, and applications to meet mission needs. | 4.081 | 14.409 | 12.834 | - | 12.834 |

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| Appropriation/Budget Activity 3600 / 7 | R-1 Program Element (Number/Name) PE 0305208F / <i>Distributed Common Ground/Surface Systems</i> | Project (Number/Name) 674826 / <i>Common Imagery Ground / Surface Systems</i> |

| B. Accomplishments/Planned Programs (\$ in Millions) | FY 2018 | FY 2019 | FY 2020 Base | FY 2020 OCO | FY 2020 Total |
|---|----------------|----------------|---------------------|--------------------|----------------------|
| <ul style="list-style-type: none"> Will continue Intelligent Modeling and Predictive Analysis of Cyberspace Targeting (IMPACT) effort. <p>FY 2019 to FY 2020 Increase/Decrease Statement: Minimal funding decrease</p> | | | | | |
| <p>Title: Network Infrastructure Transformation</p> <p>Description: The Network Infrastructure Transformation effort modernizes the AF DCGS infrastructure to improve data ingest, transfer, and storage capabilities while migrating the network toward a cloud architecture. A primary task is to replace the Asynchronous Transfer Mode (ATM) capability with a non-ATM based Transport Architecture.</p> <p>FY 2019 Plans:</p> <ul style="list-style-type: none"> Continue to develop, test and demonstrate the ATM-replacement Network Transport Architecture. Continue to develop and demonstrate technical feasibility of utilizing secure commercial clouds (e.g., the Intelligence Community's Commercial Cloud Services (C2S)). <p>FY 2020 Base Plans:</p> <ul style="list-style-type: none"> Will continue to develop, test and demonstrate the ATM-replacement Network Transport Architecture. Will continue to develop and demonstrate technical feasibility of utilizing secure commercial clouds (e.g., the Intelligence Community's Commercial Cloud Services (C2S)). Will continue development of next WST (Weapon System Trainer) agile release. <p>FY 2019 to FY 2020 Increase/Decrease Statement: Funding increase due to increased work on the WST effort.</p> | 3.038 | 3.725 | 10.675 | - | 10.675 |
| Accomplishments/Planned Programs Subtotals | 38.064 | 28.054 | 25.009 | 0.000 | 25.009 |

| C. Other Program Funding Summary (\$ in Millions) | | | | | | | | | | | |
|--|----------------|----------------|---------------------|--------------------|----------------------|----------------|----------------|----------------|----------------|-------------------------|-------------------|
| <u>Line Item</u> | <u>FY 2018</u> | <u>FY 2019</u> | <u>FY 2020 Base</u> | <u>FY 2020 OCO</u> | <u>FY 2020 Total</u> | <u>FY 2021</u> | <u>FY 2022</u> | <u>FY 2023</u> | <u>FY 2024</u> | <u>Cost To Complete</u> | <u>Total Cost</u> |
| • OPAF 04 Line Item, 846080: DCGS-AF | 243.141 | 354.917 | 94.137 | - | 94.137 | 100.886 | 133.207 | 135.577 | 138.017 | Continuing | Continuing |
| Remarks | | | | | | | | | | | |

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| Exhibit R-2A, RDT&E Project Justification: PB 2020 Air Force | | Date: February 2019 |
| Appropriation/Budget Activity 3600 / 7 | R-1 Program Element (Number/Name) PE 0305208F / <i>Distributed Common Ground/Surface Systems</i> | Project (Number/Name) 674826 / <i>Common Imagery Ground / Surface Systems</i> |

D. Acquisition Strategy

The AF DCGS acquisition strategy is to transition the weapon system to an open hardware and software architecture. Also, the strategy leverages approved lean and agile industry practices to increase delivery cycles and incorporates remote installation capabilities to speed up the installation tempo. Contracting strategy involves a combination of Basic Ordering Agreements (BOAs), Indefinite Delivery/Indefinite Quantity (IDIQ) contracts awarded to execute program funds and delivery/task orders are negotiated/awarded individually. The program is managed as five ACAT III efforts: GEOINT Transformation, SIGINT Transformation, Multi-INT-1, Network Infrastructure Transformation, and DCGS Reference Imagery Transition (DRT).

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Air Force **Date:** February 2019

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| Appropriation/Budget Activity 3600 / 7 | R-1 Program Element (Number/Name) PE 0305208F / <i>Distributed Common Ground/Surface Systems</i> | Project (Number/Name) 674826 / <i>Common Imagery Ground / Surface Systems</i> |
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| Product Development (\$ in Millions) | | | | FY 2018 | | FY 2019 | | FY 2020 Base | | FY 2020 OCO | | FY 2020 Total | Cost To Complete | Total Cost | Target Value of Contract |
|---|------------------------|--------------------------------|-------------|---------|------------|---------|------------|--------------|------------|-------------|------------|---------------|------------------|------------|--------------------------|
| Cost Category Item | Contract Method & Type | Performing Activity & Location | Prior Years | Cost | Award Date | Cost | Award Date | Cost | Award Date | Cost | Award Date | Cost | | | |
| GEOINT Transformation | Various | Various : Various | - | - | | 3.500 | Jan 2019 | 0.500 | Feb 2020 | - | | 0.500 | Continuing | Continuing | - |
| SIGINT Transformation | Various | Various : Various | - | 28.098 | Dec 2017 | 6.000 | Jul 2019 | 1.000 | Jul 2020 | - | | 1.000 | Continuing | Continuing | - |
| Multi-Intelligence | Various | Various : Various | - | 3.529 | Nov 2017 | 13.304 | Feb 2019 | 11.759 | Jan 2020 | - | | 11.759 | Continuing | Continuing | - |
| Network Infrastructure Transformation | Various | Various : Various | - | 3.058 | Jun 2018 | 3.500 | Feb 2019 | 10.000 | Feb 2020 | - | | 10.000 | Continuing | Continuing | - |
| Subtotal | | | - | 34.685 | | 26.304 | | 23.259 | | - | | 23.259 | Continuing | Continuing | N/A |

Remarks
 Note on "various" entries - Contract Method, Contract Type, Performing Activity, Target Value of Contract are entered as "various" because there are multiple projects within each upgrade and depending on the type of effort to be completed determines the contract vehicle to use. There is no way on this document to delineate the contracts that support each upgrade as they are numerous.

| Support (\$ in Millions) | | | | FY 2018 | | FY 2019 | | FY 2020 Base | | FY 2020 OCO | | FY 2020 Total | Cost To Complete | Total Cost | Target Value of Contract |
|---------------------------------|------------------------|--------------------------------|-------------|---------|------------|---------|------------|--------------|------------|-------------|------------|---------------|------------------|------------|--------------------------|
| Cost Category Item | Contract Method & Type | Performing Activity & Location | Prior Years | Cost | Award Date | Cost | Award Date | Cost | Award Date | Cost | Award Date | Cost | | | |
| Multi-Intelligence | Various | Various : Various | - | 0.118 | Mar 2018 | 0.251 | Jan 2019 | 0.251 | Jan 2020 | - | | 0.251 | Continuing | Continuing | - |
| Subtotal | | | - | 0.118 | | 0.251 | | 0.251 | | - | | 0.251 | Continuing | Continuing | N/A |

| Management Services (\$ in Millions) | | | | FY 2018 | | FY 2019 | | FY 2020 Base | | FY 2020 OCO | | FY 2020 Total | Cost To Complete | Total Cost | Target Value of Contract |
|---|------------------------|--------------------------------|-------------|---------|------------|---------|------------|--------------|------------|-------------|------------|---------------|------------------|------------|--------------------------|
| Cost Category Item | Contract Method & Type | Performing Activity & Location | Prior Years | Cost | Award Date | Cost | Award Date | Cost | Award Date | Cost | Award Date | Cost | | | |
| PMA | Various | Various : Various | - | 3.261 | Nov 2017 | 1.499 | Dec 2018 | 1.499 | Dec 2019 | - | | 1.499 | Continuing | Continuing | - |
| Subtotal | | | - | 3.261 | | 1.499 | | 1.499 | | - | | 1.499 | Continuing | Continuing | N/A |

Remarks
 Note on "various" entries - Contract Method, Contract Type, Performing Activity, Target Value of Contract are entered as "various" because there are multiple projects within in each upgrade and depending on the type of effort to be completed determines the contract vehicle to use. There is no way on this document to delineate the contracts that support each upgrade as they are numerous.

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| Exhibit R-4A, RDT&E Schedule Details: PB 2020 Air Force | | Date: February 2019 |
| Appropriation/Budget Activity 3600 / 7 | R-1 Program Element (Number/Name) PE 0305208F / <i>Distributed Common Ground/Surface Systems</i> | Project (Number/Name) 674826 / <i>Common Imagery Ground / Surface Systems</i> |

Schedule Details

| Events by Sub Project | Start | | End | |
|---|---------|------|---------|------|
| | Quarter | Year | Quarter | Year |
| <i>AF Distributed Common Ground System</i> | | | | |
| GEOINT Transformation: FMV Geo-Accuracy effort | 1 | 2019 | 2 | 2020 |
| SIGINT Transformation: SSDI development | 3 | 2019 | 4 | 2019 |
| Multi-INT Transformation: Enterprise Communication Capability (ECC) | 3 | 2019 | 4 | 2022 |
| Multi-INT Transformation: Data Analytics (RTA/CDA/MAVEN/Cyber) | 1 | 2018 | 4 | 2024 |
| Multi-INT Transformation: IMPACT (SUTER) | 2 | 2019 | 4 | 2024 |
| Network Infrastructure Transformation: OA Hybrid Cloud Services | 1 | 2019 | 4 | 2020 |
| Network Infrastructure Transformation: Follow-on WST development | 1 | 2020 | 4 | 2024 |

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| Appropriation/Budget Activity 3600 / 7 | | | | | R-1 Program Element (Number/Name) PE 0305208F / <i>Distributed Common Ground/Surface Systems</i> | | | | Project (Number/Name) 675246 / <i>MQ-9 Development and Fielding</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 |
| 675246: <i>MQ-9 Development and Fielding</i> | - | 0.000 | 26.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | Continuing | Continuing |
| Quantity of RDT&E Articles | - | - | - | - | - | - | - | - | - | - | | |

A. Mission Description and Budget Item Justification

Due to a Database Error, the additional \$26M in FY19 OCO for "MQ-9 Development and Fielding" (Project 675246) was erroneously added to PE 0305208. This funding belongs in Air Force PE 0305829F, "Video Data Link".

Video Data Link (VDL) Family of Systems (FoS) provides situational awareness (SA) to the operator on the ground using real time Full Motion Video (FMV) from secure line of sight links to airborne ISR, NTISR, PR and SF platforms. The FoS consists of interoperable Mounted (Airborne/Ground) and Handheld terminal variants. Current variants are utilized with 20 different platforms. Crypto Core Modernization (CCM) driven by NSA will create an imminent DMS issue by FY21; the current VDL equipment is incompatible with the enhanced Crypto Core.

This program element may include necessary civilian pay expenses required to manage, execute, and deliver nuclear weapon support capabilities. The use of such program funds would be in addition to the civilian pay expenses budgeted in program elements 0605826F, 0605827F, 0605828F, 0605829F, 0605830F, 0605831F, 0605832F, 0605898F, and 0605833F.

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

| | FY 2018 | FY 2019 | FY 2020 Base | FY 2020 OCO | FY 2020 Total |
|---|----------------|----------------|---------------------|--------------------|----------------------|
| Title: Video Data Link | - | 26.000 | 0.000 | - | 0.000 |
| Description: Video Data Link (VDL) Family of Systems (FoS) provides situational awareness (SA) to the operator on the ground using real time Full Motion Video (FMV) from secure line of sight links to airborne ISR, NTISR, PR and SF platforms. | | | | | |
| FY 2019 Plans: | | | | | |
| -FY19 OCO: Provide technology refresh for Mounted and Airborne Video Data Link. Focus areas will be Mobile Ad-Hoc Networking, updated cryptographic hardware, and improved waveforms for LPI/LPD (Low Probability of Intercept/Low Probability of Detection) operation. | | | | | |
| FY 2020 Base Plans: | | | | | |
| - Will continue technology refresh for Mounted and Airborne Video Data Link. Focus areas will be | | | | | |

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| B. Accomplishments/Planned Programs (\$ in Millions) | FY 2018 | FY 2019 | FY 2020 Base | FY 2020 OCO | FY 2020 Total |
|--|----------------|----------------|---------------------|--------------------|----------------------|
| Mobile Ad-Hoc Networking, updated cryptographic hardware, and improved waveforms for LPI/LPD (Low Probability of Intercept/Low Probability of Detection) operation. <i>FY 2019 to FY 2020 Increase/Decrease Statement:</i> No additional funds for FY20 | | | | | |
| Accomplishments/Planned Programs Subtotals | - | 26.000 | 0.000 | - | 0.000 |

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

N/A

Remarks

D. Acquisition Strategy

The Video Data Link acquisition strategy will be to conduct a competitive acquisition that will involve a CPIF contract vehicle to encourage proposals to integrate the required capability rapidly and within the identified budget.

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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| Exhibit R-4, RDT&E Schedule Profile: PB 2020 Air Force | | Date: February 2019 |
| Appropriation/Budget Activity 3600 / 7 | R-1 Program Element (Number/Name) PE 0305208F / <i>Distributed Common Ground/Surface Systems</i> | Project (Number/Name) 675246 / <i>MQ-9 Development and Fielding</i> |

| | 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 |

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|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| <i>Video Data Link Crypto Core Modernization</i> | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Multi-Domain and Hand-held | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

UNCLASSIFIED

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| Exhibit R-4A, RDT&E Schedule Details: PB 2020 Air Force | | Date: February 2019 |
| Appropriation/Budget Activity 3600 / 7 | R-1 Program Element (Number/Name) PE 0305208F / <i>Distributed Common Ground/Surface Systems</i> | Project (Number/Name) 675246 / <i>MQ-9 Development and Fielding</i> |

Schedule Details

| Events by Sub Project | Start | | End | |
|---|---------|------|---------|------|
| | Quarter | Year | Quarter | Year |
| <i>Video Data Link Crypto Core Modernization</i> | | | | |
| Multi-Domain and Hand-held | 2 | 2019 | 4 | 2020 |