| **Exhibit R-2**, **RDT&E Budget Item Justification:** PB 2016 Navy | | | | | | | | | | | **Date:** February 2015 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Appropriation/Budget Activity** <br> 1319: *Research, Development, Test & Evaluation, Navy I* BA 5: *System Development & Demonstration (SDD)* | | | | | | **R-1 Program Element (Number/Name)** <br> PE 0304231N *I Tactical Command System - MIP* | | | | | | |
| **COST ($ in Millions)** | **Prior Years** | **FY 2014** | **FY 2015** | **FY 2016 Base** | **FY 2016 OCO** | **FY 2016 Total** | **FY 2017** | **FY 2018** | **FY 2019** | **FY 2020** | **Cost To Complete** | **Total Cost** |
| Total Program Element | 3.362 | 2.140 | 1.011 | 0.998 | - | 0.998 | 1.007 | 1.037 | 1.067 | 1.089 | Continuing | Continuing |
| 2009: *OSIS Evolutionary Development (OED)* | 3.362 | 2.140 | 1.011 | 0.998 | - | 0.998 | 1.007 | 1.037 | 1.067 | 1.089 | Continuing | Continuing |

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

Radiant Mercury (RM) is a secure information platform that provides an automated means to sanitize, downgrade, guard, and transliterate formatted data at various classifications, compartments and releasabilities. It enables Combatant Commanders as well as operational commanders, afloat and ashore to disseminate and receive critical operational and intelligence information with coalition and allied forces.

Major Focus Area for FY16: Deliver 6.x and commence RM Version 7.0 development and begin the certification process.

**B. Program Change Summary ($ in Millions)**

| | **FY 2014** | **FY 2015** | **FY 2016 Base** | **FY 2016 OCO** | **FY 2016 Total** |
|---|---|---|---|---|---|
| Previous President's Budget | 2.140 | 1.011 | 1.007 | - | 1.007 |
| Current President's Budget | 2.140 | 1.011 | 0.998 | - | 0.998 |
| Total Adjustments | - | - | -0.009 | - | -0.009 |
| • Congressional General Reductions | - | - | | | |
| • Congressional Directed Reductions | - | - | | | |
| • Congressional Rescissions | - | - | | | |
| • Congressional Adds | - | - | | | |
| • Congressional Directed Transfers | - | - | | | |
| • Reprogrammings | - | - | | | |
| • SBIR/STTR Transfer | - | - | | | |
| • Program Adjustments | - | - | - | - | - |
| • Rate/Misc Adjustments | - | - | -0.009 | - | -0.009 |

**Change Summary Explanation**

Schedule:

1. Certification Test & Evaluation (CT&E) of Radiant Mercury (RM) Version 5.1 shifted from 3QFY13 to 1Q 2014
2. Delivery of RM Version 5.1 shifted from 4QFY13 to 1Q 2014

| Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy | | Date: February 2015 |
|---|---|---|

| Appropriation/Budget Activity<br>1319 I 5 | R-1 Program Element (Number/Name)<br>PE 0304231N I Tactical Command System - MIP | Project (Number/Name)<br>2009 I OSIS Evolutionary Development (OED) |
|---|---|---|

| COST ($ in Millions) | Prior Years | FY 2014 | FY 2015 | FY 2016 Base | FY 2016 OCO | FY 2016 Total | FY 2017 | FY 2018 | FY 2019 | FY 2020 | Cost To Complete | Total Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2009: OSIS Evolutionary Development (OED) | 3.362 | 2.140 | 1.011 | 0.998 | - | 0.998 | 1.007 | 1.037 | 1.067 | 1.089 | Continuing | Continuing |
| Quantity of RDT&E Articles | | - | - | - | - | - | - | - | - | - | | |

## A. Mission Description and Budget Item Justification

Trusted Information System (TIS) Radiant Mercury (RM) is a system that successfully provides accredited Cross Domain Solutions (CDS) to the Navy, the Department of Defense (DoD), and the Intelligence Community (IC).  TIS RM is a critical component of network-centric warfare, supporting joint operations and allied and coalition forces world-wide. The ability to pass sensitive and critical data across security domains and to our allied and coalition partners in a timely fashion can only be met by accredited CDS systems such as RM.  RM enables the Navy to operate in a multi-national environment.

TIS RM provides automated, bi-directional sanitization, transliteration and guarding capability for formatted and unformatted data between security enclaves.  RM helps ensure critical intelligence is provided quickly to operational decision-makers. TIS RM provides the capability to disseminate information for operating forces worldwide, including the operating forces of key allies in the Pacific, Central and European Command regions. This capability to move all-source intelligence-derived track information into the realm of the operational community significantly improves the situational awareness of tactical operators and planners. Unformatted data is handled by the Information Review Process (IRP).  The system provides cross domain services to a wide variety of customers including Combatant Commanders, Air Force (Shared Early Warning program), Army (Blue Force Tracking Program), Missile Defense Agency (MDA), Navy Cyber Defense Operations Command (NCDOC), Naval Modular Automated Communication Systems (NAVMACS), Mobile User Objective Systems (MUOS), Navy (Global Command and Control System - Maritime/J (GCCS-M/J), Automatic Identification System (AIS), Maritime Operations Centers (MOC), Distributed Common Ground System-Navy (DCGS-N), Tactical Ranges (TR), and numerous other DoD and Intelligence agencies.

Major Focus Area for FY16: Deliver RM Version 6.x. Begin development and certification process for RM Version 7.0.

## B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)

| | FY 2014 | FY 2015 | FY 2016 Base | FY 2016 OCO | FY 2016 Total |
|---|---|---|---|---|---|
| Title: Radiant Mercury (RM) | 2.140 | 1.011 | 0.998 | - | 0.998 |
| Articles: | - | - | - | - | - |

FY 2014 Accomplishments:
Completed development of the Radiant Mercury (RM) Version 6.0 baseline to run on SE Linux which removes dependency on proprietary vendor products whose pricing models have had a negative impact on the program. SE Linux allows the program to customize the Operating System (OS) for the RM application, increasing processing speed and improving security. Improved remote configuration management by replacing the current version of Windows with a Lightweight Text Interface for initial configuration control and a web-based interface to

| Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy | | **Date:** February 2015 |
|---|---|---|
| **Appropriation/Budget Activity** 1319 / 5 | **R-1 Program Element (Number/Name)** PE 0304231N / *Tactical Command System - MIP* | **Project (Number/Name)** 2009 / *OSIS Evolutionary Development (OED)* |

| B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each) | FY 2014 | FY 2015 | FY 2016 Base | FY 2016 OCO | FY 2016 Total |
|---|---|---|---|---|---|
| configure the system. Free and Open Source Software (FOSS) is used to manage the log, audit reduction, and mission assessment capabilities. Enhanced Message Analysis Generator (MAG) Generic Interface Functionality (MGIF) to take advantage of software and capabilities developed elsewhere within the Navy, DoD, and the Intelligence Communities (IC).  Completed certification testing.<br><br>*FY 2015 Plans:*<br>Deliver RM Version 6.0. Begin the development and certification of RM Version 6.x process which includes Factory Acceptance Testing (FAT), alpha testing, and government testing. FAT will include test procedure development to ensure all systems requirements are tested properly, dry-run testing to ensure the procedures are sufficient, and formal testing which will be witnessed by the government. Alpha testing is conducted by the Independent Verification and Validation (IV&V) team and is separate from the FAT. Upon successful FAT and alpha testing the software is provided to the National Security Agency (NSA) and Defense Intelligence Agency (DIA) government labs for the actual certification and testing event. In parallel to these testing activities, the software will also be provided to RM customers who maintain their own labs.<br><br>*FY 2016 Base Plans:*<br>Deliver RM Version 6.x. Begin the development and certification of RM Version 7.0 process which includes FAT, alpha testing, and government testing. FAT will include test procedure development to ensure all systems requirements are tested properly, dry-run testing to ensure the procedures are sufficient, and formal testing which will be witnessed by the government. Alpha testing is conducted by the IV&V team and is separate from the FAT. Upon successful FAT and alpha testing the software is provided to the NSA and DIA government labs for the actual certification and testing event. In parallel to these testing activities, the software will also be provided to RM customers who maintain their own labs.<br><br>*FY 2016 OCO Plans:*<br>N/A | | | | | |
| **Accomplishments/Planned Programs Subtotals** | 2.140 | 1.011 | 0.998 | - | 0.998 |

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

| Line Item | FY 2014 | FY 2015 | FY 2016 Base | FY 2016 OCO | FY 2016 Total | FY 2017 | FY 2018 | FY 2019 | FY 2020 | Cost To Complete | Total Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|
| • OPN/2608: *Trusted Information System (TIS)* | 0.396 | 0.324 | 0.284 | - | 0.284 | 0.290 | 0.295 | 0.302 | 0.308 | Continuing | Continuing |

| **Exhibit R-2A**, **RDT&E Project Justification:** PB 2016 Navy | | **Date:** February 2015 |
|---|---|---|
| **Appropriation/Budget Activity**<br>1319 *I* 5 | **R-1 Program Element (Number/Name)**<br>PE 0304231N *I Tactical Command System - MIP* | **Project (Number/Name)**<br>2009 *I OSIS Evolutionary Development (OED)* |

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

| Line Item | FY 2014 | FY 2015 | FY 2016 Base | FY 2016 OCO | FY 2016 Total | FY 2017 | FY 2018 | FY 2019 | FY 2020 | Cost To Complete | Total Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|

**Remarks**

**D. Acquisition Strategy**

Trusted Information Systems (TIS) Radiant Mercury (RM) provides automated, bi-directional sanitization, transliteration and guarding capability for formatted and unformatted data between security enclaves. RM helps ensure critical Indications and Warning intelligence is provided quickly to operational decision-makers. RM provides certified and accredited Cross Domain capabilities in the Pacific Command (PACOM), Europe Command (EUCOM) and Central Command (CENTCOM), Northern Command (NORTHCOM), Areas of Responsibility (AOR). RM is a fee-for-service program, it receives partial funding from the Navy to cover basic program management and infrastructure costs. The remaining funds needed to keep the program operating are generated from a fee-for-service model which charges customers a Life Cycle Surcharge (LCS) on all new task orders and an Annual User Fee (AUF) on all operational RM systems currently fielded.

**E. Performance Metrics**

Radiant Mercury (RM) provides and develops certified, accredited Cross Domain Solutions (CDS) and transfer capabilities to DoD and Intelligence Community (IC), and provides the capability to disseminate and receive operational and intelligence information for 100% of authorized sites.

Complete 100% of certification, system and security testing of RM version (X) for release. Provide the capability to sanitize, downgrade, guard, and transliterate formatted data at various classifications, compartments and releasabilities to combatant and operational commanders, coalition and allied forces at over 420 sites world-wide.

UNCLASSIFIED

| Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Navy | | Date: February 2015 |
|---|---|---|
| **Appropriation/Budget Activity**<br>1319 / 5 | **R-1 Program Element (Number/Name)**<br>PE 0304231N / Tactical Command System - MIP | **Project (Number/Name)**<br>2009 / OSIS Evolutionary Development (OED) |

### Product Development ($ in Millions)

| Cost Category Item | Contract Method & Type | Performing Activity & Location | Prior Years | FY 2014 Cost | FY 2014 Award Date | FY 2015 Cost | FY 2015 Award Date | FY 2016 Base Cost | FY 2016 Base Award Date | FY 2016 OCO Cost | FY 2016 OCO Award Date | FY 2016 Total Cost | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Software Development | C/CPFF | Lockheed Martin : Denver, CO | 2.505 | 1.552 | Dec 2013 | 0.723 | Dec 2014 | 0.713 | Dec 2015 | - | | 0.713 | Continuing | Continuing | Continuing |
| Software Development | C/CPFF | Various : Various | 0.000 | 0.231 | Dec 2013 | 0.092 | Dec 2014 | 0.091 | Dec 2015 | - | | 0.091 | Continuing | Continuing | Continuing |
| **Subtotal** | | | 2.505 | 1.783 | | 0.815 | | 0.804 | | - | | 0.804 | - | - | - |

### Support ($ in Millions)

| Cost Category Item | Contract Method & Type | Performing Activity & Location | Prior Years | FY 2014 Cost | FY 2014 Award Date | FY 2015 Cost | FY 2015 Award Date | FY 2016 Base Cost | FY 2016 Base Award Date | FY 2016 OCO Cost | FY 2016 OCO Award Date | FY 2016 Total Cost | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Requirements Analysis | C/CPFF | Various : Various | 0.000 | - | | 0.096 | Dec 2014 | 0.095 | Dec 2015 | - | | 0.095 | Continuing | Continuing | Continuing |
| Requirements Analysis | C/CPFF | BAH : San Diego, CA | 0.614 | 0.357 | Dec 2013 | 0.100 | Dec 2014 | 0.099 | Dec 2015 | - | | 0.099 | - | 1.170 | - |
| **Subtotal** | | | 0.614 | 0.357 | | 0.196 | | 0.194 | | - | | 0.194 | - | - | - |

### Test and Evaluation ($ in Millions)

| Cost Category Item | Contract Method & Type | Performing Activity & Location | Prior Years | FY 2014 Cost | FY 2014 Award Date | FY 2015 Cost | FY 2015 Award Date | FY 2016 Base Cost | FY 2016 Base Award Date | FY 2016 OCO Cost | FY 2016 OCO Award Date | FY 2016 Total Cost | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Certification Test | WR | SSC LANT : Charleston, SC | 0.243 | - | | - | | - | | - | | - | - | 0.243 | - |
| **Subtotal** | | | 0.243 | - | | - | | - | | - | | - | - | 0.243 | - |

| | Prior Years | FY 2014 | FY 2015 | FY 2016 Base | FY 2016 OCO | FY 2016 Total | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|
| **Project Cost Totals** | 3.362 | 2.140 | 1.011 | 0.998 | - | 0.998 | - | - | - |

**Remarks**

| Exhibit R-4, RDT&E Schedule Profile: PB 2016 Navy | | Date: February 2015 |
|---|---|---|
| **Appropriation/Budget Activity** 1319 / 5 | **R-1 Program Element (Number/Name)** PE 0304231N / *Tactical Command System - MIP* | **Project (Number/Name)** 2009 / *OSIS Evolutionary Development (OED)* |



Schedule chart — Proj 2009, FY 2014 through FY 2020 (quarterly).

**Test & Evaluation**

Test & Evaluation Milestone – CT&E:
- Version 5.1 ▲ (FY2014 1Q)
- Version 6.0 ▲ (FY2014 4Q)
- Version 6.x ▲ (FY2016 1Q)
- Version 7.0 ▲ (FY2017 4Q)
- Version 7.x ▲ (FY2019 4Q)

**Software Deliveries**
- Version 5.1 ▲ (FY2014 1Q)
- Version 6.0 ▲ (FY2015 1Q)
- Version 6.x ▲ (FY2016 2Q)
- Version 7.0 ▲ (FY2018 4Q)
- Version 7.x ▲ (FY2019 4Q)

*2016DON – 0304231N – 2009 CT&E of RM Version 5.1 shifted from 3Q 2013 to 1Q 2014*
*Delivery of RM Version 5.1 shifted from 4Q 2013 to 1Q2014*

| Exhibit R-4A, RDT&E Schedule Details: PB 2016 Navy | | | **Date:** February 2015 |
|---|---|---|---|
| **Appropriation/Budget Activity**<br>1319 *I* 5 | **R-1 Program Element (Number/Name)**<br>PE 0304231N *I Tactical Command System - MIP* | **Project (Number/Name)**<br>2009 *I OSIS Evolutionary Development (OED)* | |

## Schedule Details

| Events by Sub Project | Start | | End | |
|---|---|---|---|---|
| | Quarter | Year | Quarter | Year |
| ***Proj 2009*** | | | | |
| Test & Evaluation: Test & Evaluation Milestone - CT&E: RM Test & Evaluation Milestone - CT&E - RM Version 5.1 | 1 | 2014 | 1 | 2014 |
| Test & Evaluation: Test & Evaluation Milestone - CT&E: RM Test & Evaluation Milestone - CT&E - RM Version 6.0 | 4 | 2014 | 4 | 2014 |
| Test & Evaluation: Test & Evaluation Milestone - CT&E: RM Test & Evaluation Milestone - CT&E - RM Version 6.x | 1 | 2016 | 1 | 2016 |
| Test & Evaluation: Test & Evaluation Milestone - CT&E: RM Test & Evaluation Milestone - CT&E - RM Version 7.0 | 4 | 2017 | 4 | 2017 |
| Test & Evaluation: Test & Evaluation Milestone - CT&E: RM Test & Evaluation Milestone - CT&E - RM Version 7.x | 4 | 2019 | 4 | 2019 |
| Software Deliveries: RM Software - Delivery of RM Version 5.1 | 1 | 2014 | 1 | 2014 |
| Software Deliveries: RM Software - Delivery of RM Version 6.0 | 1 | 2015 | 1 | 2015 |
| Software Deliveries: RM Software - Delivery of RM Version 6.x | 2 | 2016 | 2 | 2016 |
| Software Deliveries: RM Software - Delivery of RM Version 7.0 | 4 | 2018 | 4 | 2018 |
| Software Deliveries: RM Software - Delivery of RM Version 7.x | 2 | 2020 | 2 | 2020 |