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| <b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2013 Navy | <b>DATE:</b> February 2012 |
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| <b>APPROPRIATION/BUDGET ACTIVITY</b>  | <b>R-1 ITEM NOMENCLATURE</b>                 |                |                     |                    |                      |                |                |                |                |                         |                   |
|---|--|----------------|---------------------|--------------------|----------------------|----------------|----------------|----------------|----------------|-------------------------|-------------------|
| 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i><br>BA 5: <i>Development &amp; Demonstration (SDD)</i> | PE 0604280N: <i>JT Tact Radio Sys (JTRS)</i> |                |                     |                    |                      |                |                |                |                |                         |                   |
| <b>COST (\$ in Millions)</b>  | <b>FY 2011</b>                               | <b>FY 2012</b> | <b>FY 2013 Base</b> | <b>FY 2013 OCO</b> | <b>FY 2013 Total</b> | <b>FY 2014</b> | <b>FY 2015</b> | <b>FY 2016</b> | <b>FY 2017</b> | <b>Cost To Complete</b> | <b>Total Cost</b> |
| Total Program Element   | 609.159                                      | 675.521        | 337.480             | -                  | 337.480              | 150.372        | 89.976         | 29.875         | 25.927         | Continuing              | Continuing        |
| 3020: <i>MIDS/JTRS</i>  | 20.086                                       | 41.688         | 100.419             | -                  | 100.419              | 126.912        | 72.587         | 15.629         | 11.640         | Continuing              | Continuing        |
| 3073: <i>AMF JTRS</i>   | 307.910                                      | 349.560        | 58.187              | -                  | 58.187               | 0.007          | -              | -              | -              | 0.000                   | 715.664           |
| 3074: <i>GMR JTRS</i>   | 99.289                                       | 18.732         | -                   | -                  | -                    | -              | -              | 0.025          | 0.025          | Continuing              | Continuing        |
| 3075: <i>HMS JTRS</i>   | 67.363                                       | 116.054        | 116.030             | -                  | 116.030              | 2.752          | 0.313          | -              | -              | 0.000                   | 302.512           |
| 3076: <i>JTRS Network Enterprise Domain (JNED)</i>  | 114.511                                      | 93.987         | 59.077              | -                  | 59.077               | 20.701         | 17.076         | 14.221         | 14.262         | Continuing              | Continuing        |
| 3078: <i>Digital Modular Radio</i>  | -  | 4.500          | 3.767               | -                  | 3.767                | -              | -              | -              | -              | 0.000                   | 8.267             |
| 9999: <i>Congressional Adds</i>   | -  | 51.000         | -                   | -                  | -                    | -              | -              | -              | -              | 0.000                   | 51.000            |

**Note**

In FY11-FY13, Program Element (PE) 0604280N represents the total JTRS RDT&E Budget (includes Multifunctional Information Distribution System (MIDS), Airborne and Maritime/Fixed Station (AMF) JTRS, Ground Mobile Radio (GMR) JTRS, Handheld/Manpack/Small Form Fit (HMS) JTRS, and JTRS Network Enterprise Domain (JNED)).

In FY14-FY17, Program Element (PE) 0604280N represents only the Navy share of the funding associated with all JTRS Development Projects. As part of the JTRS joint program budget strategy, each Military Department (MILDEP) budgets for a portion of the total program. Therefore in FY14-17 a portion of the JTRS RDT&E Budget is represented in this PE, in Army PE 0604280A, and in the Air Force PE 0604280F. JTRS Common Development includes funding for: MIDS, AMF JTRS, GMR JTRS, HMS JTRS, and JNED.

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

JTRS is the Department of Defense (DoD) family of common software-defined programmable radios that will form the foundation of information radio frequency transmission for Joint Vision 2020. The JTRS family of products will be multifunctional, multiband, multimode, network capable, and capable of providing communications through a range of low probability of intercept, low probability of detection and anti-jam waveforms. JTRS products will provide transformational communication capabilities for the warfighter. JTRS is intended to support communications readiness and mission success, in the 2 Megahertz (MHz) to 2 Gigahertz (GHz) operating frequency range, by providing military commanders with the ability to command, control and communicate with their forces via secure voice/video/data media forms. JTRS products are hardware-configurable and software-programmable radio systems that provide increased interoperability, flexibility and adaptability to support varied mission requirements.

AMF JTRS is a key enabler to the transformation of airborne, maritime, and land based communications toward network-centric operations. AMF JTRS will operate with legacy radios and waveforms used by civilian and military airborne, surface, subsurface, and fixed station platforms. AMF JTRS is intended to provide new radio

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| <b>APPROPRIATION/BUDGET ACTIVITY</b><br>1319: <i>Research, Development, Test &amp; Evaluation, Navy</i><br>BA 5: <i>Development &amp; Demonstration (SDD)</i>  |  | <b>R-1 ITEM NOMENCLATURE</b><br>PE 0604280N: <i>JT Tact Radio Sys (JTRS)</i> |
| <p>networking capability as well as replace existing radio systems, which are facing long-term sustainment issues. AMF JTRS capabilities will be incrementally developed, with each increment building on the technological achievements of its predecessor, while providing expanded capabilities.</p> <p>MIDS - Low Volume Terminal (LVT) is a jam-resistant, secure, digital (voice and data) information distribution system enabling rapid integrated communications, navigation and identification for tactical and command and control operations. The technical objective of the MIDS JTRS program is to transform the MIDS-LVT into a four-channel, Software Communications Architecture (SCA) compliant JTRS, while maintaining current Link-16 and tactical air navigation system (TACAN) functionality. MIDS JTRS is designed to be plug-and-play interchangeable for U.S. Navy and U.S. Air Force platforms that use MIDS-LVT, while accommodating future technologies and capabilities. Improvements such as Link-16 enhanced throughput, Link-16 frequency remapping, and programmable crypto are realized in the MIDS JTRS design. The MIDS JTRS core terminal includes three 2 MHz to 2 GHz programmable channels that allow the warfighter to use multiple waveforms in development by JNED. Total core terminal program requirements include: terminal development, F/A-18 Level 0 integration, software hosting (operating environment/waveforms) and production transition. MIDS JTRS will also provide Concurrent Multi-Netting-4 (CMN-4) and Tactical Targeting Network Technology (TTNT). These capabilities provide Joint Airborne Network-Tactical Edge (JAN-TE) functionality to run advanced mission applications in a cross-platform/cross-domain tactical network enterprise and the ability to simultaneously participate in four Link-16 Nets.</p> <p>GMR following a critical Nunn McCurdy breach the USD AT&amp;L conducted a reassessment of the GMR program. Conclusions of the reassessment did not support certification of the program, thereby cancelling the program. In accordance with the ADM dated 14 October 2011, the GMR program office is directed to conduct an orderly shutdown of the existing GMR System Development and Demonstration contract which expires on 30 March 2012.</p> <p>HMS provides the JTRS capability to meet Joint Ground Mounted, Dismounted &amp; Embedded Radio Requirements. Increment 1, Phase 1 will develop Small-Form-Fit (SFF) SFF-A (1 and 2 Channel), SFF-D and AN/PRC-154 Rifleman Radio running Soldier Radio Waveform (SRW) for use in a sensitive but unclassified environment (Type 2). Increment 1, Phase 2 will develop the 2 Channel Manpack and SFF-B. Phase 2 radios are all Type 1 compliant for use in a classified environment running Ultra High Frequency (UHF), Satellite Communications (SATCOM), High Frequency (HF), Enhanced Position Location and Reporting System (EPLRS), Soldier Radio Waveform (SRW), Mobile User Objective System (MUOS), and Single Channel Ground to Air Radio System (SINCGARS) waveforms.</p> <p>JNED is responsible for the development and delivery of software-defined, legacy radio waveforms and networking waveforms that support Net-Centric operational warfare at sea, air and on the ground. Networking waveforms extend the Global Information Grid (GIG) to the last tactical mile and to the warfighter. The JNED team is responsible for (1) the overall management and oversight of the JTRS Waveform program, (2) development, validation, and evolution of a common JTRS Software Communications Architecture (SCA), (3) development and evolution of waveform software applications, (4) development of software cryptographic algorithms and equipment applications, (5) testing and certification of JTRS waveforms, network services, network management, and software products, and (6) JTRS networking and network management software components. Services are responsible for acquiring and fielding host radio hardware and integrating JTRS into Service platforms.</p> <p><b>JUSTIFICATION FOR BUDGET ACTIVITY:</b><br/>This program is funded under ENGINEERING AND MANUFACTURING DEVELOPMENT because it encompasses engineering and manufacturing development of new end-items prior to production approval decision.</p> |  |  |

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| <b>APPROPRIATION/BUDGET ACTIVITY</b><br>1319: <i>Research, Development, Test &amp; Evaluation, Navy</i><br>BA 5: <i>Development &amp; Demonstration (SDD)</i> | <b>R-1 ITEM NOMENCLATURE</b><br>PE 0604280N: <i>JT Tact Radio Sys (JTRS)</i> |
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| <b>B. Program Change Summary (\$ in Millions)</b> | <b>FY 2011</b> | <b>FY 2012</b> | <b>FY 2013 Base</b> | <b>FY 2013 OCO</b> | <b>FY 2013 Total</b> |
|---|----------------|----------------|---------------------|--------------------|----------------------|
| Previous President's Budget                       | 687.723        | 688.146        | 127.782             | -                  | 127.782              |
| Current President's Budget                        | 609.159        | 675.521        | 337.480             | -                  | 337.480              |
| Total Adjustments                                 | -78.564        | -12.625        | 209.698             | -                  | 209.698              |
| • Congressional General Reductions                | -              | -0.625         |                     |                    |                      |
| • Congressional Directed Reductions               | -              | -63.000        |                     |                    |                      |
| • Congressional Rescissions                       | -              | -              |                     |                    |                      |
| • Congressional Adds                              | -              | 51.000         |                     |                    |                      |
| • Congressional Directed Transfers                | -              | -              |                     |                    |                      |
| • Reprogrammings                                  | 1.250          | -              |                     |                    |                      |
| • SBIR/STTR Transfer                              | -16.076        | -              |                     |                    |                      |
| • Program Adjustments                             | -              | -              | 210.169             | -                  | 210.169              |
| • Rate/Misc Adjustments                           | -              | -              | -0.471              | -                  | -0.471               |
| • Congressional General Reductions Adjustments    | -3.738         | -              | -                   | -                  | -                    |
| • Congressional Directed Reductions Adjustments   | -60.000        | -              | -                   | -                  | -                    |

**Congressional Add Details (\$ in Millions, and Includes General Reductions)**

**Project:** 9999: *Congressional Adds*

Congressional Add: *GMR JTRS (Cong)*

Congressional Add Subtotals for Project: 9999

Congressional Add Totals for all Projects

| <b>FY 2011</b> | <b>FY 2012</b> |
|----------------|----------------|
|                |                |
| -              | 51.000         |
| -              | 51.000         |
| -              | 51.000         |

**Change Summary Explanation**

The FY13 +\$210.581M Program Adjustment is due to the following: JTRS Administrative transfer from Army and Air Force (\$210.905M), NED administrative transfer to O&M,N (-14.088M), plus up for MIDS TTNT Waveform Development (\$64.000M), Navy reduction to AMF (-\$47.986M), and transfer to MIDS O&M,N (-2.250M).

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| Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy  |         |         |              |  |               |         |         |                            | DATE: February 2012 |                  |            |
| APPROPRIATION/BUDGET ACTIVITY<br>1319: Research, Development, Test & Evaluation, Navy<br>BA 5: Development & Demonstration (SDD)   |         |         |              | R-1 ITEM NOMENCLATURE<br>PE 0604280N: JT Tact Radio Sys (JTRS) |               |         |         | PROJECT<br>3020: MIDS/JTRS |                     |                  |            |
| COST (\$ in Millions)  | FY 2011 | FY 2012 | FY 2013 Base | FY 2013 OCO  | FY 2013 Total | FY 2014 | FY 2015 | FY 2016                    | FY 2017             | Cost To Complete | Total Cost |
| 3020: MIDS/JTRS  | 20.086  | 41.688  | 100.419      | -  | 100.419       | 126.912 | 72.587  | 15.629                     | 11.640              | Continuing       | Continuing |
| Quantity of RDT&E Articles   | 0       | 0       | 0            | 0  | 0             | 0       | 0       | 0                          | 0                   |                  |            |
| Note   |         |         |              |  |               |         |         |                            |                     |                  |            |
| In FY11-FY17, Project No. 3020 represents the total Multifunctional Information Distribution System (MIDS) RDT&E budget for those years. All references to MIDS funding includes funding for both MIDS-LVT and MIDS JTRS.  |         |         |              |  |               |         |         |                            |                     |                  |            |
| In FY14-FY17, Project No. 3020 represents the Navy share of the funding associated with MIDS. As part of the JTRS joint program acquisition strategy, each Military Department (MILDEP) budgets for a portion of the total program, therefore in FY14-17 a portion of JTRS development is represented in this PE, in Army PE 0604280A, and in Air Force PE 0604280F.   |         |         |              |  |               |         |         |                            |                     |                  |            |
| A. Mission Description and Budget Item Justification   |         |         |              |  |               |         |         |                            |                     |                  |            |
| JTRS is the Department of Defense (DoD) family of common software-defined programmable radios that will form the foundation of information radio frequency transmission for Joint Vision 2020. The JTRS family of products will be multifunctional, multiband, multimode, network capable, capable of providing communications through a range of low probability of intercept, low probability of detection and anti-jam waveforms. JTRS products will provide transformational communication capabilities for the warfighter. JTRS is intended to support communications readiness and mission success, in the 2 Megahertz (MHz) to 2 Gigahertz (GHz) operating frequency range, by providing military commanders with the ability to command, control and communicate with their forces via secure voice/video/data media forms. JTRS products are hardware-configurable and software-programmable radio systems that provide increased interoperability, flexibility and adaptability to support varied mission requirements.  |         |         |              |  |               |         |         |                            |                     |                  |            |
| MIDS-Low Volume Terminal (LVT) is a jam-resistant, secure, digital (voice and data) information distribution system enabling rapid integrated communications, navigation and identification for tactical and command and control operations. The technical objective of the MIDS JTRS program is to transform the MIDS-LVT into a four-channel, Software Communications Architecture (SCA) compliant JTRS, while maintaining current Link-16 and tactical air navigation system (TACAN) functionality. MIDS JTRS is designed to be plug-and-play interchangeable for U.S. Navy and U.S. Air Force platforms that use MIDS-LVT, while accommodating future technologies and capabilities. Improvements such as Link-16 frequency remapping and programmable crypto are also realized in the MIDS JTRS design. The MIDS JTRS core terminal includes three 2 MHz to 2 GHz programmable channels that allow the warfighter to use multiple waveforms in development by JNED. Total core terminal program requirements include: terminal development, F/A-18 Level 0 integration, software hosting (operating environment/waveforms) and production transition. MIDS JTRS will also provide Concurrent Multi-Netting-4 (CMN-4) and Tactical Targeting Network Technology (TTNT). These capabilities provide Joint Airborne Network-Tactical Edge (JAN-TE) functionality to run advanced mission applications in a cross-platform/cross-domain tactical network enterprise and the ability to simultaneously participate in four Link-16 Nets. |         |         |              |  |               |         |         |                            |                     |                  |            |
| B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)   |         |         |              |  |               |         |         | FY 2011                    | FY 2012             | FY 2013          |            |
| Title: MIDS/JTRS   |         |         |              |  |               |         |         | 20.086                     | 41.688              | 100.419          |            |

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| <b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2013 Navy  |  | <b>DATE:</b> February 2012               |                |                |
| <b>APPROPRIATION/BUDGET ACTIVITY</b><br>1319: <i>Research, Development, Test &amp; Evaluation, Navy</i><br>BA 5: <i>Development &amp; Demonstration (SDD)</i>   | <b>R-1 ITEM NOMENCLATURE</b><br>PE 0604280N: <i>JT Tact Radio Sys (JTRS)</i> | <b>PROJECT</b><br>3020: <i>MIDS/JTRS</i> |                |                |
| <b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>   |  | <b>FY 2011</b>                           | <b>FY 2012</b> | <b>FY 2013</b> |
| <b>Articles:</b>  |  | 0  | 0              | 0              |
| <p><b>FY 2011 Accomplishments:</b><br/>Received Limited Production &amp; Fielding 2 decision for Core Terminal program. Conducted Verification of Corrections of Deficiencies (VCD) testing for Initial Operational Capability (IOC) and Full Production and Fielding decision in 2012. Began development and implementation of a Crypto Modernization (CM) capability for MIDS JTRS, a mandate required by the NSA. Continued CM spec development and Engineering Change Proposal (ECP) Enhancements spec development for MIDS-LVT. Continued MIDS systems engineering, Communications Security (COMSEC), Information Assurance (IA) and program management support.</p> <p><b>FY 2012 Plans:</b><br/>Receive Full Production and Fielding (FP&amp;F) decision for Core Terminal program (MIDS JTRS). Complete the Crypto Modernization (CM) and ECP Enhancements spec development for MIDS-LVT. Begin development of MIDS-LVT CM/Block Upgrade 2 (BU2) and Enhanced Throughput (ET) capabilities that will replace or update several hardware, software and firmware components within the terminal. Develop Frequency Remapping (FR), a required Department of Transportation (DOT) mandate to enable the continued use of MIDS Link-16 to remap at least 14 of its 51 data transmission and receipt time slots to frequencies which do not interfere with current and planned Federal Aviation Administration (FAA) safety of flight systems. Continue MIDS systems engineering, COMSEC, Information Assurance (IA) and program management support.</p> <p><b>FY 2013 Plans:</b><br/>Deliver MIDS JTRS Crypto Modernization (CM) capability. Begin development to incorporate Concurrent Multi-Netting-4 (CMN-4) and Tactical Targeting Network Technology (TTNT). Begin development of the TTNT waveform. These capabilities provide Joint Airborne Network-Tactical Edge (JAN-TE) functionality to run advanced mission applications in a cross-platform/cross-domain tactical network enterprise and the ability to simultaneously participate in four Link-16 Nets. Continue the CM/Block Upgrade 2 (BU2) capability and enhancement efforts for MIDS-LVT to include finalizing the detailed technical and interface information in the Item Performance Specification and the Interface Control Document. Define the performance and interface requirements and provide engineering analysis to finalize interface with the Signal Message Processor (SMP) design. Continue Link 16 CM efforts to replace the current Communications Security/Transmission Security on the SMP to extend the operational lifetime of currently fielded MIDS-LVT Terminals. Continue MIDS systems engineering, COMSEC, Information Assurance (IA) and program management support.</p> |  |  |                |                |
| <b>Accomplishments/Planned Programs Subtotals</b>   |  | 20.086                                   | 41.688         | 100.419        |

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy DATE: February 2012

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| <b>APPROPRIATION/BUDGET ACTIVITY</b><br>1319: Research, Development, Test & Evaluation, Navy<br>BA 5: Development & Demonstration (SDD) | <b>R-1 ITEM NOMENCLATURE</b><br>PE 0604280N: JT Tact Radio Sys (JTRS) | <b>PROJECT</b><br>3020: MIDS/JTRS |
|---|---|-----------------------------------|

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

| Line Item  | FY 2011 | FY 2012 | FY 2013<br>Base | FY 2013<br>OCO | FY 2013<br>Total | FY 2014 | FY 2015 | FY 2016 | FY 2017 | Cost To<br>Complete | Total Cost |
|--|---------|---------|-----------------|----------------|------------------|---------|---------|---------|---------|---------------------|------------|
| • RDTEA/0604280A: MIDS JTRS  | 0.000   | 0.000   | 0.000           | 0.000          | 0.000            | 1.236   | 0.270   | 0.000   | 0.000   | 0.000               | 1.506      |
| • RDTEF/0604280F: MIDS JTRS  | 0.000   | 0.000   | 0.000           | 0.000          | 0.000            | 3.065   | 0.850   | 0.000   | 0.000   | 0.000               | 3.915      |
| • APN/0145: FA-18E/F   | 6.640   | 7.957   | 0.000           | 0.000          | 0.000            | 0.000   | 0.000   | 0.000   | 0.000   | 0.000               | 16.312     |
| • APN/0525: F-18 Series  | 3.895   | 0.000   | 0.000           | 0.000          | 0.000            | 0.000   | 19.937  | 26.458  | 26.908  | Continuing          | Continuing |
| • APN/0143: EA-18G   | 12.001  | 11.806  | 8.401           | 0.000          | 8.401            | 0.000   | 0.000   | 0.000   | 0.000   | 0.000               | 32.208     |
| • O&M, 4B7N: Space and<br>Electronic Warfare Systems (MIDS<br>LVT) | 3.729   | 3.175   | 3.051           | 0.000          | 3.051            | 3.688   | 3.682   | 3.616   | 3.637   | Continuing          | Continuing |
| • O&M, 4A6M: Service Wide<br>Comms (MIDS JTRS)                     | 15.795  | 14.457  | 15.518          | 0.000          | 15.518           | 15.133  | 14.854  | 15.250  | 16.913  | Continuing          | Continuing |

## D. Acquisition Strategy

MIDS JTRS development was initiated as a major modification to the MIDS-LVT using an Engineering Change Proposal to the existing production contracts. Development efforts included the Phase 2B Core terminal. The U.S. prime contractors from the MIDS-LVT program, Data Link Solutions (DLS) and ViaSat Inc., cooperatively designed and developed the Core terminal. Each prime contractor built and qualified Production Verification Terminals. The U.S. implemented a continuous competition strategy between DLS and ViaSat that will be maintained throughout the MIDS JTRS production phase. This strategy was successfully used on MIDS-LVT production. The FY13 budget supports development and implementation of Crypto Modernization, Frequency Remapping, and Enhanced Throughput capabilities for the MIDS-LVT terminal as well as the initial development to incorporate Concurrent Multi-Netting-4 (CMN-4) and Tactical Targeting Network Technology (TTNT) into MIDS JTRS.

## E. Performance Metrics

The five ACAT ID JTRS programs are employing mature, software-defined radio technologies and developing more than 10 million lines of code as part of the Increment 1 baseline. Early on, a JTRS enterprise software metrics requirements effort established a baseline of standard software metrics which are monitored on each JTRS contract involving software development. Example metrics are: the number of requirements and the number of use cases required for design are estimated during the requirement and design phase and analyzed for trend-actual vs. scheduled; the software lines of code (SLOC) counts are used to determine progress during the coding phase; and the execution of test cases as well as trouble reports are monitored during the integration and test phase. Further, a software complexity product metric is collected which demonstrates the testability of the code and is an important criterion for software certification. These software metrics are used to quantify the quality and progress of each software product's development over time. Additionally, MIDS employs Earned Value Metrics to monitor contract performance on its Prime Development Contracts, as required.

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| Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy   |                        |                                |                        |  |            |              |            |                            |            |               | DATE: February 2012 |            |                          |
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| APPROPRIATION/BUDGET ACTIVITY<br>1319: Research, Development, Test & Evaluation, Navy<br>BA 5: Development & Demonstration (SDD) |                        |                                |                        | R-1 ITEM NOMENCLATURE<br>PE 0604280N: JT Tact Radio Sys (JTRS) |            |              |            | PROJECT<br>3020: MIDS/JTRS |            |               |                     |            |                          |
| Product Development (\$ in Millions)   |                        |                                |                        | FY 2012  |            | FY 2013 Base |            | FY 2013 OCO                |            | FY 2013 Total |                     |            |                          |
| Cost Category Item   | Contract Method & Type | Performing Activity & Location | Total Prior Years Cost | Cost   | Award Date | Cost         | Award Date | Cost                       | Award Date | Cost          | Cost To Complete    | Total Cost | Target Value of Contract |
| MIDS JTRS HW/SW (Phase 2B Core)1   | C/CPIF                 | DLS:Cedar Rapids, IA           | 120.134                | -  |            | -            |            | -                          |            | -             | 0.000               | 120.134    | 120.134                  |
| MIDS JTRS HW/SW (Phase 2B Core)  | C/CPIF                 | ViaSat Inc:Carlsbad, CA        | 125.570                | -  |            | -            |            | -                          |            | -             | 0.000               | 125.570    | 125.570                  |
| MIDS JTRS HW/SW (Phase 2C TTNT JPCP) DLS   | C/CPFF                 | DLS:Cedar Rapids, IA           | 11.667                 | -  |            | -            |            | -                          |            | -             | 0.000               | 11.667     | 11.667                   |
| MIDS JTRS HW/SW (Phase 2C TTNT JPCP) Via   | C/CPFF                 | ViaSat Inc:Carlsbad, CA        | 5.548                  | -  |            | -            |            | -                          |            | -             | 0.000               | 5.548      | 5.548                    |
| MIDS JTRS Production Transition dls  | C/FFP                  | DLS:Cedar Rapids, IA           | 18.771                 | -  |            | -            |            | -                          |            | -             | 0.000               | 18.771     | 18.771                   |
| MIDS JTRS Production Transition via  | C/FFP                  | ViaSat Inc.:Carlsbad, CA       | 2.768                  | -  |            | -            |            | -                          |            | -             | 0.000               | 2.768      | 2.768                    |
| MIDS JTRS Preoperational Support dls   | C/CPFF                 | DLS:Cedar Rapids, IA           | 0.767                  | -  |            | -            |            | -                          |            | -             | 0.000               | 0.767      | 0.767                    |
| MIDS JTRS Preoperational Support via   | C/CPFF                 | ViaSat Inc.:Carlsbad, CA       | 0.163                  | -  |            | -            |            | -                          |            | -             | 0.000               | 0.163      | 0.163                    |
| MIDS JTRS Spec. Development (Phase 2A) dls   | C/FFP                  | DLS:Cedar Rapids, IA           | 1.383                  | -  |            | -            |            | -                          |            | -             | 0.000               | 1.383      | 1.383                    |
| MIDS JTRS Spec. Development (Phase 2A) via   | C/FFP                  | ViaSat Inc.:Carlsbad, CA       | 0.704                  | -  |            | -            |            | -                          |            | -             | 0.000               | 0.704      | 0.704                    |
| MIDS JTRS Proposal Prep (Phase 2B Core) dls  | C/FFP                  | DLS:Cedar Rapids, IA           | 0.600                  | -  |            | -            |            | -                          |            | -             | 0.000               | 0.600      | 0.600                    |
| MIDS JTRS Proposal Prep (Phase 2B Core) via  | C/FFP                  | ViaSat Inc.:Carlsbad, CA       | 1.922                  | -  |            | -            |            | -                          |            | -             | 0.000               | 1.922      | 1.922                    |
| MIDS JTRS Crypto Mod   | C/CPFF                 | ViaSat Inc:Carlsbad, CA        | 12.439                 | 1.574  | Feb 2012   | -            |            | -                          |            | -             | 0.000               | 14.013     | 6.575                    |
| MIDS JTRS Crypto Mod   | C/CPFF                 | DLS:Cedar Rapids, IA           | 7.736                  | 0.306  | Feb 2012   | -            |            | -                          |            | -             | 0.000               | 8.042      | 6.575                    |
| MIDS-LVT CM/ECP Spec Dev   | C/FFP                  | BAE:Fort Wayne, NJ             | 0.581                  | -  |            | -            |            | -                          |            | -             | 0.000               | 0.581      | 0.581                    |
| MIDS-LVT CM/ECP Spec Dev   | C/FFP                  | DLS:Cedar Rapids, IA           | 1.796                  | -  |            | -            |            | -                          |            | -             | 0.000               | 1.796      | 1.796                    |
| MIDS-LVT CM/ECP Spec Dev   | C/FFP                  | ViaSat:Carlsbad, CA            | 2.133                  | -  |            | -            |            | -                          |            | -             | 0.000               | 2.133      | 1.980                    |
| MIDS-LVT CM/FR/ET Development  | C/CPFF                 | DLS:Cedar Rapids, IA           | -                      | 16.874   | Jul 2012   | 8.911        | Mar 2013   | -                          |            | 8.911         | Continuing          | Continuing | Continuing               |

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|--|------------------------|---------------------------------|------------------------|--|------------|--------------|------------|----------------------------|------------|---------------------|------------------|------------|--------------------------|
| Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy   |                        |                                 |                        |  |            |              |            |                            |            | DATE: February 2012 |                  |            |                          |
| APPROPRIATION/BUDGET ACTIVITY<br>1319: Research, Development, Test & Evaluation, Navy<br>BA 5: Development & Demonstration (SDD) |                        |                                 |                        | R-1 ITEM NOMENCLATURE<br>PE 0604280N: JT Tact Radio Sys (JTRS) |            |              |            | PROJECT<br>3020: MIDS/JTRS |            |                     |                  |            |                          |
| Product Development (\$ in Millions)   |                        |                                 |                        | FY 2012  |            | FY 2013 Base |            | FY 2013 OCO                |            | FY 2013 Total       |                  |            |                          |
| Cost Category Item   | Contract Method & Type | Performing Activity & Location  | Total Prior Years Cost | Cost   | Award Date | Cost         | Award Date | Cost                       | Award Date | Cost                | Cost To Complete | Total Cost | Target Value of Contract |
| MIDS-LVT CM/FR/ET Development  | C/CPFF                 | ViaSat:Carlsbad, CA             | -                      | 16.875   | Jul 2012   | 8.911        | Mar 2013   | -                          |            | 8.911               | Continuing       | Continuing | Continuing               |
| MIDS-LVT CM/FR/ET Software   | C/CPFF                 | BAE:Fort Wayne, NJ              | -                      | 4.820  | Jul 2012   | 3.640        | Mar 2013   | -                          |            | 3.640               | Continuing       | Continuing | Continuing               |
| MIDS JTRS CMN-4/TTNT Development   | C/CPFF                 | DLS:Cedar Rapids, IA            | -                      | -  |            | 18.854       | Dec 2012   | -                          |            | 18.854              | Continuing       | Continuing | Continuing               |
| MIDS JTRS CMN-4/TTNT Development   | C/CPFF                 | ViaSat:Carlsbad, CA             | -                      | -  |            | 18.855       | Dec 2012   | -                          |            | 18.855              | Continuing       | Continuing | Continuing               |
| MIDS JTRS TTNT Waveform Development  | C/CPFF                 | TBD:TBD                         | -                      | -  |            | 14.000       | Dec 2012   | -                          |            | 14.000              | Continuing       | Continuing | Continuing               |
| Subtotal   |                        |                                 | 314.682                | 40.449   |            | 73.171       |            | -                          |            | 73.171              |                  |            |                          |
| Support (\$ in Millions)   |                        |                                 |                        | FY 2012  |            | FY 2013 Base |            | FY 2013 OCO                |            | FY 2013 Total       |                  |            |                          |
| Cost Category Item   | Contract Method & Type | Performing Activity & Location  | Total Prior Years Cost | Cost   | Award Date | Cost         | Award Date | Cost                       | Award Date | Cost                | Cost To Complete | Total Cost | Target Value of Contract |
| F/A-18 Level 0 Development Support (Unique) cl   | WR                     | NAWS, China Lake:Ridgecrest, CA | 1.526                  | -  |            | -            |            | -                          |            | -                   | 0.000            | 1.526      | 1.526                    |
| F/A-18 Level 0 Integrated Logistics Suppor (Unique) pax  | WR                     | NAWC:Pax River, MD              | 0.412                  | -  |            | -            |            | -                          |            | -                   | 0.000            | 0.412      | 0.412                    |
| Subtotal   |                        |                                 | 1.938                  | -  |            | -            |            | -                          |            | -                   | 0.000            | 1.938      | 1.938                    |
| Test and Evaluation (\$ in Millions)   |                        |                                 |                        | FY 2012  |            | FY 2013 Base |            | FY 2013 OCO                |            | FY 2013 Total       |                  |            |                          |
| Cost Category Item   | Contract Method & Type | Performing Activity & Location  | Total Prior Years Cost | Cost   | Award Date | Cost         | Award Date | Cost                       | Award Date | Cost                | Cost To Complete | Total Cost | Target Value of Contract |
| F/A-18 Level 0 Developmental Test & Evaluation (Unique)  | WR                     | NAWC:Pax River, MD              | 5.409                  | -  |            | -            |            | -                          |            | -                   | 0.000            | 5.409      | 5.409                    |
| F/A-18 Level 0 OperationalTest & Evaluation (Unique)   | WR                     | NAWS China Lake:Ridgecrest, CA  | 1.028                  | -  |            | -            |            | -                          |            | -                   | 0.000            | 1.028      | 1.028                    |



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|--|------------------------|--------------------------------|------------------------|--|------------|-----------------|------------|----------------------------|------------|---------------------|------------------|------------|--------------------------|
| Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy   |                        |                                |                        |  |            |                 |            |                            |            | DATE: February 2012 |                  |            |                          |
| APPROPRIATION/BUDGET ACTIVITY<br>1319: Research, Development, Test & Evaluation, Navy<br>BA 5: Development & Demonstration (SDD) |                        |                                |                        | R-1 ITEM NOMENCLATURE<br>PE 0604280N: JT Tact Radio Sys (JTRS) |            |                 |            | PROJECT<br>3020: MIDS/JTRS |            |                     |                  |            |                          |
| Test and Evaluation (\$ in Millions)   |                        |                                |                        | FY 2012  |            | FY 2013<br>Base |            | FY 2013<br>OCO             |            | FY 2013<br>Total    |                  |            |                          |
| Cost Category Item   | Contract Method & Type | Performing Activity & Location | Total Prior Years Cost | Cost   | Award Date | Cost            | Award Date | Cost                       | Award Date | Cost                | Cost To Complete | Total Cost | Target Value of Contract |
| F/A-18 Test Assets dls   | C/FFP                  | DLS:Cedar Rapids, IA           | 8.850                  | -  |            | -               |            | -                          |            | -                   | 0.000            | 8.850      | 8.850                    |
| F/A-18 Test Assets via   | C/FFP                  | ViaSat, Inc:Carlsbad, CA       | 7.365                  | -  |            | -               |            | -                          |            | -                   | 0.000            | 7.365      | 7.365                    |
| * F/A-18 EDMs dls  | C/FFP                  | DLS:Cedar Rapids, IA           | 2.740                  | -  |            | -               |            | -                          |            | -                   | 0.000            | 2.740      | 2.740                    |
| * F/A-18 EDMs via  | C/FFP                  | ViaSat, Inc.:Carlsbad, CA      | 2.475                  | -  |            | -               |            | -                          |            | -                   | 0.000            | 2.475      | 2.475                    |
| Engineering Support and Labor/SCS Changes  | WR                     | NAWS China Lake:Ridgecrest, CA | 10.519                 | -  |            | -               |            | -                          |            | -                   | 0.000            | 10.519     | 10.519                   |
| Government Testing   | WR                     | SSC:San Diego, CA              | 1.745                  | -  |            | -               |            | -                          |            | -                   | 0.000            | 1.745      | 1.745                    |
| NAVAIR Labor   | WR                     | NAWC:Pax River, MD             | 4.231                  | -  |            | -               |            | -                          |            | -                   | 0.000            | 4.231      | 4.231                    |
| ECP 6277 Preparation   | WR                     | NAWC:Pax River, MD             | 1.963                  | -  |            | -               |            | -                          |            | -                   | 0.000            | 1.963      | 1.963                    |
| JTRS CM Test Assets (DLS)  | C/FFP                  | DLS:Cedar Rapids, IA           | 0.633                  | -  |            | -               |            | -                          |            | -                   | 0.000            | 0.633      |                          |
| JTRS CM Test Assets (ViaSat)   | C/FFP                  | ViaSat:Carlsbad, Ca            | 0.853                  | -  |            | -               |            | -                          |            | -                   | 0.000            | 0.853      |                          |
| MIDS-LVT Enhancements FAQT   | WR                     | SSC:San Diego, Ca              | -                      | -  |            | 1.963           | Nov 2012   | -                          |            | 1.963               | 0.000            | 1.963      |                          |
| MIDS JTRS CMN-4/TTNT Testing   | WR                     | SSC:San Diego, Ca              | -                      | -  |            | 1.700           | Jan 2013   | -                          |            | 1.700               | 0.000            | 1.700      |                          |
| MIDS JTRS CMN-4/TTNT F/ A-18 Evaluation  | WR                     | NAWS China Lake:Ridgecrest, CA | -                      | -  |            | 2.600           | Mar 2013   | -                          |            | 2.600               | 0.000            | 2.600      |                          |
| MIDS-LVT Enhancements F/ A-18 Evaluation   | WR                     | NAWS China Lake:Ridgecrest, CA | -                      | -  |            | 1.607           | Dec 2012   | -                          |            | 1.607               | 0.000            | 1.607      |                          |
| Subtotal   |                        |                                | 47.811                 | -  |            | 7.870           |            | -                          |            | 7.870               | 0.000            | 55.681     |                          |
| Remarks<br>Items marked with an asterisk (*) designate Navy unique tasks.  |                        |                                |                        |  |            |                 |            |                            |            |                     |                  |            |                          |
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| Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy  |                        |                                       |                        |  |            |                 |            |                            |            | DATE: February 2012 |                  |            |                          |
| APPROPRIATION/BUDGET ACTIVITY<br>1319: Research, Development, Test & Evaluation, Navy<br>BA 5: Development & Demonstration (SDD)  |                        |                                       |                        | R-1 ITEM NOMENCLATURE<br>PE 0604280N: JT Tact Radio Sys (JTRS) |            |                 |            | PROJECT<br>3020: MIDS/JTRS |            |                     |                  |            |                          |
| Management Services (\$ in Millions)  |                        |                                       |                        | FY 2012  |            | FY 2013<br>Base |            | FY 2013<br>OCO             |            | FY 2013<br>Total    |                  |            |                          |
| Cost Category Item  | Contract Method & Type | Performing Activity & Location        | Total Prior Years Cost | Cost   | Award Date | Cost            | Award Date | Cost                       | Award Date | Cost                | Cost To Complete | Total Cost | Target Value of Contract |
| Contractor Engineering Support  | C/CPFF                 | General Dynamics/Sentek:San Diego, Ca | 15.145                 | -  |            | -               |            | -                          |            | -                   | 0.000            | 15.145     | 15.145                   |
| Workforce Acquisition Fund  | C/FP                   | Not Specified:Not Specified           | 0.135                  | -  |            | -               |            | -                          |            | -                   | 0.000            | 0.135      | 0.135                    |
| Travel  | WR                     | Not Specified:Not Specified           | 1.027                  | 0.008  | Dec 2011   | 0.100           | Oct 2012   | -                          |            | 0.100               | 0.000            | 1.135      | 1.020                    |
| Government Engineering  | WR                     | SSC:San Diego, Ca                     | 23.901                 | 0.364  | Nov 2011   | 4.301           | Nov 2012   | -                          |            | 4.301               | 0.000            | 28.566     | 23.745                   |
| Airborne Networking Support   | WR                     | SSC:San Diego, Ca                     | 1.313                  | -  |            | -               |            | -                          |            | -                   | 0.000            | 1.313      | 1.313                    |
| Program Management Support  | C/CPFF                 | Booz Allen Hamilton/SSC:San Diego, Ca | 8.272                  | 0.626  | Jan 2012   | 2.874           | Dec 2012   | -                          |            | 2.874               | 0.000            | 11.772     | 8.511                    |
| Information Assurance Support   | MIPR                   | NSA:Fort George Meade, MD             | 0.203                  | 0.241  | Nov 2011   | 5.071           | Jan 2013   | -                          |            | 5.071               | 0.000            | 5.515      | 0.610                    |
| Systems Engineering Support   | MIPR                   | MITRE:Bedford, Ma                     | -                      | -  |            | 4.100           | Nov 2012   | -                          |            | 4.100               | 0.000            | 4.100      |                          |
| Contractor Engineering Services   | C/CPFF                 | Sentek:San Diego, Ca                  | -                      | -  |            | 2.932           | Dec 2012   | -                          |            | 2.932               | 0.000            | 2.932      |                          |
| Subtotal  |                        |                                       | 49.996                 | 1.239  |            | 19.378          |            | -                          |            | 19.378              | 0.000            | 70.613     |                          |
|   |                        |                                       | Total Prior Years Cost | FY 2012  |            | FY 2013 Base    |            | FY 2013 OCO                |            | FY 2013 Total       | Cost To Complete | Total Cost | Target Value of Contract |
| Project Cost Totals   |                        |                                       | 414.427                | 41.688   |            | 100.419         |            | -                          |            | 100.419             |                  |            |                          |
| Remarks<br>In PYs-FY13, Project No. 3020 represents the total MIDS RDT&E budget for those years. In FY14-FY17, Project No. 3020 represents the Navy share of the funding associated with MIDS. As part of the JTRS joint program acquisition strategy, each Military Department (MILDEP) budgets for a portion of the total program, therefore in FY14-17 a portion of JTRS development is represented in this PE, in Army PE 0604280A, and in Air Force PE 0604280F. |                        |                                       |                        |  |            |                 |            |                            |            |                     |                  |            |                          |

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| Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy  |   | DATE: February 2012               |
| APPROPRIATION/BUDGET ACTIVITY<br>1319: <i>Research, Development, Test &amp; Evaluation, Navy</i><br>BA 5: <i>Development &amp; Demonstration (SDD)</i> | R-1 ITEM NOMENCLATURE<br>PE 0604280N: <i>JT Tact Radio Sys (JTRS)</i> | PROJECT<br>3020: <i>MIDS/JTRS</i> |
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| <b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2013 Navy   |  |  | <b>DATE:</b> February 2012 |
| <b>APPROPRIATION/BUDGET ACTIVITY</b><br>1319: <i>Research, Development, Test &amp; Evaluation, Navy</i><br>BA 5: <i>Development &amp; Demonstration (SDD)</i> | <b>R-1 ITEM NOMENCLATURE</b><br>PE 0604280N: <i>JT Tact Radio Sys (JTRS)</i> | <b>PROJECT</b><br>3020: <i>MIDS/JTRS</i> |                            |

**Schedule Details**

| Events by Sub Project   | Start   |      | End     |      |
|---|---------|------|---------|------|
|   | Quarter | Year | Quarter | Year |
| <b>Proj 3020</b>  |         |      |         |      |
| MIDS JTRS Core Terminal: Limited Fielding and Production 2                        | 2       | 2011 | 2       | 2011 |
| MIDS JTRS Core Terminal: Full Production and Fielding Decision                    | 2       | 2012 | 2       | 2012 |
| MIDS JTRS Core Terminal: Test and Evaluation-Initial Operational Capability (IOC) | 3       | 2012 | 3       | 2012 |
| MIDS JTRS Core Terminal: Verification of Correction of Deficiencies (VCD)         | 4       | 2011 | 2       | 2012 |
| MIDS-LVT Enhancements: Crypto Modernization (CM) -Spec Development                | 1       | 2011 | 2       | 2012 |
| MIDS-LVT Enhancements: CM -ECP Enhancements                                       | 1       | 2011 | 2       | 2012 |
| MIDS-LVT Enhancements: Enhanced Throughput Link-16 Design/Development             | 4       | 2012 | 4       | 2014 |
| MIDS-LVT Enhancements: CM -H/W Design   | 4       | 2012 | 4       | 2014 |
| MIDS-LVT Enhancements: CM -S/W Design   | 4       | 2012 | 1       | 2015 |
| MIDS-LVT Enhancements: CM -FAQT   | 2       | 2013 | 1       | 2015 |
| MIDS-LVT Enhancements: CM -DT and OT  | 2       | 2015 | 4       | 2015 |
| MIDS JTRS Crypto Modernization: H/W Design  | 4       | 2011 | 1       | 2013 |
| MIDS JTRS Crypto Modernization: CSS Design  | 4       | 2011 | 1       | 2013 |
| MIDS JTRS Crypto Modernization: S/W Design (Core I/O)                             | 4       | 2011 | 2       | 2013 |
| MIDS JTRS Crypto Modernization: FAQT  | 4       | 2011 | 3       | 2013 |
| MIDS JTRS CMN-4/TTNT: CMN-4 Development   | 1       | 2013 | 2       | 2014 |
| MIDS JTRS CMN-4/TTNT: CMN-4 DT/OT   | 3       | 2014 | 3       | 2015 |
| MIDS JTRS CMN-4/TTNT: TTNT Spec Development                                       | 1       | 2013 | 3       | 2013 |
| MIDS JTRS CMN-4/TTNT: TTNT Development  | 4       | 2013 | 1       | 2015 |
| MIDS JTRS CMN-4/TTNT: TTNT DT/OT  | 2       | 2015 | 1       | 2016 |
| MIDS JTRS CMN-4/TTNT: ECPs/Upgrades/Testing TTNT                                  | 1       | 2016 | 3       | 2017 |

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|---|---------|---------|--------------|--|---------------|---------|---------|---------------------------|---------------------|------------------|------------|
| Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy   |         |         |              |  |               |         |         |                           | DATE: February 2012 |                  |            |
| APPROPRIATION/BUDGET ACTIVITY<br>1319: Research, Development, Test & Evaluation, Navy<br>BA 5: Development & Demonstration (SDD)  |         |         |              | R-1 ITEM NOMENCLATURE<br>PE 0604280N: JT Tact Radio Sys (JTRS) |               |         |         | PROJECT<br>3073: AMF JTRS |                     |                  |            |
| COST (\$ in Millions)   | FY 2011 | FY 2012 | FY 2013 Base | FY 2013 OCO  | FY 2013 Total | FY 2014 | FY 2015 | FY 2016                   | FY 2017             | Cost To Complete | Total Cost |
| 3073: AMF JTRS  | 307.910 | 349.560 | 58.187       | -  | 58.187        | 0.007   | -       | -                         | -                   | 0.000            | 715.664    |
| Quantity of RDT&E Articles  | 15      | 0       | 0            | 0  | 0             | 0       | 0       | 0                         | 0                   |                  |            |
| Note  |         |         |              |  |               |         |         |                           |                     |                  |            |
| In FY11-FY13, Project No. 3073 represents the total Airborne Maritime/Fixed Joint Tactical Radio Systems (AMF JTRS) RDT&E budget for those years.   |         |         |              |  |               |         |         |                           |                     |                  |            |
| In FY14-FY17, Project No. 3073 represents the Navy share of the funding associated with AMF JTRS. As part of the JTRS joint program acquisition strategy, each Military Department (MILDEP) budgets for a portion of the total program, therefore in FY14-17 a portion of JTRS development is represented in this PE, in Army PE 0604280A, and in Air Force PE 0604280F.  |         |         |              |  |               |         |         |                           |                     |                  |            |
| In FY12, Project No. 3073 also includes funding associated with system and shipboard integration planning/design and OPEVAL planning and coordination of Mobile User Objective Systems (MUOS) terminals on Navy platforms and shore locations.  |         |         |              |  |               |         |         |                           |                     |                  |            |
| A. Mission Description and Budget Item Justification  |         |         |              |  |               |         |         |                           |                     |                  |            |
| JTRS is the Department of Defense (DoD) family of common software-defined programmable radios that will form the foundation of information radio frequency transmission for Joint Vision 2020. The JTRS family of products will be multifunctional, multiband, multimode, network capable, capable of providing communications through a range of low probability of intercept, low probability of detection and anti-jam waveforms. JTRS products will provide transformational communication capabilities for the warfighter. JTRS is intended to support communications readiness and mission success, in the 2 Megahertz (MHz) to 2 Gigahertz (GHz) operating frequency range, by providing military commanders with the ability to command, control and communicate with their forces via secure voice/video/data media forms. JTRS products are hardware-configurable and software-programmable radio systems that provide increased interoperability, flexibility and adaptability to support varied mission requirements. |         |         |              |  |               |         |         |                           |                     |                  |            |
| Airborne Maritime/Fixed Joint Tactical Radio Systems (AMF JTRS) is a key enabler to the transformation of airborne, maritime, and land based communications toward network-centric operations. AMF JTRS will operate with legacy radios and waveforms used by military airborne, surface, subsurface, and fixed station platforms. AMF JTRS is intended to provide new radio networking capability and will replace existing radio systems, facing long-term sustainment issues. AMF JTRS capabilities will be incrementally developed, with each increment building on the technological achievements of its predecessor, while providing expanded capabilities.   |         |         |              |  |               |         |         |                           |                     |                  |            |
| B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)  |         |         |              |  |               |         |         | FY 2011                   | FY 2012             | FY 2013          |            |
| Title: AMF JTRS   |         |         |              |  |               |         |         | 307.910                   | 349.560             | 58.187           |            |
| Articles:   |         |         |              |  |               |         |         | 15                        | 0                   | 0                |            |
| FY 2011 Accomplishments:  |         |         |              |  |               |         |         |                           |                     |                  |            |

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|---|---------|---------|--|----------------|------------------|---------------------------|---------------------|---------|---------|---------------------|------------|
| Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy   |         |         |  |                |                  |                           | DATE: February 2012 |         |         |                     |            |
| APPROPRIATION/BUDGET ACTIVITY<br>1319: Research, Development, Test & Evaluation, Navy<br>BA 5: Development & Demonstration (SDD)  |         |         | R-1 ITEM NOMENCLATURE<br>PE 0604280N: JT Tact Radio Sys (JTRS) |                |                  | PROJECT<br>3073: AMF JTRS |                     |         |         |                     |            |
| B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)  |         |         |  |                |                  |                           | FY 2011             | FY 2012 | FY 2013 |                     |            |
| Continued Engineering Development Model (EDM) hardware and non-waveform software build 2.1 & 2.3 development and integration. Conducted initial hardware and software demonstration with the AMF JTR Set-SA for Wideband Networking Waveform (WNW). Delivered AMF JTR Set-SA EDMs with initial Link 16 capability to the Army and initial WNW/Link 16 capability to the Air Force. A total of 15 EDMs were delivered. Continued platform integration development for AMF test program. Continued Acquisition documentation for Milestone C; continued NSA information assurance activities and verification of design. Continued development engineering and management support for associated JTR system components.   |         |         |  |                |                  |                           |                     |         |         |                     |            |
| FY 2012 Plans:<br>Restructure program due to schedule delays, technical challenges, increased costs, and changing Service priorities. Closeout of existing prime contract. Conduct market research to support non-developmental items (NDI) acquisition planning. Modify material solutions for incremental acquisition strategy - focused on using NDI to meet user needs. Rephase delivery of waveform capabilities aligned with Army battlefield network implementation and maturity of NDI products. Develop Request For Proposal (RFP) and award contract for NDI solution for Apache Block 3, Lot 4. Acquire initial Link 16/SRW integration assets for Apache Block 3, Lot 4. Sponsor NDI vendors for NIE and waveform certification efforts. Support legacy radio certification of networking capabilities. Develop Request for Information (RFI)/RFP for Phase 2 NDI solutions for SRW/WNW in Army Aviation platforms (Apache, Blackhawk & Chinook). |         |         |  |                |                  |                           |                     |         |         |                     |            |
| FY 2013 Plans:<br>Support Development Test (DT) /Operational Test & Evaluation flight tests with Apache Lot 4. Complete all USG developmental/ validation testing conducted on Phase 1 EDM articles and begin government DT on Low Rate Initial Production (LRIP) articles. Conduct Phase 1 Milestone C and award the LRIP contract option for Apache Block 3, Lot 4. Award contract(s) for Phase 2 NDI solutions for SRW/WNW in Army Aviation platforms (Apache, Blackhawk & Chinook). Conduct waveform confidence testing for SRW/WNW-AJ. Sponsor NDI vendors for NIE and waveform certification efforts. Support legacy radio certification of networking capabilities. Develop RFI for Phase 3 NDI solutions for MUOS in user platforms.  |         |         |  |                |                  |                           |                     |         |         |                     |            |
| Accomplishments/Planned Programs Subtotals  |         |         |  |                |                  |                           | 307.910             | 349.560 | 58.187  |                     |            |
| C. Other Program Funding Summary (\$ in Millions)   |         |         |  |                |                  |                           |                     |         |         |                     |            |
| Line Item   | FY 2011 | FY 2012 | FY 2013<br>Base  | FY 2013<br>OCO | FY 2013<br>Total | FY 2014                   | FY 2015             | FY 2016 | FY 2017 | Cost To<br>Complete | Total Cost |
| • RDTEA/0604280A: AMF JTRS  | 0.000   | 0.000   | 0.000  | 0.000          | 0.000            | 19.467                    | 2.091               | 0.000   | 0.000   | 0.000               | 21.558     |
| • RDTEF/0604280F: AMF JTRS  | 0.000   | 0.000   | 0.000  | 0.000          | 0.000            | 0.000                     | 0.000               | 0.000   | 0.000   | 0.000               | 154.189    |
| D. Acquisition Strategy   |         |         |  |                |                  |                           |                     |         |         |                     |            |
| AMF JTRS is undergoing a program restructure in accordance with Milestone Decision Authority (MDA) direction. AMF has been directed to submit a program restructure plan, updated contract strategy, updated Acquisition Strategy, revised APB and an updated Test Evaluation Master Plan (TEMP) for MDA approval. The  |         |         |  |                |                  |                           |                     |         |         |                     |            |

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| <b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2013 Navy  |  | <b>DATE:</b> February 2012              |
| <b>APPROPRIATION/BUDGET ACTIVITY</b><br>1319: <i>Research, Development, Test &amp; Evaluation, Navy</i><br>BA 5: <i>Development &amp; Demonstration (SDD)</i>   | <b>R-1 ITEM NOMENCLATURE</b><br>PE 0604280N: <i>JT Tact Radio Sys (JTRS)</i> | <b>PROJECT</b><br>3073: <i>AMF JTRS</i> |
| <p>program is revising its material solution strategy to leverage commercially available tactical radios in order to rapidly deliver AMF capabilities to the warfighter. The strategy will support a "family of radios" concept in which multiple Non-Developmental Item (NDI) radios can be selected from the vendor base and tailored to platform needs. The near term need for the Army is delivery of a Link 16 and SRW capability on the Apache platform. Near term objective capabilities include VHF/UHF Line of Sight (VULOS) waveforms. The FY13 budget supports the AMF restructure effort by acquiring initial integration assets, executing integration and LRIP contracts for Phase 1 and market research for Phase 2 SRW/WWN integration/procurement.</p> <p>AMF JTRS is planning to a phased capability delivery approach with each phase building on the technological achievements of the preceding phase. Phase 1 consists of an NDI procurement of a Multichannel Link 16 Tactical Radio and initial Soldier Radio Waveform (SRW) capability. Phase 2 will procure multichannel radios for SRW and Wideband Networking Waveform (WWN). Phase 3 will procure multichannel radios for Mobile User Objective System (MUOS) capability.</p> <p><b><u>E. Performance Metrics</u></b></p> <p>The five ACAT ID JTRS programs are employing mature, software-defined radio technologies and developing more than 10 million lines of code as part of the Increment 1 baseline. Early on, a JTRS enterprise software metrics requirements effort established a baseline of standard software metrics which are monitored on each JTRS contract involving software development. Example metrics are: the number of requirements and the number of use cases required for design are estimated during the requirement and design phase and analyzed for trend-actual vs. scheduled; the software lines of code (SLOC) counts are used to determine progress during the coding phase; and the execution of test cases as well as trouble reports are monitored during the integration and test phase. Further, a software complexity product metric is collected which demonstrates the testability of the code and is an important criterion for software certification. These software metrics are used to quantify the quality and progress of each software product's development over time. Additionally, AMF employs Earned Value Metrics to monitor contract performance on the Prime Development Contract.</p> |  |   |

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| Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy  |                        |  |                        |                                       |            |              |            |                |            |               | DATE: February 2012 |            |                          |
|---|------------------------|--|------------------------|---------------------------------------|------------|--------------|------------|----------------|------------|---------------|---------------------|------------|--------------------------|
| APPROPRIATION/BUDGET ACTIVITY   |                        |  |                        | R-1 ITEM NOMENCLATURE                 |            |              |            | PROJECT        |            |               |                     |            |                          |
| 1319: Research, Development, Test & Evaluation, Navy<br>BA 5: Development & Demonstration (SDD) |                        |  |                        | PE 0604280N: JT Tact Radio Sys (JTRS) |            |              |            | 3073: AMF JTRS |            |               |                     |            |                          |
| Product Development (\$ in Millions)  |                        |  |                        | FY 2012                               |            | FY 2013 Base |            | FY 2013 OCO    |            | FY 2013 Total |                     |            |                          |
| Cost Category Item  | Contract Method & Type | Performing Activity & Location             | Total Prior Years Cost | Cost                                  | Award Date | Cost         | Award Date | Cost           | Award Date | Cost          | Cost To Complete    | Total Cost | Target Value of Contract |
| MIDS JTRS HW/SW (Phase 2A/2B Core)  | C/CPIF                 | DLS:Cedar Rapids, IA                       | 8.563                  | -                                     |            | -            |            | -              |            | -             | 0.000               | 8.563      | 8.563                    |
| MIDS JTRS HW/SW (Phase 2A/2B Core)  | C/CPIF                 | ViaSat Inc:Carlsbad, CA                    | 4.078                  | -                                     |            | -            |            | -              |            | -             | 0.000               | 4.078      | 4.078                    |
| AMF JTRS Development - JTR System (Pre-SDD)   | C/CPFF                 | The Boeing Co:Anaheim, CA                  | 45.603                 | -                                     |            | -            |            | -              |            | -             | 0.000               | 45.603     | 45.603                   |
| AMF JTRS Development - JTR System (Pre-SDD)   | C/CPFF                 | Lockheed Martin:Manassas, VA               | 45.335                 | -                                     |            | -            |            | -              |            | -             | 0.000               | 45.335     | 45.335                   |
| AMF JTRS Development - JTR SET (SDD)  | C/CPIF                 | Lockheed Martin:Manassas, VA               | 804.104                | 271.971                               | Oct 2011   | -            |            | -              |            | -             | 0.000               | 1,076.075  |                          |
| AMF JTRS - Systems Engineering  | WR                     | Various:Various                            | 115.745                | 14.190                                | Oct 2011   | 12.163       | Oct 2012   | -              |            | 12.163        | 0.000               | 142.098    |                          |
| AMF JTRS- NDI Integration and Certification   | TBD                    | Various:Various                            | -                      | 33.620                                | Aug 2012   | 19.356       | Oct 2012   | -              |            | 19.356        | 0.000               | 52.976     |                          |
| Systems Engineering - JTRS Implementation-Navy Unique   | WR                     | Various:Various                            | 15.634                 | -                                     |            | -            |            | -              |            | -             | 0.000               | 15.634     | 15.634                   |
| H/W Development: DMR HF Power Amplifier   | C/FFP                  | GDDS:Various                               | 6.227                  | -                                     |            | -            |            | -              |            | -             | 0.000               | 6.227      | 6.227                    |
| Systems Engineering - JTF WARNET  | WR                     | Various:Various                            | 7.481                  | -                                     |            | -            |            | -              |            | -             | 0.000               | 7.481      | 7.481                    |
| JTRS HMS Design, Development and Manufacture of Engineering Development Models (EDMs)           | C/CPAF                 | General Dynamics C4 Systems:Scottsdale, AZ | -                      | -                                     |            | -            |            | -              |            | -             | 0.000               | 0.000      |                          |
| Subtotal  |                        |  | 1,052.770              | 319.781                               |            | 31.519       |            | -              |            | 31.519        | 0.000               | 1,404.070  |                          |
| Support (\$ in Millions)  |                        |  |                        | FY 2012                               |            | FY 2013 Base |            | FY 2013 OCO    |            | FY 2013 Total |                     |            |                          |
| Cost Category Item  | Contract Method & Type | Performing Activity & Location             | Total Prior Years Cost | Cost                                  | Award Date | Cost         | Award Date | Cost           | Award Date | Cost          | Cost To Complete    | Total Cost | Target Value of Contract |
| AMF JTRS - Acquisition, and ILS Support   | WR                     | Various:Various                            | 32.295                 | 7.002                                 | Oct 2011   | 2.518        | Oct 2012   | -              |            | 2.518         | 0.000               | 41.815     |                          |



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|--|------------------------|--------------------------------|------------------------|--|------------|--------------|------------|---------------------------|------------|---------------|---------------------|------------|--------------------------|--|
| Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy   |                        |                                |                        |  |            |              |            |                           |            |               | DATE: February 2012 |            |                          |  |
| APPROPRIATION/BUDGET ACTIVITY<br>1319: Research, Development, Test & Evaluation, Navy<br>BA 5: Development & Demonstration (SDD)   |                        |                                |                        | R-1 ITEM NOMENCLATURE<br>PE 0604280N: JT Tact Radio Sys (JTRS) |            |              |            | PROJECT<br>3073: AMF JTRS |            |               |                     |            |                          |  |
| Support (\$ in Millions)   |                        |                                |                        | FY 2012  |            | FY 2013 Base |            | FY 2013 OCO               |            | FY 2013 Total |                     |            |                          |  |
| Cost Category Item   | Contract Method & Type | Performing Activity & Location | Total Prior Years Cost | Cost   | Award Date | Cost         | Award Date | Cost                      | Award Date | Cost          | Cost To Complete    | Total Cost | Target Value of Contract |  |
| Software Dev: DMR Build 6.4  | C/FFP                  | GDDS:Various                   | 12.861                 | -  |            | -            |            | -                         |            | -             | 0.000               | 12.861     | 12.861                   |  |
| Subtotal   |                        |                                | 45.156                 | 7.002  |            | 2.518        |            | -                         |            | 2.518         | 0.000               | 54.676     |                          |  |
| Test and Evaluation (\$ in Millions)   |                        |                                |                        | FY 2012  |            | FY 2013 Base |            | FY 2013 OCO               |            | FY 2013 Total |                     |            |                          |  |
| Cost Category Item   | Contract Method & Type | Performing Activity & Location | Total Prior Years Cost | Cost   | Award Date | Cost         | Award Date | Cost                      | Award Date | Cost          | Cost To Complete    | Total Cost | Target Value of Contract |  |
| AMF JTRS - Test and Evaluation and Test Support  | WR                     | Various:Various                | 51.860                 | 15.940   | Oct 2011   | 20.100       | Oct 2012   | -                         |            | 20.100        | 0.000               | 87.900     |                          |  |
| DMR T&E (FOTE) SD  | WR                     | SSC:San Diego, CA              | 7.093                  | -  |            | -            |            | -                         |            | -             | 0.000               | 7.093      | 7.093                    |  |
| DMR T&E (FOTE) CHARL   | WR                     | SSC:Charleston, SC             | 1.732                  | -  |            | -            |            | -                         |            | -             | 0.000               | 1.732      | 1.732                    |  |
| MUOS SST- Navy Specific Integration  | C/CPIF                 | Various:Various                | -                      | 1.267  | Dec 2011   | -            | Dec 2012   | -                         |            | -             | 0.000               | 1.267      |                          |  |
| MUOS SST - Navy Specific Integration   | WR                     | SSC:San Diego, CA              | -                      | 0.712  | Oct 2011   | -            | Oct 2012   | -                         |            | -             | 0.000               | 0.712      |                          |  |
| MUOS SST- Navy Specific Integration  | WR                     | SSC:Charleston, SC             | -                      | 0.128  | Oct 2011   | -            |            | -                         |            | -             | 0.000               | 0.128      |                          |  |
| Subtotal   |                        |                                | 60.685                 | 18.047   |            | 20.100       |            | -                         |            | 20.100        | 0.000               | 98.832     |                          |  |
| Remarks<br>MUOS Shipboard/Submarine Terminals(MUOS SST)- Navy Specific Integration for Navy to complete system and shipboard integration planning/design and OPEVAL of MUOS terminals on Navy platforms and shore locations. |                        |                                |                        |  |            |              |            |                           |            |               |                     |            |                          |  |
| Management Services (\$ in Millions)   |                        |                                |                        | FY 2012  |            | FY 2013 Base |            | FY 2013 OCO               |            | FY 2013 Total |                     |            |                          |  |
| Cost Category Item   | Contract Method & Type | Performing Activity & Location | Total Prior Years Cost | Cost   | Award Date | Cost         | Award Date | Cost                      | Award Date | Cost          | Cost To Complete    | Total Cost | Target Value of Contract |  |
| AMF Business Operations Management and Support   | WR                     | Various:Various                | 32.375                 | 4.730  | Oct 2011   | 4.050        | Oct 2012   | -                         |            | 4.050         | 0.007               | 41.162     |                          |  |
| Acquisition Workforce Fund - 2009  | C/FP                   | Various:Various                | 1.039                  | -  |            | -            |            | -                         |            | -             | 0.000               | 1.039      | 1.039                    |  |

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| Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy  |                        |                                |                        |  |            |              |            |                           |            | DATE: February 2012 |                  |            |                          |
| APPROPRIATION/BUDGET ACTIVITY<br>1319: Research, Development, Test & Evaluation, Navy<br>BA 5: Development & Demonstration (SDD)  |                        |                                |                        | R-1 ITEM NOMENCLATURE<br>PE 0604280N: JT Tact Radio Sys (JTRS) |            |              |            | PROJECT<br>3073: AMF JTRS |            |                     |                  |            |                          |
| Management Services (\$ in Millions)  |                        |                                |                        | FY 2012  |            | FY 2013 Base |            | FY 2013 OCO               |            | FY 2013 Total       |                  |            |                          |
| Cost Category Item  | Contract Method & Type | Performing Activity & Location | Total Prior Years Cost | Cost   | Award Date | Cost         | Award Date | Cost                      | Award Date | Cost                | Cost To Complete | Total Cost | Target Value of Contract |
| Subtotal  |                        |                                | 33.414                 | 4.730  |            | 4.050        |            | -                         |            | 4.050               | 0.007            | 42.201     |                          |
|   |                        |                                | Total Prior Years Cost | FY 2012  |            | FY 2013 Base |            | FY 2013 OCO               |            | FY 2013 Total       | Cost To Complete | Total Cost | Target Value of Contract |
| Project Cost Totals   |                        |                                | 1,192.025              | 349.560  |            | 58.187       |            | -                         |            | 58.187              | 0.007            | 1,599.779  |                          |
| Remarks   |                        |                                |                        |  |            |              |            |                           |            |                     |                  |            |                          |
| The AMF JTRS is a Joint Acquisition Category ID (ACAT ID) program that combines the requirements of the United States Army, United States Marine Corps, United States Navy, and United States Air Force into a single Program of Record. AMF will deliver capabilities in three phases. Phase 1 consists of an NDI procurement of a Commercial Multichannel Link 16 Tactical Radio. Phase 2 consists of a competitive approach to procure the Commercial Multichannel Link 16 Tactical Radios that will instantiate additional waveforms (e.g. Soldier Radio Waveform (SRW) and Wideband Networking Waveform (WNW) for use in a classified security domain. Phase 3 consists of a full and open competition for a Mobile User Objective System (MUOS) capable Commercial Multichannel Tactical Radio. |                        |                                |                        |  |            |              |            |                           |            |                     |                  |            |                          |
| Prior Year (PY) column only includes the Navy portion of the budget for AMF JTRS; prior to FY07, Air Force AMF JTRS funding resided in Air Force PE 0604280F, Project 5068. FY07-FY11 PYs represent the total AMF JTRS RDT&E budget for those years. In FY12-FY13, Project No. 3073 represents the total AMF JTRS RDT&E budget. In FY14-17 Project No. 3073 represents a portion of the total AMF JTRS RDT&E budget. As part of the JTRS joint program acquisition strategy, each MILDEP budgets for a portion of the total program, therefore in FY14-17 a portion of JTRS development is represented in this PE, in Army PE 0604280A, and in Air Force PE 0604280F.   |                        |                                |                        |  |            |              |            |                           |            |                     |                  |            |                          |

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| Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy  |   | DATE: February 2012              |
| APPROPRIATION/BUDGET ACTIVITY<br>1319: <i>Research, Development, Test &amp; Evaluation, Navy</i><br>BA 5: <i>Development &amp; Demonstration (SDD)</i> | R-1 ITEM NOMENCLATURE<br>PE 0604280N: <i>JT Tact Radio Sys (JTRS)</i> | PROJECT<br>3073: <i>AMF JTRS</i> |
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| <b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2013 Navy   |  |   | <b>DATE:</b> February 2012 |
| <b>APPROPRIATION/BUDGET ACTIVITY</b><br>1319: <i>Research, Development, Test &amp; Evaluation, Navy</i><br>BA 5: <i>Development &amp; Demonstration (SDD)</i> | <b>R-1 ITEM NOMENCLATURE</b><br>PE 0604280N: <i>JT Tact Radio Sys (JTRS)</i> | <b>PROJECT</b><br>3073: <i>AMF JTRS</i> |                            |

Schedule Details

| Events by Sub Project                       | Start   |      | End     |      |
|---|---------|------|---------|------|
|   | Quarter | Year | Quarter | Year |
| <b>Proj 3073</b>                            |         |      |         |      |
| Link 16/SRW Integration test/Contract Award | 3       | 2012 | 3       | 2012 |
| Link 16/SRW Operational Assessment (OA)     | 3       | 2013 | 3       | 2013 |
| Link 16/SRW Milestone C (MS C)/LRIP         | 4       | 2013 | 4       | 2013 |
| Link 16/SRW IOT&E                           | 3       | 2014 | 3       | 2014 |
| Link 16/SRW FRP Decision                    | 1       | 2015 | 1       | 2015 |
| Link 16/SRW IOC                             | 2       | 2015 | 2       | 2015 |
| SRW/WNW Request For Proposal (RFI)          | 2       | 2012 | 2       | 2012 |
| -SRW/WNW Request For Proposal (RFP)         | 4       | 2012 | 4       | 2012 |
| -SRW/WNW Contract Award                     | 2       | 2013 | 2       | 2013 |
| -SRW/WNW Operational Assessment (OA)        | 3       | 2015 | 3       | 2015 |
| SRW/WNW In Process Review (IPR)             | 4       | 2015 | 4       | 2015 |
| -SRW/WNW IOT&E                              | 3       | 2016 | 3       | 2016 |
| SRW/WNW FRP Decision                        | 1       | 2017 | 1       | 2017 |
| SRW/WNW IOC                                 | 2       | 2017 | 2       | 2017 |
| -MUOS Request For Proposal (RFI)            | 2       | 2013 | 2       | 2013 |
| -MUOS Request For Proposal (RFP)            | 4       | 2013 | 4       | 2013 |
| MUOS Contract Award                         | 2       | 2014 | 2       | 2014 |
| MUOS Operational Assessment (OA)            | 3       | 2016 | 3       | 2016 |
| MUOS In Process Review (IPR)                | 4       | 2016 | 4       | 2016 |
| MUOS IOT&E                                  | 3       | 2017 | 3       | 2017 |
| Link 16/SRW Integration (I)                 | 1       | 2012 | 3       | 2012 |

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| Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy   |  |      | DATE: February 2012       |      |
| APPROPRIATION/BUDGET ACTIVITY<br>1319: Research, Development, Test & Evaluation, Navy<br>BA 5: Development & Demonstration (SDD) | R-1 ITEM NOMENCLATURE<br>PE 0604280N: JT Tact Radio Sys (JTRS) |      | PROJECT<br>3073: AMF JTRS |      |
|  | Start  |      | End                       |      |
| Events by Sub Project  | Quarter  | Year | Quarter                   | Year |
| Link 16/SRW Integration (II)   | 3  | 2012 | 3                         | 2013 |
| DT&E Apache Lot 4 Flight Test (I)  | 1  | 2013 | 1                         | 2013 |
| DT&E Apache Lot 4 Flight Test (II)   | 2  | 2013 | 2                         | 2013 |
| Link 16/SRW IOT&E Apache Lot 4   | 3  | 2013 | 3                         | 2013 |
| SVR/PRR  | 3  | 2013 | 3                         | 2013 |
| Integration for Limited User Test (LUT)  | 2  | 2013 | 3                         | 2013 |
| Limited User Test (LUT)  | 4  | 2013 | 4                         | 2013 |
| Aircraft Integration   | 1  | 2014 | 3                         | 2015 |
| Down Select  | 1  | 2014 | 1                         | 2014 |
| DT&E Flight Test (I)   | 1  | 2015 | 1                         | 2015 |
| DT&E Flight Test (II)  | 2  | 2015 | 2                         | 2015 |
| OT&E   | 3  | 2015 | 3                         | 2015 |
| MUOS Integration for Limited User Test (LUT)   | 2  | 2014 | 3                         | 2014 |
| MUOS Limited User Test (LUT)   | 4  | 2014 | 4                         | 2014 |
| MUOS Down Select   | 1  | 2015 | 1                         | 2015 |
| MUOS Platform Integration  | 1  | 2015 | 3                         | 2016 |
| MUOS DT&E Flight Test (I)  | 1  | 2016 | 1                         | 2016 |
| MUOS DT&E Flight Test (II)   | 2  | 2016 | 2                         | 2016 |
| MUOS OT&E  | 3  | 2016 | 3                         | 2016 |

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| Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy   |         |         |              |  |               |         |         |                           | DATE: February 2012 |                  |            |
| APPROPRIATION/BUDGET ACTIVITY<br>1319: Research, Development, Test & Evaluation, Navy<br>BA 5: Development & Demonstration (SDD)  |         |         |              | R-1 ITEM NOMENCLATURE<br>PE 0604280N: JT Tact Radio Sys (JTRS) |               |         |         | PROJECT<br>3074: GMR JTRS |                     |                  |            |
| COST (\$ in Millions)   | FY 2011 | FY 2012 | FY 2013 Base | FY 2013 OCO  | FY 2013 Total | FY 2014 | FY 2015 | FY 2016                   | FY 2017             | Cost To Complete | Total Cost |
| 3074: GMR JTRS  | 99.289  | 18.732  | -            | -  | -             | -       | -       | 0.025                     | 0.025               | Continuing       | Continuing |
| Quantity of RDT&E Articles  | 0       | 0       | 0            | 0  | 0             | 0       | 0       | 0                         | 0                   |                  |            |
| Note  |         |         |              |  |               |         |         |                           |                     |                  |            |
| In FY11-FY13, Project No. 3074 represents the total Joint Tactical Radio System (JTRS) Ground Mobile Radio (GMR) RDT&E budget for those years.  |         |         |              |  |               |         |         |                           |                     |                  |            |
| In FY14-FY17, Project No. 3074 represents the Navy share of the funding associated with JTRS GMR. As part of the JTRS joint program budget strategy, each Military Department (MILDEP) budgets for a portion of the total program, therefore in FY14-17 a portion of JTRS development is represented in this Project Element (PE), in Army PE 0604280A, and in Air Force PE 0604280F.   |         |         |              |  |               |         |         |                           |                     |                  |            |
| A. Mission Description and Budget Item Justification  |         |         |              |  |               |         |         |                           |                     |                  |            |
| JTRS is the Department of Defense (DoD) family of common software-defined programmable radios that will form the foundation of information radio frequency transmission for Joint Vision 2020. The JTRS family of products will be multifunctional, multiband, multimode, network capable, capable of providing communications through a range of low probability of intercept, low probability of detection and anti-jam waveforms. JTRS products will provide transformational communication capabilities for the warfighter. JTRS is intended to support communications readiness and mission success, in the 2 Megahertz (MHz) to 2 Gigahertz (GHz) operating frequency range, by providing military commanders with the ability to command, control and communicate with their forces via secure voice/video/data media forms. JTRS products are hardware-configurable and software-programmable radio systems that provide increased interoperability, flexibility and adaptability to support varied mission requirements. |         |         |              |  |               |         |         |                           |                     |                  |            |
| Following a Critical Nunn McCurdy breach the USD AT&L conducted a reassessment of the GMR program. Conclusions of the reassessment did not support certification of the program, thereby cancelling the program. In accordance with the ADM dated 14 October 2011, the GMR program office is directed to conduct an orderly shutdown of the existing GMR System Development and Demonstration contract which expires on 30 March 2012.  |         |         |              |  |               |         |         |                           |                     |                  |            |
| B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)  |         |         |              |  |               |         |         | FY 2011                   | FY 2012             | FY 2013          |            |
| Title: GMR JTRS   |         |         |              |  |               |         |         | 99.289                    | 18.732              | -                |            |
|   |         |         |              |  |               |         |         | 0                         | 0                   |                  |            |
| FY 2011 Accomplishments:  |         |         |              |  |               |         |         |                           |                     |                  |            |
| Supported the design and development of the GMR product, technical support to the Program Management Office (PMO), Field Testing, and Customer Test (CT). Completed Production Qualification Test (PQT).  |         |         |              |  |               |         |         |                           |                     |                  |            |
| FY 2012 Plans:  |         |         |              |  |               |         |         |                           |                     |                  |            |

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| Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy  |  |         |   |                 |                |                                  | DATE: February 2012 |         |         |         |                     |            |
| <b>APPROPRIATION/BUDGET ACTIVITY</b><br>1319: Research, Development, Test & Evaluation, Navy<br>BA 5: Development & Demonstration (SDD)  |  |         | <b>R-1 ITEM NOMENCLATURE</b><br>PE 0604280N: JT Tact Radio Sys (JTRS) |                 |                | <b>PROJECT</b><br>3074: GMR JTRS |                     |         |         |         |                     |            |
| <b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>  |  |         |   |                 |                |                                  | FY 2011             |         | FY 2012 |         | FY 2013             |            |
| Conduct close out of the Software Design and Development (SDD) contract. Activities include: identifying critical deliverables such as hardware, design specifications, instrumentation, modeling tools, simulators, etc. for delivery to the Government. Continue support to the GMR PMO (travel, training, payroll, etc.).   |  |         |   |                 |                |                                  |                     |         |         |         |                     |            |
| <b>Accomplishments/Planned Programs Subtotals</b>  |  |         |   |                 |                |                                  | 99.289              |         | 18.732  |         | -                   |            |
| <b>C. Other Program Funding Summary (\$ in Millions)</b>   |  |         |   |                 |                |                                  |                     |         |         |         |                     |            |
| Line Item  |  | FY 2011 | FY 2012   | FY 2013<br>Base | FY 2013<br>OCO | FY 2013<br>Total                 | FY 2014             | FY 2015 | FY 2016 | FY 2017 | Cost To<br>Complete | Total Cost |
| • RDTEA/0604805A: JTRS Cluster<br>1/ GMR   |  | 0.000   | 0.000   | 0.000           | 0.000          | 0.000                            | 0.000               | 0.000   | 0.000   | 0.000   | 0.000               | 571.542    |
| <b>D. Acquisition Strategy</b><br>Following a Critical Nunn McCurdy breach the USD AT&L conducted a reassessment of the GMR program. Conclusions of the reassessment did not support certification of the program, thereby cancelling the program. In accordance with the ADM dated 14 October 2011, the GMR program office is directed to conduct an orderly shutdown of the existing GMR System Development and Demonstration contract which expires on 30 March 2012. |  |         |   |                 |                |                                  |                     |         |         |         |                     |            |
| <b>E. Performance Metrics</b><br>Following a Critical Nunn McCurdy breach the USD AT&L conducted a reassessment of the GMR program. Conclusions of the reassessment did not support certification of the program, thereby cancelling the program. In accordance with the ADM dated 14 October 2011, the GMR program office is directed to conduct an orderly shutdown of the existing GMR System Development and Demonstration contract which expires on 30 March 2012.  |  |         |   |                 |                |                                  |                     |         |         |         |                     |            |

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| Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy  |                        |                                      |                        |                                       |            |              |            |                |            | DATE: February 2012 |                  |            |                          |
|---|------------------------|--------------------------------------|------------------------|---------------------------------------|------------|--------------|------------|----------------|------------|---------------------|------------------|------------|--------------------------|
| APPROPRIATION/BUDGET ACTIVITY   |                        |                                      |                        | R-1 ITEM NOMENCLATURE                 |            |              |            | PROJECT        |            |                     |                  |            |                          |
| 1319: Research, Development, Test & Evaluation, Navy<br>BA 5: Development & Demonstration (SDD) |                        |                                      |                        | PE 0604280N: JT Tact Radio Sys (JTRS) |            |              |            | 3074: GMR JTRS |            |                     |                  |            |                          |
| Product Development (\$ in Millions)  |                        |                                      |                        | FY 2012                               |            | FY 2013 Base |            | FY 2013 OCO    |            | FY 2013 Total       |                  |            |                          |
| Cost Category Item  | Contract Method & Type | Performing Activity & Location       | Total Prior Years Cost | Cost                                  | Award Date | Cost         | Award Date | Cost           | Award Date | Cost                | Cost To Complete | Total Cost | Target Value of Contract |
| JTRS GMR GFE  | MIPR                   | PEO C3T:Aberdeen Proving Grounds, MD | 4.000                  | -                                     |            | -            |            | -              |            | -                   | 0.000            | 4.000      | 4.000                    |
| JTRS GMR GFE  | C/CPAF                 | GENERAL DYNAMICS:Scottsdale, AZ      | 0.702                  | -                                     |            | -            |            | -              |            | -                   | 0.000            | 0.702      | 0.702                    |
| JTRS GMR SDD  | C/CPAF                 | BOEING:Huntington Beach, CA          | 846.719                | 10.278                                | Oct 2011   | -            |            | -              |            | -                   | 0.000            | 856.997    | 850.886                  |
| JTRS DEVELOPMENT - System Engineering Support   | MIPR                   | PEO C3T:Aberdeen Proving Grounds, MD | 16.738                 | -                                     |            | -            |            | -              |            | -                   | 0.000            | 16.738     | 16.738                   |
| Technology Development Efforts  | MIPR                   | PEO C3T:Aberdeen Proving Grounds, MD | 20.966                 | -                                     |            | -            |            | -              |            | -                   | 0.000            | 20.966     | 23.216                   |
| Subtotal  |                        |                                      | 889.125                | 10.278                                |            | -            |            | -              |            | -                   | 0.000            | 899.403    | 895.542                  |
| Support (\$ in Millions)  |                        |                                      |                        | FY 2012                               |            | FY 2013 Base |            | FY 2013 OCO    |            | FY 2013 Total       |                  |            |                          |
| Cost Category Item  | Contract Method & Type | Performing Activity & Location       | Total Prior Years Cost | Cost                                  | Award Date | Cost         | Award Date | Cost           | Award Date | Cost                | Cost To Complete | Total Cost | Target Value of Contract |
| JTRS Antenna Study  | MIPR                   | PEO C3T:Aberdeen Proving Grounds, MD | 2.025                  | -                                     |            | -            |            | -              |            | -                   | 0.000            | 2.025      | 2.025                    |
| JTRS Tech Support   | MIPR                   | PEO C3T:Aberdeen Proving Grounds, MD | 9.344                  | -                                     |            | -            |            | -              |            | -                   | 0.000            | 9.344      | 9.344                    |
| JTRS MUOS Support   | C/CPFF                 | Johns Hopkins University:Laurel, MD  | 0.623                  | -                                     |            | -            |            | -              |            | -                   | 0.000            | 0.623      | 0.623                    |
| DIACAP Support  | MIPR                   | PEO C3T:Aberdeen Proving Grounds, MD | 0.960                  | -                                     |            | -            |            | -              |            | -                   | 0.000            | 0.960      | 1.460                    |
| Subtotal  |                        |                                      | 12.952                 | -                                     |            | -            |            | -              |            | -                   | 0.000            | 12.952     | 13.452                   |
|   |                        |                                      |                        |                                       |            |              |            |                |            |                     |                  |            |                          |



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|--|------------------------|--------------------------------------|------------------------|--|------------|--------------|------------|---------------------------|------------|---------------------|------------------|------------|--------------------------|
| Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy   |                        |                                      |                        |  |            |              |            |                           |            | DATE: February 2012 |                  |            |                          |
| APPROPRIATION/BUDGET ACTIVITY<br>1319: Research, Development, Test & Evaluation, Navy<br>BA 5: Development & Demonstration (SDD)   |                        |                                      |                        | R-1 ITEM NOMENCLATURE<br>PE 0604280N: JT Tact Radio Sys (JTRS) |            |              |            | PROJECT<br>3074: GMR JTRS |            |                     |                  |            |                          |
| Test and Evaluation (\$ in Millions)   |                        |                                      |                        | FY 2012  |            | FY 2013 Base |            | FY 2013 OCO               |            | FY 2013 Total       |                  |            |                          |
| Cost Category Item   | Contract Method & Type | Performing Activity & Location       | Total Prior Years Cost | Cost   | Award Date | Cost         | Award Date | Cost                      | Award Date | Cost                | Cost To Complete | Total Cost | Target Value of Contract |
| JTRS EPG test bed & test planning  | MIPR                   | EPG:Fort Huachuca, AZ                | 18.297                 | -  |            | -            |            | -                         |            | -                   | 0.000            | 18.297     | 18.297                   |
| JTRS M&S   | MIPR                   | USAIC:Fort Huachuca, AZ              | 7.384                  | -  |            | -            |            | -                         |            | -                   | 0.000            | 7.384      | 7.384                    |
| JTRS Test In-house Spt & Gov activities  | MIPR                   | PEO C3T:Aberdeen Proving Grounds, MD | 11.380                 | -  |            | -            |            | -                         |            | -                   | 0.000            | 11.380     | 11.380                   |
| JTRS EOA/CLUT/NIR/NIE Dev. Field Test Activity   | MIPR                   | EPG:Fort Huachuca, AZ                | 17.024                 | -  |            | -            |            | -                         |            | -                   | 0.000            | 17.024     | 17.024                   |
| Subtotal   |                        |                                      | 54.085                 | -  |            | -            |            | -                         |            | -                   | 0.000            | 54.085     | 54.085                   |
| Management Services (\$ in Millions)   |                        |                                      |                        | FY 2012  |            | FY 2013 Base |            | FY 2013 OCO               |            | FY 2013 Total       |                  |            |                          |
| Cost Category Item   | Contract Method & Type | Performing Activity & Location       | Total Prior Years Cost | Cost   | Award Date | Cost         | Award Date | Cost                      | Award Date | Cost                | Cost To Complete | Total Cost | Target Value of Contract |
| JTRS Business Engineering Mgmt   | MIPR                   | PEO C3T:Aberdeen Proving Grounds, MD | 16.191                 | -  |            | -            |            | -                         |            | -                   | 0.000            | 16.191     | 16.791                   |
| PMO Support  | MIPR                   | PEO C3T:Aberdeen Proving Grounds, MD | 26.990                 | 8.454  | Dec 2011   | -            |            | -                         |            | -                   | 0.000            | 35.444     | 35.444                   |
| JTRS MITRE support   | MIPR                   | MITRE:Aberdeen Proving Grounds, MD   | 0.513                  | -  |            | -            |            | -                         |            | -                   | 0.000            | 0.513      | 0.513                    |
| Acquisition Workforce Fund   | C/FP                   | Not Specified:Not Specified          | 1.167                  | -  |            | -            |            | -                         |            | -                   | 0.000            | 1.167      | 1.167                    |
| Subtotal   |                        |                                      | 44.861                 | 8.454  |            | -            |            | -                         |            | -                   | 0.000            | 53.315     | 53.915                   |
|  |                        |                                      | Total Prior Years Cost | FY 2012  |            | FY 2013 Base |            | FY 2013 OCO               |            | FY 2013 Total       | Cost To Complete | Total Cost | Target Value of Contract |
| Project Cost Totals  |                        |                                      | 1,001.023              | 18.732   |            | -            |            | -                         |            | -                   | 0.000            | 1,019.755  | 1,016.994                |
| Remarks<br>Prior Years (PYs) column only reflects prior year Navy Joint Tactical Radio System (JTRS) Ground Mobile Radio (GMR) costs for FY07-11. Prior to FY07, JTRS GMR funding resided in Army Program Element (PE) 0604805A, Project 615. In FY12 and FY13, Project No. 3074 represents the total JTRS GMR RDT&E budget. In FY14-17, Project No. 3074 represents |                        |                                      |                        |  |            |              |            |                           |            |                     |                  |            |                          |

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|--|------------------------------|---------|--|----------------|------------------|---------------------------|---------------------|--------------------------------|--|
| Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy   |                              |         |  |                |                  |                           | DATE: February 2012 |                                |  |
| APPROPRIATION/BUDGET ACTIVITY<br>1319: Research, Development, Test & Evaluation, Navy<br>BA 5: Development & Demonstration (SDD)   |                              |         | R-1 ITEM NOMENCLATURE<br>PE 0604280N: JT Tact Radio Sys (JTRS) |                |                  | PROJECT<br>3074: GMR JTRS |                     |                                |  |
|  | Total Prior<br>Years<br>Cost | FY 2012 | FY 2013<br>Base  | FY 2013<br>OCO | FY 2013<br>Total | Cost To<br>Complete       | Total Cost          | Target<br>Value of<br>Contract |  |
| a portion of the total JTRS GMR RDT&E budget. As part of the JTRS joint program acquisition strategy, each Military Department (MILDEP) budgets for a portion of the total program, therefore in FY14-17 a portion of JTRS development is represented in this PE, in Army PE 0604280A, and in Air Force PE 0604280F. |                              |         |  |                |                  |                           |                     |                                |  |

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| Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy  |   | DATE: February 2012              |
| APPROPRIATION/BUDGET ACTIVITY<br>1319: <i>Research, Development, Test &amp; Evaluation, Navy</i><br>BA 5: <i>Development &amp; Demonstration (SDD)</i> | R-1 ITEM NOMENCLATURE<br>PE 0604280N: <i>JT Tact Radio Sys (JTRS)</i> | PROJECT<br>3074: <i>GMR JTRS</i> |
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| <b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2013 Navy   |  | <b>DATE:</b> February 2012              |
| <b>APPROPRIATION/BUDGET ACTIVITY</b><br>1319: <i>Research, Development, Test &amp; Evaluation, Navy</i><br>BA 5: <i>Development &amp; Demonstration (SDD)</i> | <b>R-1 ITEM NOMENCLATURE</b><br>PE 0604280N: <i>JT Tact Radio Sys (JTRS)</i> | <b>PROJECT</b><br>3074: <i>GMR JTRS</i> |

Schedule Details

| Events by Sub Project   | Start   |      | End     |      |
|-------------------------|---------|------|---------|------|
|                         | Quarter | Year | Quarter | Year |
| <b><i>Proj 3074</i></b> |         |      |         |      |
| Contract Closeout       | 2       | 2012 | 2       | 2012 |
| PQT                     | 1       | 2011 | 1       | 2011 |

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|--|---------|---------|--------------|--|---------------|---------|---------|---------------------------|---------|------------------|------------|
| Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy  |         |         |              |  |               |         |         | DATE: February 2012       |         |                  |            |
| APPROPRIATION/BUDGET ACTIVITY<br>1319: Research, Development, Test & Evaluation, Navy<br>BA 5: Development & Demonstration (SDD)   |         |         |              | R-1 ITEM NOMENCLATURE<br>PE 0604280N: JT Tact Radio Sys (JTRS) |               |         |         | PROJECT<br>3075: HMS JTRS |         |                  |            |
| COST (\$ in Millions)  | FY 2011 | FY 2012 | FY 2013 Base | FY 2013 OCO  | FY 2013 Total | FY 2014 | FY 2015 | FY 2016                   | FY 2017 | Cost To Complete | Total Cost |
| 3075: HMS JTRS   | 67.363  | 116.054 | 116.030      | -  | 116.030       | 2.752   | 0.313   | -                         | -       | 0.000            | 302.512    |
| Quantity of RDT&E Articles   | 0       | 0       | 0            | 0  | 0             | 0       | 0       | 0                         | 0       |                  |            |
| Note   |         |         |              |  |               |         |         |                           |         |                  |            |
| In FY11-FY13, Project No. 3075 represents the total HMS JTRS RDT&E budget for those years.   |         |         |              |  |               |         |         |                           |         |                  |            |
| In FY14-FY17, Project No. 3075 represents the Navy share of the funding associated with HMS JTRS. As part of the JTRS joint program budget strategy, each Military Department (MILDEP) budgets for a portion of the total program, therefore in FY14-17 a portion of JTRS development is represented in this PE, in Army PE 0604280A, and in Air Force PE 0604280F.  |         |         |              |  |               |         |         |                           |         |                  |            |
| A. Mission Description and Budget Item Justification   |         |         |              |  |               |         |         |                           |         |                  |            |
| JTRS is the Department of Defense (DoD) family of common software-defined programmable radios that will form the foundation of information radio frequency transmission for JointVision 2020. The JTRS family of products will be multifunctional, multiband, multimode, network capable, capable of providing communications through a range of low probability of intercept, low probability of detection and anti-jam waveforms. JTRS products will provide transformational communication capabilities for the warfighter. JTRS is intended to support communications readiness and mission success, in the 2 Megahertz (MHz) to 2 Gigahertz (GHz) operating frequency range, by providing military commanders with the ability to command, control and communicate with their forces via secure voice/video/data media forms. JTRS products are hardware-configurable and software-programmable radio systems that provide increased interoperability, flexibility and adaptability to support varied mission requirements. |         |         |              |  |               |         |         |                           |         |                  |            |
| HMS provides the JTRS capability to meet Joint Ground Mounted, Dismounted & Embedded Radio Requirements. Increment 1, Phase 1 developed Small-Form-Fit (SFF) SFF-A (1 and 2 Channel), SFF-D and AN/PRC-154 Rifleman Radio running Soldier Radio Waveform (SRW) for use in a sensitive but unclassified environment (Type 2). Increment 1, Phase 2 will develop the 2 Channel Manpack and SFF-B. Phase 2 radios are all Type 1 compliant for use in a classified environment running Very High Frequency/Ultra High Frequency (V/UHF) Line of Sight (LOS) w/Air Traffic Control (ATC), Satellite Communications (SATCOM), High Frequency (HF), Soldier Radio Waveform (SRW), Mobile User Objective System (MUOS), JTRS Bowman Waveform (JBW) and Single Channel Ground to Air Radio System (SINCGARS) waveforms.  |         |         |              |  |               |         |         |                           |         |                  |            |
| B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)   |         |         |              |  |               |         |         | FY 2011                   | FY 2012 | FY 2013          |            |
| Title: HMS JTRS  |         |         |              |  |               |         |         | 67.363                    | 116.054 | 116.030          |            |
| Articles:  |         |         |              |  |               |         |         | 0                         | 0       | 0                |            |
| FY 2011 Accomplishments:   |         |         |              |  |               |         |         |                           |         |                  |            |
| Completed Phase 1 and 2 Contractor Developmental Test (CDT); Completed Government Developmental Test 2 (GDT2) and the Verification of Correction of Deficiencies (VCD) test for Phase 1 AN/PRC-154 Rifleman Radio; Achieved a Milestone C; Started   |         |         |              |  |               |         |         |                           |         |                  |            |

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|---|---------|---------|-----------------|--|------------------|---------|---------|---------------------------|---------------------|---------------------|------------|
| Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy   |         |         |                 |  |                  |         |         |                           | DATE: February 2012 |                     |            |
| APPROPRIATION/BUDGET ACTIVITY<br>1319: Research, Development, Test & Evaluation, Navy<br>BA 5: Development & Demonstration (SDD)  |         |         |                 | R-1 ITEM NOMENCLATURE<br>PE 0604280N: JT Tact Radio Sys (JTRS) |                  |         |         | PROJECT<br>3075: HMS JTRS |                     |                     |            |
| B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)  |         |         |                 |  |                  |         |         |                           | FY 2011             | FY 2012             | FY 2013    |
| preparation for the Phase 1 Initial Operational Test & Evaluation; Provided technical support for Phase 1 and Phase 2; Completed Phase 2 GDT1 and Phase 2 Limited User Test (LUT).  |         |         |                 |  |                  |         |         |                           |                     |                     |            |
| FY 2012 Plans:<br>Perform Phase 1 Initial Operational Test & Evaluation (IOT&E); Obtain Phase 1 Information Assurance certification; Perform cold and hot climate testing for Phase 1; Receive Phase 2 Information Assurance certification; Complete Phase 2 GDT2 and Phase 2 Multi-Service Operational Test & Evaluation (MOTE); Perform hot climate testing for Phase 2; Porting efforts for Mobile User Objective System (MUOS) waveform; Start Small Form Fit (SFF)-B CDT; Initiate redesign of SFF-B capabilities; Provide technical and engineering support for completion of Phase 1 and Phase 2 efforts.  |         |         |                 |  |                  |         |         |                           |                     |                     |            |
| FY 2013 Plans:<br>Receive Information Assurance certification for Phase 2 radios with MUOS capability; Continue MUOS porting and testing activities; Initiate Manpack capabilities of Over-The-Air-Rekeying/Over-The-Air-Zeroizing (OTAR/OTAZ), Very High Frequency/ Ultra High Frequency Line-of-Sight (V/UHF LOS) with Air Traffic Control (ATC); Initiate efforts to port Public Key Information (PKI) functionality onto Phase 2 radios; Provide technical and engineering support for development efforts.   |         |         |                 |  |                  |         |         |                           |                     |                     |            |
| Accomplishments/Planned Programs Subtotals  |         |         |                 |  |                  |         |         |                           | 67.363              | 116.054             | 116.030    |
| C. Other Program Funding Summary (\$ in Millions)   |         |         |                 |  |                  |         |         |                           |                     |                     |            |
| Line Item   | FY 2011 | FY 2012 | FY 2013<br>Base | FY 2013<br>OCO   | FY 2013<br>Total | FY 2014 | FY 2015 | FY 2016                   | FY 2017             | Cost To<br>Complete | Total Cost |
| • RDTEA/0604280A: HMS JTRS  | 0.755   | 0.000   | 0.000           | 0.000  | 0.000            | 28.217  | 4.712   | 4.615                     | 0.000               | 0.000               | 38.299     |
| • RDTEF/0604280F: HMS JTRS  | 0.000   | 0.000   | 0.000           | 0.000  | 0.000            | 2.857   | 0.336   | 0.000                     | 0.000               | 0.000               | 3.193      |
| • RDTEA/0604805A: JTRS Cluster 5 /HMS   | 0.000   | 0.000   | 0.000           | 0.000  | 0.000            | 0.000   | 0.000   | 0.000                     | 0.000               | 0.000               | 242.657    |
| • OPN/3057: COMMUNICATION ITEMS UNDER \$5M  | 5.100   | 0.000   | 3.300           | 0.000  | 3.300            | 26.434  | 59.914  | 67.873                    | 66.414              | Continuing          | Continuing |
| D. Acquisition Strategy   |         |         |                 |  |                  |         |         |                           |                     |                     |            |
| This project supports the JTRS HMS Engineering and Manufacturing Development phase efforts. The JTRS HMS Program began with the development of the HMS Radios following Milestone (MS) B approval on April 26, 2004. HMS uses an evolutionary acquisition strategy and will deliver NSA certified capabilities. Following full and open competition, a single Cost-Plus-Award Fee (CPAF) contract was awarded on July 16, 2004. The contract is structured to address Increment 1. JTRS HMS Increment 1 consists of two phases of development. Increment 1, Phase 1 developed SFF-A (1 and 2 Channel), SFF-D and AN/PRC-154 Rifleman Radio running Soldier Radio Waveform (SRW) for use in a sensitive but unclassified environment (Type 2). Increment 1, Phase 2 will develop the 2 Channel Manpack and SFF-B which are Type 1 compliant for use in a classified environment running Ultra High Frequency (UHF), Satellite Communications (SATCOM), High Frequency (HF), Soldier Radio Waveform (SRW), Mobile User Objective System (MUOS), and Single Channel Ground to Air Radio System (SINCGARS) waveforms. The FY13 Budget |         |         |                 |  |                  |         |         |                           |                     |                     |            |

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| <b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2013 Navy   |  | <b>DATE:</b> February 2012              |
| <b>APPROPRIATION/BUDGET ACTIVITY</b><br>1319: <i>Research, Development, Test &amp; Evaluation, Navy</i><br>BA 5: <i>Development &amp; Demonstration (SDD)</i>  | <b>R-1 ITEM NOMENCLATURE</b><br>PE 0604280N: <i>JT Tact Radio Sys (JTRS)</i> | <b>PROJECT</b><br>3075: <i>HMS JTRS</i> |
| supports continued porting efforts of MUOS and HF waveforms to the Manpack, continued follow-on Manpack Capabilities of JTRS Bowman Waveform (JBW), SRW Teleops, Over-The-Air-Rekeying/Over-The-Air-Zeroizing (OTAR/OTAZ), and Very High Frequency/Ultra High Frequency Line-of-Sight (V/UHF LOS) and initiate efforts to port Public Key Information (PKI) functionality onto Phase 2 radios.   |  |   |
| <b><u>E. Performance Metrics</u></b><br>The five ACAT 1D JTRS programs are employing mature, software-defined radio technologies and developing more than 10 million lines of code as part of the Increment 1 baseline. Early on, a JTRS enterprise software metrics requirements effort established a baseline of standard software metrics which are monitored on each JTRS contract involving software development. Further, a software complexity product metric is collected which demonstrates the testability of the code and is an important criterion for software certification. These software metrics are used to quantify the quality and progress of each software product's development over time. Additionally, JTRS HMS employs Earned Value Metrics to monitor contract performance on the Prime Development Contract. |  |   |

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| Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy   |                        |   |                        |  |            |              |            |                           |            | DATE: February 2012 |                  |            |                          |
| APPROPRIATION/BUDGET ACTIVITY<br>1319: Research, Development, Test & Evaluation, Navy<br>BA 5: Development & Demonstration (SDD) |                        |   |                        | R-1 ITEM NOMENCLATURE<br>PE 0604280N: JT Tact Radio Sys (JTRS) |            |              |            | PROJECT<br>3075: HMS JTRS |            |                     |                  |            |                          |
| Product Development (\$ in Millions)   |                        |   |                        | FY 2012  |            | FY 2013 Base |            | FY 2013 OCO               |            | FY 2013 Total       |                  |            |                          |
| Cost Category Item   | Contract Method & Type | Performing Activity & Location  | Total Prior Years Cost | Cost   | Award Date | Cost         | Award Date | Cost                      | Award Date | Cost                | Cost To Complete | Total Cost | Target Value of Contract |
| JTRS HMS Design, Development and Manufacture of Engineering Development Models (EDMs)  | C/CPAF                 | General Dynamics C4 Systems:Scottsdale, AZ  | 494.154                | 80.138   | Oct 2011   | 93.842       | Oct 2012   | -                         |            | 93.842              | 2.272            | 670.406    | 668.134                  |
| JTRS HMS Development System Engineering Support  | MIPR                   | PEO C3T:Ft. Monmouth, NJ/APG, MD  | 24.964                 | -  |            | -            |            | -                         |            | -                   | 0.000            | 24.964     | 24.964                   |
| Technology Development efforts   | MIPR                   | PEO C3T:Ft. Monmouth, NJ/APG, MD  | 8.317                  | -  |            | -            |            | -                         |            | -                   | 0.000            | 8.317      | 8.317                    |
| Subtotal   |                        |   | 527.435                | 80.138   |            | 93.842       |            | -                         |            | 93.842              | 2.272            | 703.687    | 701.415                  |
| Support (\$ in Millions)   |                        |   |                        | FY 2012  |            | FY 2013 Base |            | FY 2013 OCO               |            | FY 2013 Total       |                  |            |                          |
| Cost Category Item   | Contract Method & Type | Performing Activity & Location  | Total Prior Years Cost | Cost   | Award Date | Cost         | Award Date | Cost                      | Award Date | Cost                | Cost To Complete | Total Cost | Target Value of Contract |
| JTRS Engineering/Technical Support   | MIPR                   | PEO C3T, ARL, CACI, CECOM, CERDEC, LCMC, DSCI:Ft. Monmouth, NJ/APG, MD; San Diego, CA | 39.720                 | 8.092  | Oct 2011   | 6.795        | Oct 2012   | -                         |            | 6.795               | 0.152            | 54.759     | 54.607                   |
| Subtotal   |                        |   | 39.720                 | 8.092  |            | 6.795        |            | -                         |            | 6.795               | 0.152            | 54.759     | 54.607                   |
| Test and Evaluation (\$ in Millions)   |                        |   |                        | FY 2012  |            | FY 2013 Base |            | FY 2013 OCO               |            | FY 2013 Total       |                  |            |                          |
| Cost Category Item   | Contract Method & Type | Performing Activity & Location  | Total Prior Years Cost | Cost   | Award Date | Cost         | Award Date | Cost                      | Award Date | Cost                | Cost To Complete | Total Cost | Target Value of Contract |
| JTRS EPG test bed and planning .   | MIPR                   | EPG:Ft. Huachuca, AZ  | 0.300                  | -  |            | -            |            | -                         |            | -                   | 0.000            | 0.300      | 0.300                    |
| JTRS Modeling and Simulation.  | MIPR                   | USAIC:Ft. Huachuca, AZ  | 0.650                  | -  |            | -            |            | -                         |            | -                   | 0.000            | 0.650      | 0.650                    |



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| Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy  |                        |   |                        |                                       |            |              |            |                |            | DATE: February 2012 |                  |            |                          |
|---|------------------------|---|------------------------|---------------------------------------|------------|--------------|------------|----------------|------------|---------------------|------------------|------------|--------------------------|
| APPROPRIATION/BUDGET ACTIVITY   |                        |   |                        | R-1 ITEM NOMENCLATURE                 |            |              |            | PROJECT        |            |                     |                  |            |                          |
| 1319: Research, Development, Test & Evaluation, Navy<br>BA 5: Development & Demonstration (SDD) |                        |   |                        | PE 0604280N: JT Tact Radio Sys (JTRS) |            |              |            | 3075: HMS JTRS |            |                     |                  |            |                          |
| Test and Evaluation (\$ in Millions)  |                        |   |                        | FY 2012                               |            | FY 2013 Base |            | FY 2013 OCO    |            | FY 2013 Total       |                  |            |                          |
| Cost Category Item  | Contract Method & Type | Performing Activity & Location  | Total Prior Years Cost | Cost                                  | Award Date | Cost         | Award Date | Cost           | Award Date | Cost                | Cost To Complete | Total Cost | Target Value of Contract |
| JTRS Test In-house Support & Government   | MIPR                   | PEO C3T:Ft. Monmouth, NJ/APG, MD; SSC PAC: San Diego, CA                                | 11.924                 | 0.279                                 | Oct 2011   | 0.287        | Oct 2012   | -              |            | 0.287               | 0.000            | 12.490     | 12.490                   |
| Phase1 T&E (CDT, GDT, LUT, OT)  | MIPR                   | PEO C3T:Ft. Monmouth, NJ/APG, MD  | 14.994                 | 3.279                                 | Oct 2011   | -            | Oct 2012   | -              |            | -                   | 0.000            | 18.273     | 20.039                   |
| Phase2 T&E (CDT, GDT, LUT, OT)  | MIPR                   | PEO C3T:Ft. Monmouth, NJ/APG,MD   | 9.871                  | 16.568                                | Oct 2011   | -            |            | -              |            | -                   | 0.000            | 26.439     | 29.371                   |
| Follow on Delta Development & Testing   | MIPR                   | EPG, ATEC, AEC, MBL, ARLSLAD, CERDEC:Ft. Huachuca, AZ; Ft. Benning, GA; Ft. Monmouth,AP | -                      | 2.000                                 | May 2012   | 9.949        | Oct 2012   | -              |            | 9.949               | 0.171            | 12.120     | 11.949                   |
| Subtotal  |                        |   | 37.739                 | 22.126                                |            | 10.236       |            | -              |            | 10.236              | 0.171            | 70.272     | 74.799                   |
| Management Services (\$ in Millions)  |                        |   |                        | FY 2012                               |            | FY 2013 Base |            | FY 2013 OCO    |            | FY 2013 Total       |                  |            |                          |
| Cost Category Item  | Contract Method & Type | Performing Activity & Location  | Total Prior Years Cost | Cost                                  | Award Date | Cost         | Award Date | Cost           | Award Date | Cost                | Cost To Complete | Total Cost | Target Value of Contract |
| Project Management Office Support   | MIPR                   | PEO C3T:Ft. Monmouth, NJ/APG, MD  | 36.844                 | 4.828                                 | Oct 2011   | 4.426        | Oct 2012   | -              |            | 4.426               | 0.454            | 46.552     | 46.098                   |
| JTRS Business/Management  | MIPR                   | PEO C3T:Ft. Monmouth, NJ/APG, MD  | 14.424                 | 0.870                                 | Oct 2011   | 0.731        | Oct 2012   | -              |            | 0.731               | 0.016            | 16.041     | 16.025                   |
| Acquistion Workforce Fund   | C/FP                   | Not Specified:Not Specified   | 0.634                  | -                                     |            | -            |            | -              |            | -                   | 0.000            | 0.634      | 0.634                    |
| Subtotal  |                        |   | 51.902                 | 5.698                                 |            | 5.157        |            | -              |            | 5.157               | 0.470            | 63.227     | 62.757                   |
|   |                        |   |                        |                                       |            |              |            |                |            |                     |                  |            |                          |

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|--|------------------------|---------|--|--|--|-------------|--|---------------------------|------------------|------------|--------------------------|
| Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy   |                        |         |  |  |  |             |  | DATE: February 2012       |                  |            |                          |
| APPROPRIATION/BUDGET ACTIVITY<br>1319: Research, Development, Test & Evaluation, Navy<br>BA 5: Development & Demonstration (SDD) |                        |         |  | R-1 ITEM NOMENCLATURE<br>PE 0604280N: JT Tact Radio Sys (JTRS) |  |             |  | PROJECT<br>3075: HMS JTRS |                  |            |                          |
|  | Total Prior Years Cost | FY 2012 |  | FY 2013 Base   |  | FY 2013 OCO |  | FY 2013 Total             | Cost To Complete | Total Cost | Target Value of Contract |
| Project Cost Totals  | 656.796                | 116.054 |  | 116.030  |  | -           |  | 116.030                   | 3.065            | 891.945    | 893.578                  |

**Remarks**

PYs column only reflects prior year Navy HMS costs for FY07-11. Prior to FY07, HMS JTRS funding resided in Army PE 0604805A, Project 61A. In FY12-FY13, Project No. 3075 represents the total HMS JTRS RDT&E budget. In FY14-17 Project No. 3075 represents a portion of the total HMS JTRS RDT&E budget. As part of the JTRS joint program acquisition strategy, each MILDEP budgets for a portion of the total program, therefore in FY14-17 a portion of JTRS development is represented in this PE, in Army PE 0604280A, and in Air Force PE 0604280F.

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| Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy  |   | DATE: February 2012              |
| APPROPRIATION/BUDGET ACTIVITY<br>1319: <i>Research, Development, Test &amp; Evaluation, Navy</i><br>BA 5: <i>Development &amp; Demonstration (SDD)</i> | R-1 ITEM NOMENCLATURE<br>PE 0604280N: <i>JT Tact Radio Sys (JTRS)</i> | PROJECT<br>3075: <i>HMS JTRS</i> |
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| <b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2013 Navy   |  |   | <b>DATE:</b> February 2012 |
| <b>APPROPRIATION/BUDGET ACTIVITY</b><br>1319: <i>Research, Development, Test &amp; Evaluation, Navy</i><br>BA 5: <i>Development &amp; Demonstration (SDD)</i> | <b>R-1 ITEM NOMENCLATURE</b><br>PE 0604280N: <i>JT Tact Radio Sys (JTRS)</i> | <b>PROJECT</b><br>3075: <i>HMS JTRS</i> |                            |

Schedule Details

| Events by Sub Project                 | Start   |      | End     |      |
|---------------------------------------|---------|------|---------|------|
|                                       | Quarter | Year | Quarter | Year |
| <b>Proj 3075</b>                      |         |      |         |      |
| Increment 1, Phase 1 CDT              | 1       | 2011 | 2       | 2011 |
| Increment 1, Phase 1 GDT2             | 1       | 2011 | 1       | 2011 |
| Increment 1, Phase 1 VCD              | 2       | 2011 | 2       | 2011 |
| Increment 1, MS C                     | 3       | 2011 | 3       | 2011 |
| Increment 1, Phase 1 IOT&E            | 1       | 2012 | 1       | 2012 |
| Increment 1, Phase 2 CDT              | 1       | 2011 | 4       | 2011 |
| Increment 1, Phase 2 GDT1             | 3       | 2011 | 3       | 2011 |
| Increment 1, Phase 2 LUT              | 3       | 2011 | 4       | 2011 |
| Increment 1, Phase 2 GDT2             | 2       | 2012 | 2       | 2012 |
| Increment 1, Phase 2 IPR              | 2       | 2012 | 2       | 2012 |
| Increment 1, Phase 2 MOTE             | 3       | 2012 | 3       | 2012 |
| Increment 1, Phase 2 Manpack MUOS GDT | 1       | 2013 | 2       | 2013 |
| Increment 1, Phase 2 Manpack FOT&E    | 3       | 2013 | 3       | 2013 |

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|--|---------|---------|--------------|--|---------------|---------|---------|--|---------------------|------------------|------------|
| Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy  |         |         |              |  |               |         |         |  | DATE: February 2012 |                  |            |
| APPROPRIATION/BUDGET ACTIVITY<br>1319: Research, Development, Test & Evaluation, Navy<br>BA 5: Development & Demonstration (SDD) |         |         |              | R-1 ITEM NOMENCLATURE<br>PE 0604280N: JT Tact Radio Sys (JTRS) |               |         |         | PROJECT<br>3076: JTRS Network Enterprise Domain (JNED) |                     |                  |            |
| COST (\$ in Millions)  | FY 2011 | FY 2012 | FY 2013 Base | FY 2013 OCO  | FY 2013 Total | FY 2014 | FY 2015 | FY 2016  | FY 2017             | Cost To Complete | Total Cost |
| 3076: JTRS Network Enterprise Domain (JNED)  | 114.511 | 93.987  | 59.077       | -  | 59.077        | 20.701  | 17.076  | 14.221   | 14.262              | Continuing       | Continuing |
| Quantity of RDT&E Articles   | 0       | 0       | 0            | 0  | 0             | 0       | 0       | 0  | 0                   |                  |            |

**Note**

In FY11-FY13, Project No. 3076 represents the total JNED RDT&E budget.

In FY14-FY17, Project No. 3076 represents the Navy share of the funding associated with JNED. As part of the JTRS joint program budget strategy, each Military Department (MILDEP) budgets for a portion of the total program, therefore in FY14-17, a portion of JTRS development is represented in this PE, the Army PE 0604280A, and the Air Force PE 0604280F.

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

JTRS is the Department of Defense (DoD) family of common software-defined programmable radios that will form the foundation of information radio frequency transmission for Joint Vision 2020. The JTRS family of products will be multifunctional, multiband, multimode, network capable, capable of providing communications through a range of low probability of intercept, low probability of detection and anti-jam waveforms. JTRS products will provide transformational communication capabilities for the warfighter. JTRS is intended to support communications readiness and mission success, in the 2 Megahertz (MHz) to 2 Gigahertz (GHz) operating frequency range, by providing military commanders with the ability to command, control and communicate with their forces via secure voice/video/data media forms. JTRS products are hardware-configurable and software-programmable radio systems that provide increased interoperability, flexibility and adaptability to support varied mission requirements.

JNED is responsible for the development and delivery of software-defined, legacy radio waveforms and networking waveforms that support Net-Centric operational warfare at sea, air and on the ground. Networking waveforms extend the Global Information Grid (GIG) to the last tactical mile and to the warfighter. The JNED team is responsible for (1) the overall management and oversight of the JTRS Waveform program, (2) development, validation, and evolution of a common JTRS Software Communications Architecture (SCA), (3) development and evolution of waveform software applications, (4) development of software cryptographic algorithms and equipment applications, (5) testing and certification of JTRS waveforms, network services, network management, and software products, and (6) JTRS networking and network management software components. Services are responsible for acquiring and fielding host radio hardware and integrating JTRS into Service platforms.

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

|   | <b>FY 2011</b> | <b>FY 2012</b> | <b>FY 2013</b> |
|---|----------------|----------------|----------------|
| <b>Title:</b> Soldier Radio Waveform (SRW)  | 2.129          | -              | -              |
| <b>Articles:</b>  | 0              |                |                |
| <b>Description:</b> Soldier Radio Waveform (SRW) will operate on JTR sets to provide a networked battlefield communications capability for disadvantaged users engaged in land combat operations and will support voice, data, and video communications |                |                |                |

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| Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy   |  | DATE: February 2012                                    |         |         |
| APPROPRIATION/BUDGET ACTIVITY<br>1319: Research, Development, Test & Evaluation, Navy<br>BA 5: Development & Demonstration (SDD)  | R-1 ITEM NOMENCLATURE<br>PE 0604280N: JT Tact Radio Sys (JTRS) | PROJECT<br>3076: JTRS Network Enterprise Domain (JNED) |         |         |
| B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)  |  | FY 2011  | FY 2012 | FY 2013 |
| on and over the immediate battlefield. These forces include vehicles, rotary wing, dismounted soldiers, munitions, sensors, and unmanned air vehicles (UAV). Functional software applications will use SRW enabled JTR sets over Internet Protocol (IP) capable networks and sub-networks. SRW will be interoperable with higher throughput, IP-based network waveforms, such as WNW. As applicable, these IP-based networking waveforms will enable information exchanges through the GIG to the soldier and provide entirely new capabilities for battlefield communications and information sharing. Platforms include: AMF and HMS.   |  |  |         |         |
| FY 2011 Accomplishments:<br>Continued Software In Service Support for the SRW waveform.   |  |  |         |         |
| Title: Mobile User Objective System (MUOS)  |  | 39.150   | 42.627  | 12.300  |
| Articles:   |  | 0  | 0       | 0       |
| Description: Mobile User Objective System (MUOS) will enable MUOS satellites to provide worldwide communication satellite coverage for DoD requirements. MUOS will provide functionality comparable to commercial mobile phone systems. MUOS offers secure streaming video, netted communications, and voice/data in real time to provide essential connectivity. JNED program will modify this waveform, making it compatible and certifiable to meet DoD security requirements plus enable porting to JTR sets. Platforms include: HMS and AMF.   |  |  |         |         |
| FY 2011 Accomplishments:<br>Continued development of MUOS v3.1.   |  |  |         |         |
| FY 2012 Plans:<br>Complete development of MUOS v3.1 in 4Q FY12. Begin Software In Service Support for the MUOS waveform.  |  |  |         |         |
| FY 2013 Plans:<br>Continue Software In Service Support for the MUOS waveform.   |  |  |         |         |
| Title: Joint Airborne Networking -Tactical Edge (JAN-TE)  |  | 2.250  | 3.000   | 3.000   |
| Articles:   |  | 0  | 0       | 0       |
| Description: Joint Airborne Networking - Tactical Edge (JAN-TE) will operate on JTR airborne sets to provide a networked tactical communications capability for tactical aircraft. JAN-TE will provide increased throughput, highly responsive connectivity, and ad hoc mobile networking for fighters engaged in air operations. This networking waveform is uniquely designed and engineered for highly maneuverable, fast moving aircraft for rapidly establishing networks to share high value data communications. USD(AT&L) directed that the development of the JAN-TE waveform be discontinued after Critical Design Review in October 2008, but allowed the Navy and/or Air Force to continue funding its development independently, if desired. In FY2011, the Navy began to budget and execute funding for continuation of JAN-TE's development. |  |  |         |         |

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| Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy  |  | DATE: February 2012                                    |             |             |
| APPROPRIATION/BUDGET ACTIVITY<br>1319: Research, Development, Test & Evaluation, Navy<br>BA 5: Development & Demonstration (SDD)   | R-1 ITEM NOMENCLATURE<br>PE 0604280N: JT Tact Radio Sys (JTRS) | PROJECT<br>3076: JTRS Network Enterprise Domain (JNED) |             |             |
| B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)   |  | FY 2011  | FY 2012     | FY 2013     |
| FY 2011 Accomplishments:<br>Continued development of the JAN-TE waveform.  |  |  |             |             |
| FY 2012 Plans:<br>Continue development of the JAN-TE waveform.   |  |  |             |             |
| FY 2013 Plans:<br>Continue development of the JAN-TE waveform.   |  |  |             |             |
| Title: Network Enterprise Services (NES)<br><br>Articles:<br><br>Description: Network Enterprise Services (NES): Includes development and acquisition of JTRS Network Enterprise Services (JNES) to include JTRS WNW Network Manager (JWNM), JTRS Enterprise Network Manager (JENM), Soldier Radio Waveform Network Manager (SRWNM), and Enterprise Network Services (ENS). Provide JNED technical support, including waveform development, systems engineering, spectrum allocation, system security engineering, problem resolution and support of Software Communications Architecture (SCA) activities.<br><br>FY 2011 Accomplishments:<br>Completed development and performed FQT for JENM Phase 1 in 4Q FY11 and began JENM Phase 2 enhancement effort. Completed development and performed FQT for SRWNM 1.0.2. in 2Q FY11. Completed development and performed FQT for ENS Phase 1 SoftINC in 3Q FY11 and ENS Phase 1 TDC in 3Q FY11. Began Software In Service Support for Network Services. Continued Software In Service Support for Network Managers.<br><br>FY 2012 Plans:<br>Continue to provide JNED technical support, including waveform development, systems engineering, spectrum allocation, system security engineering, problem resolution and support of Software Communications Architecture (SCA) activities. Complete development and perform FQT for JENM Phase 2 in 4Q FY12. Continue Software In Service Support for Network Services and Network Managers. Begin JENM Phase 3 effort.<br><br>FY 2013 Plans:<br>Complete development and perform FQT for JENM Phase 3 in 2Q FY13. Continue Software In Service Support for Network Services and Network Managers. |  | 39.275<br>0  | 25.691<br>0 | 13.242<br>0 |
| Title: Legacy Radio Waveforms<br><br>Articles:   |  | 31.707<br>0  | 22.669<br>0 | 30.535<br>0 |

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|--|---------|---------|-----------------|--|------------------|---------|---------|--|---------------------|---------------------|------------|
| Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy  |         |         |                 |  |                  |         |         |  | DATE: February 2012 |                     |            |
| APPROPRIATION/BUDGET ACTIVITY<br>1319: Research, Development, Test & Evaluation, Navy<br>BA 5: Development & Demonstration (SDD)   |         |         |                 | R-1 ITEM NOMENCLATURE<br>PE 0604280N: JT Tact Radio Sys (JTRS) |                  |         |         | PROJECT<br>3076: JTRS Network Enterprise Domain (JNED) |                     |                     |            |
| B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)   |         |         |                 |  |                  |         |         |  | FY 2011             | FY 2012             | FY 2013    |
| <b>Description:</b> Legacy Radio Waveforms: Includes the development and acquisition of legacy software and other related activities to support the legacy waveform development.<br><br><b>FY 2011 Accomplishments:</b><br>Continued to support waveform integration, test and evaluation to include hardware and Software Waveform Certification Process (SCA compliance testing) to meet program requirements. Continued JNED program management office support. Continued Software In Service Support for Legacy waveforms.<br><br><b>FY 2012 Plans:</b><br>Continue to support waveform integration, test and evaluation to include hardware and Software Waveform Certification Process (SCA compliance testing) to meet program requirements. Continue JNED program management office support. Continue Software In Service Support for Legacy waveforms.<br><br><b>FY 2013 Plans:</b><br>Continue to support waveform integration, test and evaluation to include hardware and Software Waveform Certification Process (SCA compliance testing) to meet program requirements. Continue JNED program management office support. Continue Software In Service Support for Legacy waveforms. |         |         |                 |  |                  |         |         |  |                     |                     |            |
|  |         |         |                 |  |                  |         |         |  |                     |                     |            |
|  |         |         |                 |  |                  |         |         |  |                     |                     |            |
|  |         |         |                 |  |                  |         |         |  |                     |                     |            |
| Accomplishments/Planned Programs Subtotals   |         |         |                 |  |                  |         |         |  | 114.511             | 93.987              | 59.077     |
| C. Other Program Funding Summary (\$ in Millions)  |         |         |                 |  |                  |         |         |  |                     |                     |            |
| Line Item  | FY 2011 | FY 2012 | FY 2013<br>Base | FY 2013<br>OCO   | FY 2013<br>Total | FY 2014 | FY 2015 | FY 2016  | FY 2017             | Cost To<br>Complete | Total Cost |
| • RDTEA/0604280A: JNED   | 0.000   | 0.000   | 0.000           | 0.000  | 0.000            | 23.621  | 19.909  | 21.788   | 26.849              | Continuing          | Continuing |
| • RDTEF/0604280F: JNED   | 0.628   | 0.000   | 2.594           | 0.000  | 2.594            | 23.901  | 20.209  | 22.705   | 22.529              | Continuing          | Continuing |
| • O&M, 4A6M: Service Wide Communications (JNED)  | 40.238  | 39.514  | 42.264          | 0.000  | 42.264           | 0.000   | 0.000   | 0.000  | 0.000               | Continuing          | Continuing |
| D. Acquisition Strategy  |         |         |                 |  |                  |         |         |  |                     |                     |            |
| JNED, formerly Joint Waveforms Program Office, is responsible for common core activities including developing and evolving the software-defined legacy and networking waveforms that operate on multiple hardware sets and in all operational environments that support network-centric operational warfare, as well as common networking services solutions. Waveform developments will be procured through full and open contract competitions, except when special circumstances support sole source acquisition. The JNED program is developing waveforms and Cryptographic Equipment applications (CEAs) for use within the JTRS community. The module developer will develop CEAs. The FY13 Budget supports continued development of waveforms, supporting software, and testing support, as well as the National Security Agency (NSA) evaluation of software crypto libraries.   |         |         |                 |  |                  |         |         |  |                     |                     |            |



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| Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy   |  | DATE: February 2012  |
| <b>APPROPRIATION/BUDGET ACTIVITY</b><br>1319: <i>Research, Development, Test &amp; Evaluation, Navy</i><br>BA 5: <i>Development &amp; Demonstration (SDD)</i>   | <b>R-1 ITEM NOMENCLATURE</b><br>PE 0604280N: <i>JT Tact Radio Sys (JTRS)</i> | <b>PROJECT</b><br>3076: <i>JTRS Network Enterprise Domain (JNED)</i> |
| <b>E. Performance Metrics</b><br><p>The five ACAT 1D JTRS programs are employing mature, software-defined radio technologies and developing more than 10 million lines of code as part of the Increment 1 baseline. Early on, a JTRS enterprise software metrics requirements effort established a baseline of standard software metrics which are monitored on each JTRS contract involving software development. Example metrics are: the number of requirements and the number of use cases required for design are estimated during the requirement and design phase and analyzed for trend-actual vs. scheduled; the software lines of code (SLOC) counts are used to determine progress during the coding phase; and the execution of test cases as well as trouble reports are monitored during the integration and test phase. Further, a software complexity product metric is collected which demonstrates the testability of the code and is an important criterion for software certification. These software metrics are used to quantify the quality and progress of each software product's development over time. Additionally, JNED employs Earned Value Metrics to monitor contract performance on its Prime Development Contracts.</p> |  |  |

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| Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy   |                        |                                   |                        |  |            |              |            |  |            | DATE: February 2012 |                  |            |                          |
|--|------------------------|-----------------------------------|------------------------|--|------------|--------------|------------|--|------------|---------------------|------------------|------------|--------------------------|
| APPROPRIATION/BUDGET ACTIVITY<br>1319: Research, Development, Test & Evaluation, Navy<br>BA 5: Development & Demonstration (SDD) |                        |                                   |                        | R-1 ITEM NOMENCLATURE<br>PE 0604280N: JT Tact Radio Sys (JTRS) |            |              |            | PROJECT<br>3076: JTRS Network Enterprise Domain (JNED) |            |                     |                  |            |                          |
| Product Development (\$ in Millions)   |                        |                                   |                        | FY 2012  |            | FY 2013 Base |            | FY 2013 OCO  |            | FY 2013 Total       |                  |            |                          |
| Cost Category Item   | Contract Method & Type | Performing Activity & Location    | Total Prior Years Cost | Cost   | Award Date | Cost         | Award Date | Cost   | Award Date | Cost                | Cost To Complete | Total Cost | Target Value of Contract |
| Architecture Development and Validation, Evolve and Provide CM Mgmt of SCA   | WR                     | Johns Hopkins:Laurel, MD          | 2.350                  | -  |            | -            |            | -  |            | -                   | Continuing       | Continuing | Continuing               |
| Wideband Networking Waveform (WNW)   | C/CPAF                 | BOEING:Huntington Beach, CA       | 104.101                | -  |            | -            |            | -  |            | -                   | 0.000            | 104.101    | 104.094                  |
| Soldier Radio Waveform (SRW)   | C/CPIF                 | ITT:Clifton, NJ                   | 91.531                 | -  |            | -            |            | -  |            | -                   | 0.000            | 91.531     | 91.470                   |
| Mobile User Objective System (MUOS)  | C/CPIF                 | Lockheed Martin:Sunnyvale, CA     | 132.971                | 40.439   | Nov 2011   | 11.993       | Dec 2012   | -  |            | 11.993              | 0.000            | 185.403    | 149.159                  |
| Joint Airborne Networking -Tactical Edge (JAN-TE) Development  | C/CPFF                 | Rockwell Collins:Cedar Rapids, IA | 41.464                 | 2.700  | Dec 2011   | 2.700        | Dec 2012   | -  |            | 2.700               | Continuing       | Continuing | Continuing               |
| Legacy Software-Defined Radio Waveforms  | Various                | Various:Various                   | 51.915                 | 1.405  | Feb 2012   | -            |            | -  |            | -                   | Continuing       | Continuing | Continuing               |
| Network Enterprise Services Development  | C/CPIF                 | ITT:Clifton, NJ                   | 60.124                 | -  |            | -            |            | -  |            | -                   | 0.000            | 60.124     | 61.072                   |
| Network Enterprise Services Development  | Various                | BOEING:Huntington Beach, CA       | 220.727                | 20.282   | Oct 2011   | 11.663       | Dec 2012   | -  |            | 11.663              | Continuing       | Continuing | Continuing               |
| Network Enterprise Services Development  | Various                | RCI:Cedar Rapids, IA              | 21.798                 | -  |            | -            |            | -  |            | -                   | 0.000            | 21.798     | 32.287                   |
| Post FQT / Software Sustainment  | Various                | ITT:Clifton, NJ                   | 1.938                  | -  |            | -            |            | -  |            | -                   | 0.000            | 1.938      | 6.148                    |
| Post FQT / Software Sustainment  | Various                | RCI:Cedar Rapids, IA              | 1.012                  | -  |            | -            |            | -  |            | -                   | 0.000            | 1.012      | 1.297                    |
| Post FQT / Software Sustainment  | Various                | BAE:Wayne, NJ                     | -                      | -  |            | 0.869        | Dec 2012   | -  |            | 0.869               | Continuing       | Continuing | Continuing               |
| Post FQT / Software Sustainment  | Various                | Boeing:Huntington Beach, CA       | 1.247                  | -  |            | 12.538       | Dec 2012   | -  |            | 12.538              | 0.000            | 13.785     | 9.991                    |
| Post FQT / Software Sustainment  | Various                | LANT:Charleston, SC               | 2.043                  | 0.024  | Oct 2011   | 1.708        | Dec 2012   | -  |            | 1.708               | 0.000            | 3.775      | 4.805                    |
| Joint Airborne Networking - Tactical Edge (JAN-TE) Post FQT/Software Sustainment   | C/CPFF                 | RCI:Cedar Rapids, IA              | -                      | -  |            | -            |            | -  |            | -                   | Continuing       | Continuing | Continuing               |

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|--|------------------------|---|------------------------|--|------------|--------------|------------|--|------------|---------------------|------------------|------------|--------------------------|
| Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy   |                        |   |                        |  |            |              |            |  |            | DATE: February 2012 |                  |            |                          |
| APPROPRIATION/BUDGET ACTIVITY<br>1319: Research, Development, Test & Evaluation, Navy<br>BA 5: Development & Demonstration (SDD) |                        |   |                        | R-1 ITEM NOMENCLATURE<br>PE 0604280N: JT Tact Radio Sys (JTRS) |            |              |            | PROJECT<br>3076: JTRS Network Enterprise Domain (JNED) |            |                     |                  |            |                          |
| Product Development (\$ in Millions)   |                        |   |                        | FY 2012  |            | FY 2013 Base |            | FY 2013 OCO  |            | FY 2013 Total       |                  |            |                          |
| Cost Category Item   | Contract Method & Type | Performing Activity & Location  | Total Prior Years Cost | Cost   | Award Date | Cost         | Award Date | Cost   | Award Date | Cost                | Cost To Complete | Total Cost | Target Value of Contract |
| Certification (Interim SCA Compliance Testing)   | MIPR                   | NSA:Ft. Meade, MD   | 16.004                 | 2.198  | Jan 2012   | 1.250        | Dec 2012   | -  |            | 1.250               | Continuing       | Continuing | Continuing               |
| Subtotal   |                        |   | 749.225                | 67.048   |            | 42.721       |            | -  |            | 42.721              |                  |            |                          |
| Support (\$ in Millions)   |                        |   |                        | FY 2012  |            | FY 2013 Base |            | FY 2013 OCO  |            | FY 2013 Total       |                  |            |                          |
| Cost Category Item   | Contract Method & Type | Performing Activity & Location  | Total Prior Years Cost | Cost   | Award Date | Cost         | Award Date | Cost   | Award Date | Cost                | Cost To Complete | Total Cost | Target Value of Contract |
| FFRDC - MITRE Technical Support  | MIPR                   | MITRE:Ft. Monmouth, NJ  | 10.497                 | 0.360  | Oct 2011   | -            |            | -  |            | -                   | Continuing       | Continuing | Continuing               |
| Subtotal   |                        |   | 10.497                 | 0.360  |            | -            |            | -  |            | -                   |                  |            |                          |
| Management Services (\$ in Millions)   |                        |   |                        | FY 2012  |            | FY 2013 Base |            | FY 2013 OCO  |            | FY 2013 Total       |                  |            |                          |
| Cost Category Item   | Contract Method & Type | Performing Activity & Location  | Total Prior Years Cost | Cost   | Award Date | Cost         | Award Date | Cost   | Award Date | Cost                | Cost To Complete | Total Cost | Target Value of Contract |
| Program Management Support   | Various                | SRA / SSC PAC / SSC LANT:San Diego, CA / San Diego, CA / Charleston, SC | 226.140                | 26.279   | Dec 2011   | 16.056       | Dec 2012   | -  |            | 16.056              | Continuing       | Continuing | Continuing               |
| Joint Airborne Networking - Tactical Edge (JAN-TE) PMO   | C/CPFF                 | RCI:Cedar Rapids, IA  | -                      | 0.300  | Dec 2011   | 0.300        | Dec 2012   | -  |            | 0.300               | Continuing       | Continuing | Continuing               |
| Acquisition Workforce Fund   | C/FP                   | Not Specified:Not Specified   | 1.030                  | -  |            | -            |            | -  |            | -                   | 0.000            | 1.030      | 1.030                    |
| Subtotal   |                        |   | 227.170                | 26.579   |            | 16.356       |            | -  |            | 16.356              |                  |            |                          |
|  |                        |   | Total Prior Years Cost | FY 2012  |            | FY 2013 Base |            | FY 2013 OCO  |            | FY 2013 Total       | Cost To Complete | Total Cost | Target Value of Contract |
| Project Cost Totals  |                        |   | 986.892                | 93.987   |            | 59.077       |            | -  |            | 59.077              |                  |            |                          |
|  |                        |   |                        |  |            |              |            |  |            |                     |                  |            |                          |

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|--|------------------------|---------|--|-------------|---------------|--|---------------------|--------------------------|--|
| Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy   |                        |         |  |             |               |  | DATE: February 2012 |                          |  |
| APPROPRIATION/BUDGET ACTIVITY<br>1319: Research, Development, Test & Evaluation, Navy<br>BA 5: Development & Demonstration (SDD)   |                        |         | R-1 ITEM NOMENCLATURE<br>PE 0604280N: JT Tact Radio Sys (JTRS) |             |               | PROJECT<br>3076: JTRS Network Enterprise Domain (JNED) |                     |                          |  |
|  | Total Prior Years Cost | FY 2012 | FY 2013 Base   | FY 2013 OCO | FY 2013 Total | Cost To Complete                                       | Total Cost          | Target Value of Contract |  |
| Remarks<br>Remarks: PYs column only reflects prior year Navy JNED costs for FY07-FY11. Prior to FY07, funding for JNED resided in Army PE 0604280A, Project 162. In FY12 & FY13, Project No. 3076 represents the total JTRS NED RDT&E budget. In FY14-17, Project No. 3076 represents the Navy share of the total JTRS NED RDT&E budget. As part of the JTRS joint program acquisition strategy, each Military Department (MILDEP) budgets for a portion of the total program, therefore in FY14-17 a portion of JTRS development is represented in this PE, in Army PE 0604280A, and in Air Force PE 0604280F. Software Sustainment funds to be transferred from RDT&E to O&M,N in fiscal year of execution as part of the JTRS joint program acquisition strategy. |                        |         |  |             |               |  |                     |                          |  |

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| Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy  |   | DATE: February 2012   |
| APPROPRIATION/BUDGET ACTIVITY<br>1319: <i>Research, Development, Test &amp; Evaluation, Navy</i><br>BA 5: <i>Development &amp; Demonstration (SDD)</i> | R-1 ITEM NOMENCLATURE<br>PE 0604280N: <i>JT Tact Radio Sys (JTRS)</i> | PROJECT<br>3076: <i>JTRS Network Enterprise Domain (JNED)</i> |
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| <b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2013 Navy   |  |  | <b>DATE:</b> February 2012 |
| <b>APPROPRIATION/BUDGET ACTIVITY</b><br>1319: <i>Research, Development, Test &amp; Evaluation, Navy</i><br>BA 5: <i>Development &amp; Demonstration (SDD)</i> | <b>R-1 ITEM NOMENCLATURE</b><br>PE 0604280N: <i>JT Tact Radio Sys (JTRS)</i> | <b>PROJECT</b><br>3076: <i>JTRS Network Enterprise Domain (JNED)</i> |                            |

Schedule Details

| Events by Sub Project                           | Start   |      | End     |      |
|---|---------|------|---------|------|
|   | Quarter | Year | Quarter | Year |
| <b><i>Proj 3076</i></b>                         |         |      |         |      |
| MUOS 3.1  | 4       | 2012 | 4       | 2012 |
| JENM Phase I                                    | 4       | 2011 | 4       | 2011 |
| JENM Phase II                                   | 4       | 2012 | 4       | 2012 |
| JENM Phase III                                  | 2       | 2013 | 2       | 2013 |
| SRWNM 1.0.2                                     | 2       | 2011 | 2       | 2011 |
| ENS Phase 1 SoftINC                             | 3       | 2011 | 3       | 2011 |
| ENS Phase 1 TDC                                 | 3       | 2011 | 3       | 2011 |
| Software In Service Support (SwISS) Update I    | 3       | 2011 | 3       | 2011 |
| Software In Service Support (SwISS) Update II   | 3       | 2013 | 3       | 2013 |
| Software In Service Support (SwISS) Update III  | 3       | 2015 | 3       | 2015 |
| Software In Service Support (SwISS) Update IIII | 3       | 2017 | 3       | 2017 |

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|--|---------|---------|--------------|--|---------------|---------|---------|--|---------------------|------------------|------------|
| Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy  |         |         |              |  |               |         |         |  | DATE: February 2012 |                  |            |
| APPROPRIATION/BUDGET ACTIVITY<br>1319: Research, Development, Test & Evaluation, Navy<br>BA 5: Development & Demonstration (SDD)   |         |         |              | R-1 ITEM NOMENCLATURE<br>PE 0604280N: JT Tact Radio Sys (JTRS) |               |         |         | PROJECT<br>3078: Digital Modular Radio     |                     |                  |            |
| COST (\$ in Millions)  | FY 2011 | FY 2012 | FY 2013 Base | FY 2013 OCO  | FY 2013 Total | FY 2014 | FY 2015 | FY 2016                                    | FY 2017             | Cost To Complete | Total Cost |
| 3078: Digital Modular Radio  | -       | 4.500   | 3.767        | -  | 3.767         | -       | -       | -  | -                   | 0.000            | 8.267      |
| Quantity of RDT&E Articles   | 0       | 0       | 0            | 0  | 0             | 0       | 0       | 0  | 0                   |                  |            |
| Note<br>Digital Modular Radio previously funded under Project 3073.  |         |         |              |  |               |         |         |  |                     |                  |            |
| A. Mission Description and Budget Item Justification<br>The Digital Modular Radio (DMR), AN/USC-61(C), is the first software defined radio to have become a communications system standard for the U.S. Military. The compact, multi-channel DMR provides multiple waveforms and multi-level information security for voice and data communications. Digital Modular Radios currently operate aboard U.S. Navy surface and subsurface vessels, fixed-sites and other Department of Defense communication platforms using frequencies ranging from 2 MHz to 2 GHz. Certified to pass secure voice and data at Multiple Independent Levels of Security (MILS) over High Frequency (HF), Very High Frequency (VHF), Ultra High Frequency (UHF), and Satellite Communications (SATCOM) channels, the DMR system was developed to the U.S. Navy's specifications and meets all the stringent environmental, Electromagnetic Interference (EMI) and performance requirements for use in the U.S. Fleet.<br>This task is to develop Integrated Waveform (IW) capability for the Digital Modular Radio (DMR) in accordance with Military Standards 188-181,2,3. IW uses a Time Division Multiple Access (TDMA) communication system in an attempt to improve satellite bandwidth utilization over legacy SATCOM waveforms. This enables demand assigned services on UHF SATCOM networks to support new applications that require better performance and higher channel throughput. |         |         |              |  |               |         |         |  |                     |                  |            |
| B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)   |         |         |              |  |               |         |         | FY 2011                                    | FY 2012             | FY 2013          |            |
| Title: DMR<br><br><div>Articles:</div><br><br><b>FY 2012 Plans:</b><br>FY12 funding is for DMR Integrated Waveform (IW) capability development and testing of software version 6.5.1.<br><br><b>FY 2013 Plans:</b><br>FY13 funding is to complete DMR Integrated Waveform (IW) capability development and testing for software version 6.5.1.  |         |         |              |  |               |         |         | -  | 4.500<br>0          | 3.767<br>0       |            |
|  |         |         |              |  |               |         |         |  |                     |                  |            |
|  |         |         |              |  |               |         |         | Accomplishments/Planned Programs Subtotals |                     |                  |            |
| C. Other Program Funding Summary (\$ in Millions)  |         |         |              |  |               |         |         |  |                     |                  |            |
| Line Item  | FY 2011 | FY 2012 | FY 2013 Base | FY 2013 OCO  | FY 2013 Total | FY 2014 | FY 2015 | FY 2016                                    | FY 2017             | Cost To Complete | Total Cost |
| • OPN/3010: Ship Tactical Communications   | 0.000   | 0.000   | 0.000        | 0.000  | 0.000         | 4.018   | 3.988   | 6.065                                      | 6.222               | 0.000            | 20.293     |

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| <b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2013 Navy  |  | <b>DATE:</b> February 2012                           |
| <b>APPROPRIATION/BUDGET ACTIVITY</b><br>1319: <i>Research, Development, Test &amp; Evaluation, Navy</i><br>BA 5: <i>Development &amp; Demonstration (SDD)</i>   | <b>R-1 ITEM NOMENCLATURE</b><br>PE 0604280N: <i>JT Tact Radio Sys (JTRS)</i> | <b>PROJECT</b><br>3078: <i>Digital Modular Radio</i> |
| <b><u>D. Acquisition Strategy</u></b> <p>As per DMR's Acquisition Strategy / Acquisition Plan, Section 1.2:<br/>The evolutionary acquisition strategy for the DMR program commenced in November 1996 with a Sources Sought Synopses being released in the Commerce Business Daily (CBD) that resulted in the Government receiving responses from industry indicating that sufficient technology and competition existed to satisfy the U.S. Navy's requirements.</p> <p>After the evaluation of industry proposals by the Space and Naval Warfare Systems Command (SPAWAR) Technical Evaluation Board (TEB), two multiple award FFP/IDIQ contracts were awarded. One contract was awarded to Raytheon E-Systems Incorporated and the other to Motorola Wireless Information Transfer Systems (now General Dynamics C4 Systems (GDC4S)).</p> <p>Two delivery orders, one to each vendor, were issued to deliver four Service Test Models (STMs) from each vendor. The vendor with the superior design, to be determined after down select testing, would be issued an order for production DMRs. Extensive Government laboratory Developmental Testing (DT) was conducted on the STMs to determine which vendor proposed the superior DMR product. The Government concluded that, based on the results from the DT, the Motorola DMR was the best value for the Navy and an order for LRIP I DMR production quantities was issued to Motorola.</p> <p>Due to the fact that GDC4S owns the technical data rights to the DMR, they are the only contractor with the unique capabilities and technical knowhow to perform the required IW upgrade work. This scope will be issued to GDC4S as an option under the sole source contract, N00039-10-C-0069, as authorized by SPAWAR J&amp;A No. 16,351, signed 5 January 2010 by the Assistant Secretary of the Navy (ASN), Research, Development and Acquisition (RD&amp;A).</p> <b><u>E. Performance Metrics</u></b> <p>The dollar threshold for Earned Value Management (EVM) has not been reached. Therefore, contractor performance will be managed through monthly program review meetings and contract milestones.</p> |  |  |



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| <b>Exhibit R-3, RDT&amp;E Project Cost Analysis:</b> PB 2013 Navy   |  |  |  |  |  |  |  |  |  |  | <b>DATE:</b> February 2012 |  |  |
| <b>APPROPRIATION/BUDGET ACTIVITY</b><br>1319: <i>Research, Development, Test &amp; Evaluation, Navy</i><br>BA 5: <i>Development &amp; Demonstration (SDD)</i> |  |  |  | <b>R-1 ITEM NOMENCLATURE</b><br>PE 0604280N: <i>JT Tact Radio Sys (JTRS)</i> |  |  |  | <b>PROJECT</b><br>3078: <i>Digital Modular Radio</i> |  |  |                            |  |  |

  

| <b>Product Development (\$ in Millions)</b> |                                   |   |                               | <b>FY 2012</b> |                   | <b>FY 2013 Base</b> |                   | <b>FY 2013 OCO</b> |                   | <b>FY 2013 Total</b> |                         |                   |                                 |
|---|-----------------------------------|---|-------------------------------|----------------|-------------------|---------------------|-------------------|--------------------|-------------------|----------------------|-------------------------|-------------------|---------------------------------|
| <b>Cost Category Item</b>                   | <b>Contract Method &amp; Type</b> | <b>Performing Activity &amp; Location</b> | <b>Total Prior Years Cost</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> |
| IW Developement                             | C/CPIF                            | GDC4S:Scottsdale, AZ                      | -                             | 4.500          | Nov 2011          | 3.767               | Nov 2012          | -                  |                   | 3.767                | 0.000                   | 8.267             |                                 |
| <b>Subtotal</b>                             |                                   |   | -                             | 4.500          |                   | 3.767               |                   | -                  |                   | 3.767                | 0.000                   | 8.267             |                                 |

  

|                            | <b>Total Prior Years Cost</b> | <b>FY 2012</b> |  | <b>FY 2013 Base</b> |  | <b>FY 2013 OCO</b> |  | <b>FY 2013 Total</b> | <b>Cost To Complete</b> | <b>Total Cost</b> | <b>Target Value of Contract</b> |
|----------------------------|-------------------------------|----------------|--|---------------------|--|--------------------|--|----------------------|-------------------------|-------------------|---------------------------------|
| <b>Project Cost Totals</b> | -                             | 4.500          |  | 3.767               |  | -                  |  | 3.767                | 0.000                   | 8.267             |                                 |

  

**Remarks**

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| Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy  |   | DATE: February 2012                           |
| APPROPRIATION/BUDGET ACTIVITY<br>1319: <i>Research, Development, Test &amp; Evaluation, Navy</i><br>BA 5: <i>Development &amp; Demonstration (SDD)</i> | R-1 ITEM NOMENCLATURE<br>PE 0604280N: <i>JT Tact Radio Sys (JTRS)</i> | PROJECT<br>3078: <i>Digital Modular Radio</i> |
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| <b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2013 Navy   |  |  | <b>DATE:</b> February 2012 |
| <b>APPROPRIATION/BUDGET ACTIVITY</b><br>1319: <i>Research, Development, Test &amp; Evaluation, Navy</i><br>BA 5: <i>Development &amp; Demonstration (SDD)</i> | <b>R-1 ITEM NOMENCLATURE</b><br>PE 0604280N: <i>JT Tact Radio Sys (JTRS)</i> | <b>PROJECT</b><br>3078: <i>Digital Modular Radio</i> |                            |

Schedule Details

| Events by Sub Project   | Start   |      | End     |      |
|-------------------------|---------|------|---------|------|
|                         | Quarter | Year | Quarter | Year |
| <b><i>Proj 3078</i></b> |         |      |         |      |
| IW SW 6.5.1 Development | 1       | 2012 | 3       | 2014 |
| ITU 6.5.1 JTIC Cert     | 3       | 2014 | 4       | 2014 |
| ITU 6.5.1 NSA Cert      | 2       | 2014 | 3       | 2014 |

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**Exhibit R-2A, RDT&E Project Justification:** PB 2013 Navy **DATE:** February 2012

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| <b>APPROPRIATION/BUDGET ACTIVITY</b><br>1319: <i>Research, Development, Test &amp; Evaluation, Navy</i><br>BA 5: <i>Development &amp; Demonstration (SDD)</i> | <b>R-1 ITEM NOMENCLATURE</b><br>PE 0604280N: <i>JT Tact Radio Sys (JTRS)</i> | <b>PROJECT</b><br>9999: <i>Congressional Adds</i> |
|---|--|---|

| COST (\$ in Millions)           | FY 2011 | FY 2012 | FY 2013 Base | FY 2013 OCO | FY 2013 Total | FY 2014 | FY 2015 | FY 2016 | FY 2017 | Cost To Complete | Total Cost |
|---------------------------------|---------|---------|--------------|-------------|---------------|---------|---------|---------|---------|------------------|------------|
| 9999: <i>Congressional Adds</i> | -       | 51.000  | -            | -           | -             | -       | -       | -       | -       | 0.000            | 51.000     |
| Quantity of RDT&E Articles      | 0       | 0       | 0            | 0           | 0             | 0       | 0       | 0       | 0       |                  |            |

## A. Mission Description and Budget Item Justification

JTRS is the Department of Defense (DoD) family of common software-defined programmable radios that will form the foundation of information radio frequency transmission for Joint Vision 2020. The JTRS family of products will be multifunctional, multiband, multimode, network capable, capable of providing communications through a range of low probability of intercept, low probability of detection and anti-jam waveforms. JTRS products will provide transformational communication capabilities for the warfighter. JTRS is intended to support communications readiness and mission success, in the 2 Megahertz (MHz) to 2 Gigahertz (GHz) operating frequency range, by providing military commanders with the ability to command, control and communicate with their forces via secure voice/video/data media forms. JTRS products are hardware-configurable and software-programmable radio systems that provide increased interoperability, flexibility and adaptability to support varied mission requirements.

Following a Critical Nunn McCurdy breach the USD AT&L conducted a reassessment of the GMR program. Conclusions of the reassessment did not support certification of the program, thereby cancelling the program. In accordance with the ADM dated 14 October 2011, the GMR program office is directed to conduct an orderly shutdown of the existing GMR System Development and Demonstration contract which expires on 30 March 2012.

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

|  | FY 2011 | FY 2012 |
|--|---------|---------|
| <b>Congressional Add:</b> GMR JTRS (Cong)  | -       | 51.000  |
| <b>FY 2012 Plans:</b> \$13.268M is to conduct close out of the Software Design and Development (SDD) contract. Activities include: identifying critical deliverables such as hardware, design specifications, instrumentation, modeling tools, simulators, etc. for delivery to the Government. Continue support to the GMR PMO (travel, training, payroll, etc.). Per USD(AT&L) memo dated 14 October 2011, \$37.732M will be used to execute a Non-Developmental Item (NDI) strategy for a mid-tier networking capability. |         |         |
| <b>Congressional Adds Subtotals</b>  | -       | 51.000  |

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

N/A

## D. Acquisition Strategy

This is Congressional transfer funding associated with Project 3074, GMR JTRS. Acquisition strategy is same as that project. Following a Critical Nunn McCurdy breach the USD AT&L conducted a reassessment of the GMR program. Conclusions of the reassessment did not support certification of the program, thereby

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| Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy   |  | DATE: February 2012                               |
| <b>APPROPRIATION/BUDGET ACTIVITY</b><br>1319: <i>Research, Development, Test &amp; Evaluation, Navy</i><br>BA 5: <i>Development &amp; Demonstration (SDD)</i>   | <b>R-1 ITEM NOMENCLATURE</b><br>PE 0604280N: <i>JT Tact Radio Sys (JTRS)</i> | <b>PROJECT</b><br>9999: <i>Congressional Adds</i> |
| cancelling the program. In accordance with the ADM dated 14 October 2011, the GMR program office is directed to conduct an orderly shutdown of the existing GMR System Development and Demonstration contract which expires on 30 March 2012.   |  |   |
| <b>E. Performance Metrics</b><br>This is Congressional transfer funding associated with Project 3074, GMR JTRS. Performane metrics are the same as that project. Following a Critical Nunn McCurdy breach the USD AT&L conducted a reassessment of the GMR program. Conclusions of the reassessment did not support certification of the program, thereby cancelling the program. In accordance with the ADM dated 14 October 2011, the GMR program office is directed to conduct an orderly shutdown of the existing GMR System Development and Demonstration contract which expires on 30 March 2012. |  |   |

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| <b>Exhibit R-3, RDT&amp;E Project Cost Analysis:</b> PB 2013 Navy   |  |  |  |  |  |  |  |   |  |  | <b>DATE:</b> February 2012 |  |  |  |
| <b>APPROPRIATION/BUDGET ACTIVITY</b><br>1319: <i>Research, Development, Test &amp; Evaluation, Navy</i><br>BA 5: <i>Development &amp; Demonstration (SDD)</i> |  |  |  | <b>R-1 ITEM NOMENCLATURE</b><br>PE 0604280N: <i>JT Tact Radio Sys (JTRS)</i> |  |  |  | <b>PROJECT</b><br>9999: <i>Congressional Adds</i> |  |  |                            |  |  |  |

  

| <b>Product Development (\$ in Millions)</b> |                                   |   |                               | <b>FY 2012</b> |                   | <b>FY 2013 Base</b> |                   | <b>FY 2013 OCO</b> |                   | <b>FY 2013 Total</b> |                         |                   |                                 |
|---|-----------------------------------|---|-------------------------------|----------------|-------------------|---------------------|-------------------|--------------------|-------------------|----------------------|-------------------------|-------------------|---------------------------------|
| <b>Cost Category Item</b>                   | <b>Contract Method &amp; Type</b> | <b>Performing Activity &amp; Location</b> | <b>Total Prior Years Cost</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> |
| JTRS GMR SDD                                | C/CPAF                            | BOEING:Huntington Beach, CA               | -                             | 13.268         | Mar 2012          | -                   |                   | -                  |                   | -                    | 0.000                   | 13.268            | 13.268                          |
| <b>Subtotal</b>                             |                                   |   | -                             | 13.268         |                   | -                   |                   | -                  |                   | -                    | 0.000                   | 13.268            | 13.268                          |

  

| <b>Test and Evaluation (\$ in Millions)</b> |                                   |   |                               | <b>FY 2012</b> |                   | <b>FY 2013 Base</b> |                   | <b>FY 2013 OCO</b> |                   | <b>FY 2013 Total</b> |                         |                   |                                 |
|---|-----------------------------------|---|-------------------------------|----------------|-------------------|---------------------|-------------------|--------------------|-------------------|----------------------|-------------------------|-------------------|---------------------------------|
| <b>Cost Category Item</b>                   | <b>Contract Method &amp; Type</b> | <b>Performing Activity &amp; Location</b> | <b>Total Prior Years Cost</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> |
| Test Support                                | MIPR                              | PEO C3T:Aberdeen, MD                      | -                             | 37.732         | Mar 2012          | -                   |                   | -                  |                   | -                    | 0.000                   | 37.732            | 37.732                          |
| <b>Subtotal</b>                             |                                   |   | -                             | 37.732         |                   | -                   |                   | -                  |                   | -                    | 0.000                   | 37.732            | 37.732                          |

  

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|---|--|--|--|--|--|--|--|--|--|--|--|--|--|
| <b>Remarks</b><br>Per USD(AT&L) memo dated 14 October 2011, \$37.732M will be used to execute a Non-Developmental Item (NDI) strategy for a mid-tier networking capability. |  |  |  |  |  |  |  |  |  |  |  |  |  |
|---|--|--|--|--|--|--|--|--|--|--|--|--|--|

  

|                            | <b>Total Prior Years Cost</b> | <b>FY 2012</b> |  | <b>FY 2013 Base</b> |  | <b>FY 2013 OCO</b> |  | <b>FY 2013 Total</b> | <b>Cost To Complete</b> | <b>Total Cost</b> | <b>Target Value of Contract</b> |
|----------------------------|-------------------------------|----------------|--|---------------------|--|--------------------|--|----------------------|-------------------------|-------------------|---------------------------------|
| <b>Project Cost Totals</b> | -                             | 51.000         |  | -                   |  | -                  |  | -                    | 0.000                   | 51.000            | 51.000                          |

  

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| <b>Remarks</b> |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy  |   | DATE: February 2012                        |
| APPROPRIATION/BUDGET ACTIVITY<br>1319: <i>Research, Development, Test &amp; Evaluation, Navy</i><br>BA 5: <i>Development &amp; Demonstration (SDD)</i> | R-1 ITEM NOMENCLATURE<br>PE 0604280N: <i>JT Tact Radio Sys (JTRS)</i> | PROJECT<br>9999: <i>Congressional Adds</i> |
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| <b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2013 Navy   |  |   | <b>DATE:</b> February 2012 |
| <b>APPROPRIATION/BUDGET ACTIVITY</b><br>1319: <i>Research, Development, Test &amp; Evaluation, Navy</i><br>BA 5: <i>Development &amp; Demonstration (SDD)</i> | <b>R-1 ITEM NOMENCLATURE</b><br>PE 0604280N: <i>JT Tact Radio Sys (JTRS)</i> | <b>PROJECT</b><br>9999: <i>Congressional Adds</i> |                            |

Schedule Details

| Events by Sub Project   | Start   |      | End     |      |
|-------------------------|---------|------|---------|------|
|                         | Quarter | Year | Quarter | Year |
| <b><i>Proj 9999</i></b> |         |      |         |      |
| Contract Closeout       | 2       | 2012 | 2       | 2012 |