| Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Navy | | | | | | | | | | | | Date: February 2015 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Appropriation/Budget Activity<br>1319: *Research, Development, Test & Evaluation, Navy I* BA 5: *System Development & Demonstration (SDD)* | | | | | R-1 Program Element (Number/Name)<br>PE 0604280N *I JT Tact Radio Sys (JTRS)* | | | | | | | |
| **COST ($ in Millions)** | **Prior Years** | **FY 2014** | **FY 2015** | **FY 2016 Base** | **FY 2016 OCO** | **FY 2016 Total** | **FY 2017** | **FY 2018** | **FY 2019** | **FY 2020** | **Cost To Complete** | **Total Cost** |
| Total Program Element | 1,462.794 | 3.909 | 6.945 | 25.071 | - | 25.071 | 2.512 | 0.519 | - | - | - | 1,501.750 |
| 3073: *AMF JTRS* | 1,454.941 | 3.909 | - | - | - | - | - | - | - | - | - | 1,458.850 |
| 3078: *Digital Modular Radio* | 7.853 | - | 6.945 | 25.071 | - | 25.071 | 2.512 | 0.519 | - | - | - | 42.900 |
| **Program MDAP/MAIS Code:**<br>**Project MDAP/MAIS Code(s):** 421 | | | | | | | | | | | | |

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

Digital Modular Radio (DMR) with Integrated Waveform (IW) and Mobile User Objective System (MUOS)capable hardware is the Navy's technical solution for the IW/ MUOS requirement. The 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. DMR 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. This task is to continue the development/integration of the IW and MUOS waveforms for the DMR in accordance with Military Standards 188-181,2,3, and the High Frequency Distribution Amplifier Group (HFDAG). 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. The MUOS waveform will enable MUOS satellites to provide worldwide communication satellite coverage for DoD requirements. MUOS will provide functionality comparable to commercial mobile phone systems. HFDAG is a follow-on HF solution to fulfill the HF communication capability from 2MHz - 30MHz (transmit) and 2MHz - 30MHz (receive) with ALE, Link 11, FSK, USB, LSB and ISB modes of operation for Navy Modernization Process (NMP) and platforms. HFDAG will utilize the existing DMR as the exciter/receiver. The budget in FY16 and FY17 also provides funding to DMR for HF Automatic Link Establishment (ALE) Generation 3 development efforts.

| Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Navy | | | | | Date: February 2015 |
|---|---|---|---|---|---|
| Appropriation/Budget Activity<br>1319: *Research, Development, Test & Evaluation, Navy I* BA 5: *System Development & Demonstration (SDD)* | | | R-1 Program Element (Number/Name)<br>PE 0604280N *I JT Tact Radio Sys (JTRS)* | | |
| **B. Program Change Summary ($ in Millions)** | **FY 2014** | **FY 2015** | **FY 2016 Base** | **FY 2016 OCO** | **FY 2016 Total** |
| Previous President's Budget | 3.259 | 7.106 | 6.183 | - | 6.183 |
| Current President's Budget | 3.909 | 6.945 | 25.071 | - | 25.071 |
| Total Adjustments | 0.650 | -0.161 | 18.888 | - | 18.888 |
| • Congressional General Reductions | - | -0.161 | | | |
| • Congressional Directed Reductions | - | - | | | |
| • Congressional Rescissions | - | - | | | |
| • Congressional Adds | - | - | | | |
| • Congressional Directed Transfers | - | - | | | |
| • Reprogrammings | 0.650 | - | | | |
| • SBIR/STTR Transfer | - | - | | | |
| • Rate/Misc Adjustments | - | - | 18.888 | - | 18.888 |

**Change Summary Explanation**

The FY 2016 funding request was reduced by $1.3 million to account for the availability of prior year execution balances.

| Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy | | | | | | | | | Date: February 2015 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Appropriation/Budget Activity<br>1319 / 5 | | | | | R-1 Program Element (Number/Name)<br>PE 0604280N / *JT Tact Radio Sys (JTRS)* | | | | Project (Number/Name)<br>3073 / *AMF JTRS* | | | |
| **COST ($ in Millions)** | **Prior Years** | **FY 2014** | **FY 2015** | **FY 2016 Base** | **FY 2016 OCO** | **FY 2016 Total** | **FY 2017** | **FY 2018** | **FY 2019** | **FY 2020** | **Cost To Complete** | **Total Cost** |
| 3073: *AMF JTRS* | 1,454.941 | 3.909 | - | - | - | - | - | - | - | - | - | 1,458.850 |
| Quantity of RDT&E Articles | | - | - | - | - | - | - | - | - | - | | |

**Project MDAP/MAIS Code:** 421

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

Digital Modular Radio (DMR) with Integrated Waveform (IW) and Mobile User Objective System (MUOS)capable hardware is the Navy's technical solution for the IW/ MUOS requirement. The 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. DMR 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 Frequecy (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. This task is to continue the development/integration of the Integrated Waveform (IW) and the Mobile User Objective System (MUOS) waveforms 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. The MUOS waveform will enable MUOS satellites to provide worldwide communication satellite coverage for DoD requirements. MUOS will provide functionality comparable to commercial mobile phone systems.

| B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each) | FY 2014 | FY 2015 | FY 2016 Base | FY 2016 OCO | FY 2016 Total |
|---|---|---|---|---|---|
| ***Title:*** DMR Mobile Users Objective System (MUOS) | 3.909 | - | - | - | - |
| ***Articles:*** | - | - | - | - | - |
| ***Description:*** Formerly included in JTRS AMF for Navy integration and porting efforts. | | | | | |
| ***FY 2014 Accomplishments:***<br>Continued Digital Modular Radio (DMR) Integrated Waveform (IW)/Mobile User Objective System (MUOS) development/integration efforts to include testing and logistics. Supported management and system engineering efforts towards completing Design Review (DR), Software Design Review, Critical Design Review, and Integrated Baseline Review (IBR). Continued effort on development of technical solution for Navy's MUOS requirement including integration and porting the MUOS waveform into the DMR. Completed High Frequency Distribution Amplifier Group (HFDAG) development and continued HFDAG system test and evaluation efforts. | | | | | |
| ***FY 2015 Plans:*** | | | | | |

| Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy | | Date: February 2015 |
|---|---|---|
| **Appropriation/Budget Activity**<br>1319 / 5 | **R-1 Program Element (Number/Name)**<br>PE 0604280N / *JT Tact Radio Sys (JTRS)* | **Project (Number/Name)**<br>3073 / *AMF JTRS* |

| B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each) | FY 2014 | FY 2015 | FY 2016 Base | FY 2016 OCO | FY 2016 Total |
|---|---|---|---|---|---|
| N/A<br>***FY 2016 Base Plans:***<br>N/A<br>***FY 2016 OCO Plans:***<br>N/A | | | | | |
| **Accomplishments/Planned Programs Subtotals** | 3.909 | - | - | - | - |

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

N/A

**Remarks**

**D. Acquisition Strategy**

AMF JTRS underwent a program restructure in accordance with Milestone Decision Authority (MDA) direction.

**E. Performance Metrics**

Acquisition Decision Memorandum (ADM) received on 11 July 2012 directing a restructure of the AMF JTRS Program. Performance metrics will be evaluated after the program Acquisition Strategy has been finalized and the new Acquisition Program Baseline approved.

| Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Navy | | | Date: February 2015 |
|---|---|---|---|
| Appropriation/Budget Activity<br>1319 / 5 | R-1 Program Element (Number/Name)<br>PE 0604280N / *JT Tact Radio Sys (JTRS)* | Project (Number/Name)<br>3073 / *AMF JTRS* | |

**Product Development ($ in Millions)**

| Cost Category Item | Contract Method & Type | Performing Activity & Location | Prior Years | FY 2014 Cost | FY 2014 Award Date | FY 2015 Cost | FY 2015 Award Date | FY 2016 Base Cost | FY 2016 Base Award Date | FY 2016 OCO Cost | FY 2016 OCO Award Date | FY 2016 Total Cost | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MIDS JTRS HW/SW (Phase 2A/2B Core) | C/CPIF | DLS : Cedar Rapids, IA | 8.563 | - | | - | | - | | - | | - | - | 8.563 | - |
| MIDS JTRS HW/SW (Phase 2A/2B Core) | C/CPIF | ViaSat Inc : Carlsbad, CA | 4.078 | - | | - | | - | | - | | - | - | 4.078 | - |
| AMF JTRS Development-JTR System (Pre-SDD) | C/CPFF | The Boeing Co : Anaheim, CA | 45.603 | - | | - | | - | | - | | - | - | 45.603 | - |
| AMF JTRS Development-JTR System (Pre-SDD) | C/CPFF | Lockheed Martin : Manassas, VA | 45.335 | - | | - | | - | | - | | - | - | 45.335 | - |
| AMF JTRS Development-JTR SET (SDD) | C/CPIF | Lockheed Martin : Manassas, VA | 890.132 | - | | - | | - | | - | | - | - | 890.132 | - |
| AMF JTRS- Systems Engineering | WR | Various : Various | 125.561 | - | | - | | - | | - | | - | - | 125.561 | - |
| AMF JTRS- NDI Integration and Certification | TBD | Various : Various | 34.721 | - | | - | | - | | - | | - | - | 34.721 | - |
| Systems Engineering-JTRS Implementation-Navy Unique | WR | Various : Various | 15.634 | - | | - | | - | | - | | - | - | 15.634 | - |
| DMR HF DAG Power Amplifier H/W Development | C/FFP | GDDS : Various | 4.962 | - | | - | | - | | - | | - | - | 4.962 | - |
| Systems Engineering- JTF WARNET | WR | Various : Various | 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 | - | | - | | - | | - | | - | - | - | - |
| DMR HF DAG- System Integration | WR | SSC PAC : San Diego, CA | 0.545 | - | | - | | - | | - | | - | - | 0.545 | - |
| DMR HF DAG- Design | WR | SSC PAC : San Diego, CA | 2.185 | - | | - | | - | | - | | - | - | 2.185 | - |
| DMR HFDAG Software Engineering | C/CPFF | CECOM MITRE : San Diego, CA | 0.100 | - | | - | | - | | - | | - | - | 0.100 | - |

| Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Navy | | | Date: February 2015 |
|---|---|---|---|
| Appropriation/Budget Activity<br>1319 / 5 | R-1 Program Element (Number/Name)<br>PE 0604280N / *JT Tact Radio Sys (JTRS)* | Project (Number/Name)<br>3073 / *AMF JTRS* | |

**Product Development ($ in Millions)**

| Cost Category Item | Contract Method & Type | Performing Activity & Location | Prior Years | FY 2014 Cost | FY 2014 Award Date | FY 2015 Cost | FY 2015 Award Date | FY 2016 Base Cost | FY 2016 Base Award Date | FY 2016 OCO Cost | FY 2016 OCO Award Date | FY 2016 Total Cost | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DMR MUOS Software Development | C/CPFF | General Dynamics : Scottsdale, AZ | 20.347 | 2.409 | May 2014 | - | | - | | - | | - | - | 22.756 | - |
| DMR MUOSSoftware Development | WR | SSC PAC : San Diego, GA | 0.000 | 1.200 | Oct 2013 | - | | - | | - | | - | - | 1.200 | - |
| DMR MUOS Software Engineering | C/CPFF | CECOM MITRE : San Diego, CA | 0.000 | 0.300 | Oct 2013 | - | | - | | - | | - | - | 0.300 | - |
| | | **Subtotal** | 1,205.247 | 3.909 | | - | | - | | - | | - | - | 1,209.156 | - |

**Support ($ in Millions)**

| Cost Category Item | Contract Method & Type | Performing Activity & Location | Prior Years | FY 2014 Cost | FY 2014 Award Date | FY 2015 Cost | FY 2015 Award Date | FY 2016 Base Cost | FY 2016 Base Award Date | FY 2016 OCO Cost | FY 2016 OCO Award Date | FY 2016 Total Cost | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AMF JTRS- Acquisition, and ILS Support | WR | Various : Various | 40.137 | - | | - | | - | | - | | - | - | 40.137 | - |
| Software Dev: DMR Build 6.4 | C/FFP | GDDS : Various | 12.861 | - | | - | | - | | - | | - | - | 12.861 | - |
| DMR HF DAG- ILS | C/CPFF | CSA : San Diego | 0.125 | - | | - | | - | | - | | - | - | 0.125 | - |
| MUOS SST - Acquisition Support | C/CPFF | BAH : San Diego | 0.709 | - | | - | | - | | - | | - | - | 0.709 | - |
| | | **Subtotal** | 53.832 | - | | - | | - | | - | | - | - | 53.832 | - |

**Test and Evaluation ($ in Millions)**

| Cost Category Item | Contract Method & Type | Performing Activity & Location | Prior Years | FY 2014 Cost | FY 2014 Award Date | FY 2015 Cost | FY 2015 Award Date | FY 2016 Base Cost | FY 2016 Base Award Date | FY 2016 OCO Cost | FY 2016 OCO Award Date | FY 2016 Total Cost | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AMF JTRS- Test and Evaluation and Test Support | WR | Various : Various | 83.154 | - | | - | | - | | - | | - | - | 83.154 | - |
| DMR T&E (FOTE) SD | WR | SSC : San Diego, CA | 7.093 | - | | - | | - | | - | | - | - | 7.093 | - |
| DMR T&E (FOTE) CHARL | WR | SSC : Charleston, SC | 1.732 | - | | - | | - | | - | | - | - | 1.732 | - |

| Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Navy | | | Date: February 2015 |
|---|---|---|---|
| Appropriation/Budget Activity<br>1319 / 5 | R-1 Program Element (Number/Name)<br>PE 0604280N / *JT Tact Radio Sys (JTRS)* | Project (Number/Name)<br>3073 / *AMF JTRS* | |

**Test and Evaluation ($ in Millions)**

| Cost Category Item | Contract Method & Type | Performing Activity & Location | Prior Years | FY 2014 Cost | FY 2014 Award Date | FY 2015 Cost | FY 2015 Award Date | FY 2016 Base Cost | FY 2016 Base Award Date | FY 2016 OCO Cost | FY 2016 OCO Award Date | FY 2016 Total Cost | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MUOS SST- Navy Specific Integration | WR | Various : San Diego, CA | 0.022 | - | | - | | - | | - | | - | - | 0.022 | - |
| DMR HF DAG- T&E | WR | SSC PAC : San Diego, CA | 0.230 | - | | - | | - | | - | | - | - | 0.230 | - |
| JTNC Waveform Alignment | WR | Various : San Diego, CA | 23.545 | - | | - | | - | | - | | - | - | 23.545 | - |
| MUOS - Air Force Specific | WR | Various : San Diego, CA | 20.500 | - | | - | | - | | - | | - | - | 20.500 | - |
| | | **Subtotal** | 136.276 | - | | - | | - | | - | | - | - | 136.276 | - |

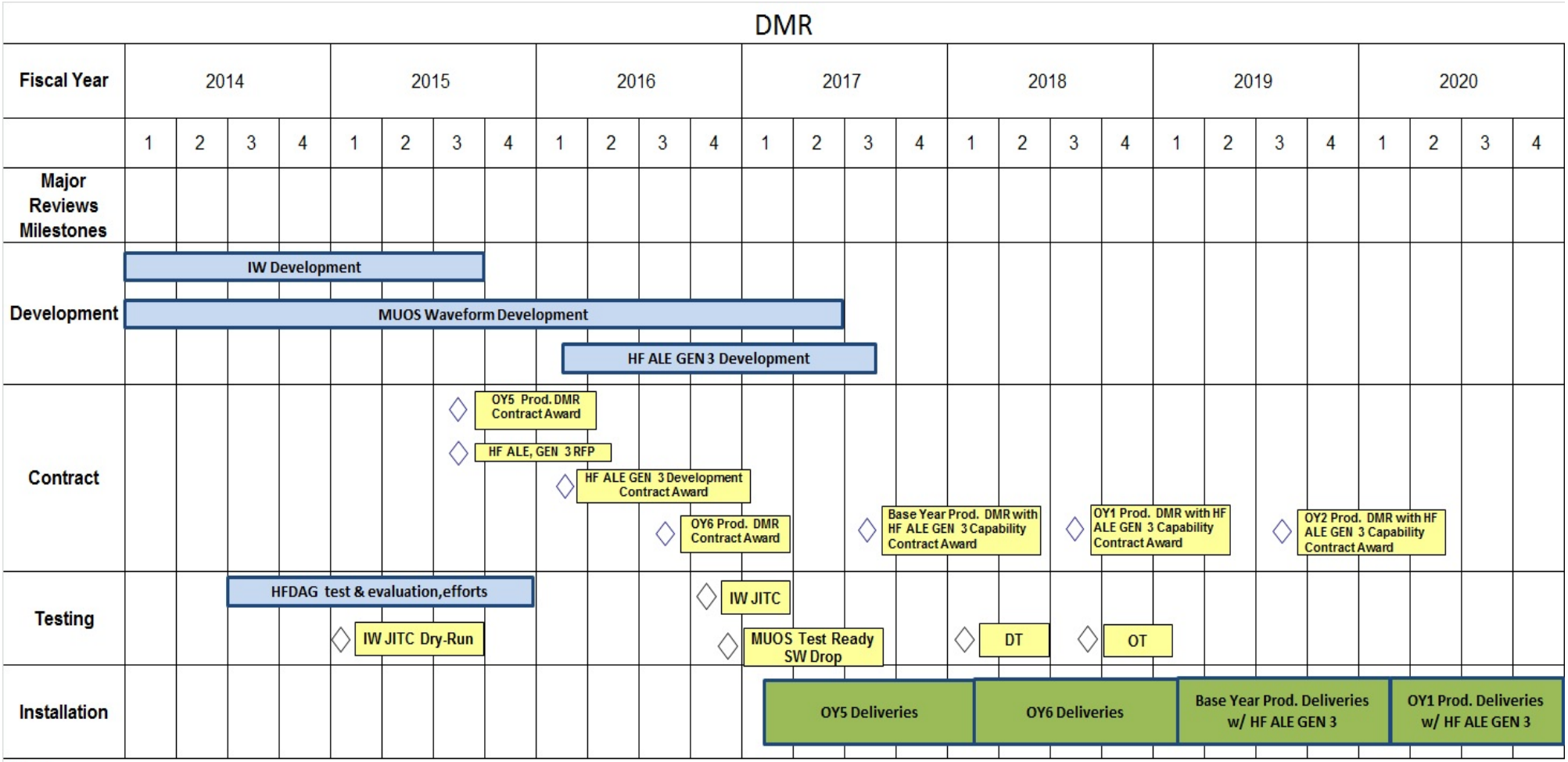
**Management Services ($ in Millions)**

| Cost Category Item | Contract Method & Type | Performing Activity & Location | Prior Years | FY 2014 Cost | FY 2014 Award Date | FY 2015 Cost | FY 2015 Award Date | FY 2016 Base Cost | FY 2016 Base Award Date | FY 2016 OCO Cost | FY 2016 OCO Award Date | FY 2016 Total Cost | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AMF Business Operations Management and Support | WR | Various : Various | 58.547 | - | | - | | - | | - | | - | - | 58.547 | - |
| Acquisition Workforce Fund- 2009 | C/FP | Various : Various | 1.039 | - | | - | | - | | - | | - | - | 1.039 | - |
| | | **Subtotal** | 59.586 | - | | - | | - | | - | | - | - | 59.586 | - |

| | Prior Years | FY 2014 | | FY 2015 | | FY 2016 Base | | FY 2016 OCO | | FY 2016 Total | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Project Cost Totals** | 1,454.941 | 3.909 | | - | | - | | - | | - | - | 1,458.850 | - |

**Remarks**

| Exhibit R-4, RDT&E Schedule Profile: PB 2016 Navy | | Date: February 2015 |
|---|---|---|
| **Appropriation/Budget Activity**<br>1319 / 5 | **R-1 Program Element (Number/Name)**<br>PE 0604280N / *JT Tact Radio Sys (JTRS)* | **Project (Number/Name)**<br>3073 / *AMF JTRS* |




Notes:

| Exhibit R-4A, RDT&E Schedule Details: PB 2016 Navy | | Date: February 2015 |
|---|---|---|
| **Appropriation/Budget Activity**<br>1319 / 5 | **R-1 Program Element (Number/Name)**<br>PE 0604280N / *JT Tact Radio Sys (JTRS)* | **Project (Number/Name)**<br>3073 / *AMF JTRS* |

## Schedule Details

| | Start | | End | |
|---|---|---|---|---|
| **Events by Sub Project** | **Quarter** | **Year** | **Quarter** | **Year** |
| ***Proj 3073*** | | | | |
| DMR MUOS Development | 1 | 2014 | 4 | 2014 |

| Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy | | | | | | | | | Date: February 2015 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Appropriation/Budget Activity<br>1319 / 5 | | | | | R-1 Program Element (Number/Name)<br>PE 0604280N / *JT Tact Radio Sys (JTRS)* | | | | Project (Number/Name)<br>3078 / *Digital Modular Radio* | | | |
| **COST ($ in Millions)** | **Prior Years** | **FY 2014** | **FY 2015** | **FY 2016 Base** | **FY 2016 OCO** | **FY 2016 Total** | **FY 2017** | **FY 2018** | **FY 2019** | **FY 2020** | **Cost To Complete** | **Total Cost** |
| 3078: *Digital Modular Radio* | 7.853 | - | 6.945 | 25.071 | - | 25.071 | 2.512 | 0.519 | - | - | - | 42.900 |
| Quantity of RDT&E Articles | | - | - | - | - | - | - | - | - | - | | |

**Note**

In FY15, the Digital Modular Radio (DMR) program, previously funded under Project 3073, transitioned to Project 3078.

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

Digital Modular Radio (DMR) with Integrated Waveform (IW) and Mobile User Objective System (MUOS)capable hardware is the Navy's technical solution for the IW/ MUOS requirement. The 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. DMR 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. This task is to continue the development/integration of the IW and MUOS waveforms for the DMR in accordance with Military Standards 188-181,2,3, and the High Frequency Distribution Amplifier Group (HFDAG). 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. The MUOS waveform will enable MUOS satellites to provide worldwide communication satellite coverage for DoD requirements. MUOS will provide functionality comparable to commercial mobile phone systems. HFDAG is a follow-on HF solution to fulfill the HF communication capability from 2MHz - 30MHz (transmit) and 2MHz - 30MHz (receive) with ALE, Link 11, FSK, USB, LSB and ISB modes of operation for Navy Modernization Process (NMP) and platforms. HFDAG will utilize the existing DMR as the exciter/receiver. The budget in FY16 and FY17 also provides funding to DMR for HF Automatic Link Establishment (ALE) Generation 3 development efforts.

| **B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)** | **FY 2014** | **FY 2015** | **FY 2016 Base** | **FY 2016 OCO** | **FY 2016 Total** |
|---|---|---|---|---|---|
| ***Title:*** DMR | - | 6.945 | 25.071 | - | 25.071 |
| ***Articles:*** | - | - | - | - | - |
| ***FY 2014 Accomplishments:***<br>N/A | | | | | |
| ***FY 2015 Plans:***<br>Continue the development/integration of the Integrated Waveform (IW) and Mobile User Objective System (MUOS) capabilities into the Digital Modular Radio (DMR) system including system engineering, software development, testing, design reviews, integration, porting and logistics efforts and support acquisition documentation development. Perform IW certification "Dry Run" with Joint Integration Test Commnad. Complete | | | | | |

| Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy | | Date: February 2015 |
|---|---|---|
| **Appropriation/Budget Activity**<br>1319 / 5 | **R-1 Program Element (Number/Name)**<br>PE 0604280N / *JT Tact Radio Sys (JTRS)* | **Project (Number/Name)**<br>3078 / *Digital Modular Radio* |

| B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each) | FY 2014 | FY 2015 | FY 2016 Base | FY 2016 OCO | FY 2016 Total |
|---|---|---|---|---|---|
| High Frequency Distribution Amplifier Group (HFDAG) test & evaluation including Environmental Testing as well as Shock and Vibe testing.<br>***FY 2016 Base Plans:***<br>Continue the development/integration of the Integrated Waveform (IW) and Mobile User Objective System (MUOS) capabilities into the Digital Modular Radio (DMR) including system engineering, software development, testing, design reviews, integration, porting and logistics efforts. Perform IW certification efforts with Joint Integration Test Command (JITC). Recieve MUOS software drop from vendor for testing and Release Requirements Review (RRR) efforts. Begin DMR High Frequency Amplifier Link Establishment (HF ALE) GEN3 Software development efforts.<br>***FY 2016 OCO Plans:***<br>N/A | | | | | |
| **Accomplishments/Planned Programs Subtotals** | - | 6.945 | 25.071 | - | 25.071 |

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

| Line Item | FY 2014 | FY 2015 | FY 2016 Base | FY 2016 OCO | FY 2016 Total | FY 2017 | FY 2018 | FY 2019 | FY 2020 | Cost To Complete | Total Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|
| • OPN/3010: *DMR OPN, PE:0303109N* | - | 14.410 | 10.128 | - | 10.128 | 35.673 | 51.285 | 62.091 | 66.709 | - | 240.296 |

**Remarks**

**D. Acquisition Strategy**

General Dynamics C4 Systems (GDC4S) owns the technical data rights to the DMR. Due to this fact they are the only contractor with the unique capabilities and technical know how to perform the required design work to complete the IW upgrade and the MUOS interoperability efforts. This scope will be issued as the final increment to GDC4S under the sole source contract, N00039-10-C-0069, as authorized by SPAWAR J&A No. 16,976, signed 3 December 2012 by SPAWAR Executive Director and as authorized by SPAWAR J&A No. 16,351 signed 5 January 2010 by the Assistant Secretary of the Navy (ASN), Research Development and Acquisition (RD&A). SPAWAR Systems Center Pacific (SSC PAC) will continue performing HFDAG system test and evaluation.

**E. Performance Metrics**

MIL-STD conformance to meet JITC Certification for IW/UHF SATCOM waveform and the MUOS waveform.

| Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Navy | | | Date: February 2015 |
|---|---|---|---|
| Appropriation/Budget Activity<br>1319 / 5 | R-1 Program Element (Number/Name)<br>PE 0604280N / *JT Tact Radio Sys (JTRS)* | Project (Number/Name)<br>3078 / *Digital Modular Radio* | |

**Product Development ($ in Millions)**

| Cost Category Item | Contract Method & Type | Performing Activity & Location | Prior Years | FY 2014 Cost | FY 2014 Award Date | FY 2015 Cost | FY 2015 Award Date | FY 2016 Base Cost | FY 2016 Base Award Date | FY 2016 OCO Cost | FY 2016 OCO Award Date | FY 2016 Total Cost | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| IW/MUOS Development | C/CPIF | GDC4S : Scottsdate, AZ | 7.853 | - | | 4.106 | Oct 2014 | 16.684 | Oct 2015 | - | | 16.684 | - | 28.643 | - |
| HF ALE Development | C/CPFF | TBD : TBD | 0.000 | - | | - | | 1.994 | Dec 2015 | - | | 1.994 | - | 1.994 | - |
| | | **Subtotal** | 7.853 | - | | 4.106 | | 18.678 | | - | | 18.678 | - | 30.637 | - |

**Support ($ in Millions)**

| Cost Category Item | Contract Method & Type | Performing Activity & Location | Prior Years | FY 2014 Cost | FY 2014 Award Date | FY 2015 Cost | FY 2015 Award Date | FY 2016 Base Cost | FY 2016 Base Award Date | FY 2016 OCO Cost | FY 2016 OCO Award Date | FY 2016 Total Cost | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| System Engineering Support | Various | SSC PAC : San Diego, CA | 0.000 | - | | 1.839 | Nov 2014 | 3.540 | Nov 2015 | - | | 3.540 | - | 5.379 | - |
| | | **Subtotal** | 0.000 | - | | 1.839 | | 3.540 | | - | | 3.540 | - | 5.379 | - |

**Test and Evaluation ($ in Millions)**

| Cost Category Item | Contract Method & Type | Performing Activity & Location | Prior Years | FY 2014 Cost | FY 2014 Award Date | FY 2015 Cost | FY 2015 Award Date | FY 2016 Base Cost | FY 2016 Base Award Date | FY 2016 OCO Cost | FY 2016 OCO Award Date | FY 2016 Total Cost | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Developmental Testing | Various | SSC PAC : San Diego, CA | 0.000 | - | | 0.500 | Oct 2014 | 1.418 | Oct 2015 | - | | 1.418 | - | 1.918 | - |
| | | **Subtotal** | 0.000 | - | | 0.500 | | 1.418 | | - | | 1.418 | - | 1.918 | - |

**Management Services ($ in Millions)**

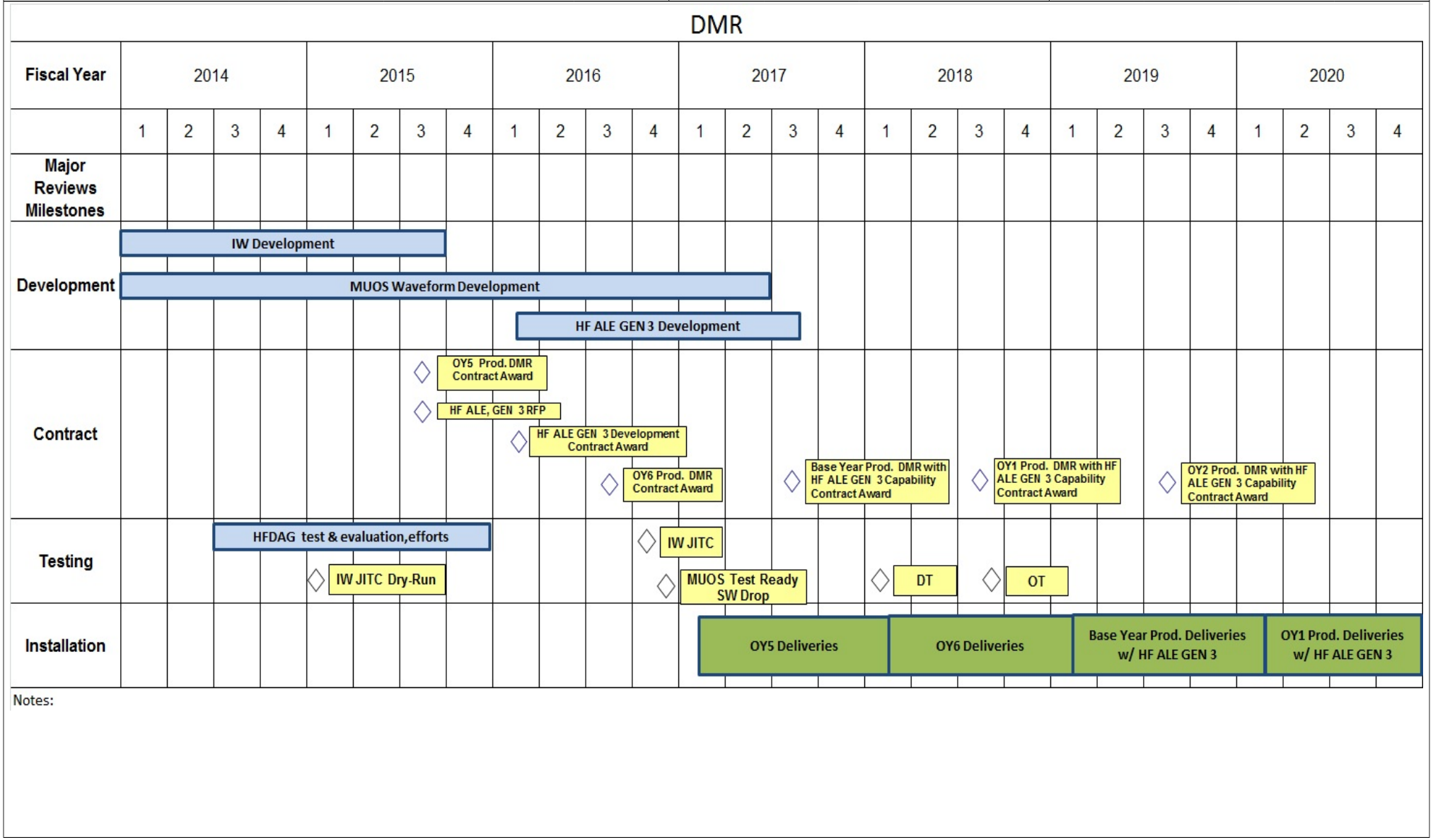
| Cost Category Item | Contract Method & Type | Performing Activity & Location | Prior Years | FY 2014 Cost | FY 2014 Award Date | FY 2015 Cost | FY 2015 Award Date | FY 2016 Base Cost | FY 2016 Base Award Date | FY 2016 OCO Cost | FY 2016 OCO Award Date | FY 2016 Total Cost | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Program Management Support | C/CPFF | BAH : San Diego, CA | 0.000 | - | | 0.500 | Nov 2014 | 1.435 | Nov 2015 | - | | 1.435 | - | 1.935 | - |
| | | **Subtotal** | 0.000 | - | | 0.500 | | 1.435 | | - | | 1.435 | - | 1.935 | - |

| Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Navy | | | Date: February 2015 |
|---|---|---|---|
| Appropriation/Budget Activity<br>1319 / 5 | R-1 Program Element (Number/Name)<br>PE 0604280N / *JT Tact Radio Sys (JTRS)* | Project (Number/Name)<br>3078 / *Digital Modular Radio* | |

| | Prior Years | FY 2014 | | FY 2015 | | FY 2016 Base | | FY 2016 OCO | | FY 2016 Total | Cost To Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Project Cost Totals** | 7.853 | - | | 6.945 | | 25.071 | | - | | 25.071 | - | 39.869 | - |

**Remarks**

| Exhibit R-4, RDT&E Schedule Profile: PB 2016 Navy | | Date: February 2015 |
|---|---|---|
| **Appropriation/Budget Activity**<br>1319 / 5 | **R-1 Program Element (Number/Name)**<br>PE 0604280N / *JT Tact Radio Sys (JTRS)* | **Project (Number/Name)**<br>3078 / *Digital Modular Radio* |



| Exhibit R-4A, RDT&E Schedule Details: PB 2016 Navy | | Date: February 2015 |
|---|---|---|
| **Appropriation/Budget Activity**<br>1319 / 5 | **R-1 Program Element (Number/Name)**<br>PE 0604280N / *JT Tact Radio Sys (JTRS)* | **Project (Number/Name)**<br>3078 / *Digital Modular Radio* |

## Schedule Details

| | Start | | End | |
|---|---|---|---|---|
| **Events by Sub Project** | **Quarter** | **Year** | **Quarter** | **Year** |
| ***Proj 3078*** | | | | |
| IW Development | 1 | 2014 | 3 | 2015 |
| MOUS Waveform Development | 1 | 2014 | 2 | 2017 |
| HFDAG Test and Evaluation | 3 | 2014 | 4 | 2015 |
| HF ALE GEN 3 Development Request for Proposal (RFP) | 3 | 2015 | 3 | 2015 |
| DMR Production Contract Award | 3 | 2015 | 3 | 2015 |
| MUOS Test Ready Software (SW) Drop | 4 | 2016 | 4 | 2016 |
| HF ALE GEN 3 Development Contract Award | 1 | 2016 | 1 | 2016 |
| HF ALE GEN 3 Development | 1 | 2016 | 3 | 2017 |
| Production Deliveries | 1 | 2017 | 1 | 2020 |
| Development Testing (DT) | 1 | 2018 | 1 | 2018 |
| Operational Testing (OT) | 3 | 2018 | 3 | 2018 |