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| EXHIBIT R-2, RDT&E Budget Item Justification | DATE: <b>February 2007</b> |
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| APPROPRIATION/BUDGET ACTIVITY<br><b>RESEARCH DEVELOPMENT TEST &amp; EVALUATION, NAVY</b> | R-1 ITEM NOMENCLATURE<br>PE: 0604280N TITLE: JOINT TACTICAL RADIO SYSTEMS (JTRS) |
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| COST (\$ in Millions)  | FY 2006 | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 | FY 2012 | FY 2013 |
|--|---------|---------|---------|---------|---------|---------|---------|---------|
| Total Cost   | 162.444 | 795.340 | 853.676 | 274.687 | 201.050 | 99.128  | 100.769 | 102.475 |
| 3020 Multifunctional Information Distribution System (MIDS) JTRS | 87.802  | 128.976 | 78.738  | 5.035   | 0.000   | 0.000   | 0.000   | 0.000   |
| 3073 Airborne/Maritime/Fixed Station (AMF) JTRS                  | 64.863  | 93.566  | 152.350 | 69.721  | 68.373  | 47.460  | 82.052  | 85.444  |
| 3073 Joint Task Force Wide Area Relay Network (JTF WARNET)       | 7.481   | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   |
| 3074 Ground Mobile Radio (GMR) JTRS                              | 0.000   | 219.061 | 236.442 | 68.319  | 39.769  | 16.116  | 0.000   | 0.000   |
| 3075 Handheld/Manpack/Small Form Fit (HMS) JTRS                  | 0.000   | 110.529 | 106.329 | 36.239  | 24.229  | 7.451   | 0.000   | 0.000   |
| 3076 JTRS Network Enterprise Domain (JNED)                       | 0.000   | 243.208 | 279.817 | 95.373  | 68.679  | 28.101  | 18.717  | 17.031  |
| 9999 Congressional Adds  | 2.298   | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   | 0.000   |

In FY06, funding for Ground Mobile Radio (GMR) JTRS, formerly known as Cluster 1 (Army Project 615), and Handheld/Manpack/Small Form Fit (HMS) JTRS, formerly known as Cluster 5 (Army Project 61A) resides in Army Program Element (PE) 0604805A. Funding for JTRS Network Enterprise Domain (JNED), formerly known as Joint Waveforms (Army Project 162), resides in Army PE 0604280A. Funding for Airborne/Maritime/Fixed Station (AMF) Air Force JTRS (Project 5068) resides in Air Force PE 0604280F.

In FY07-FY08, Program Element (PE) 0604280N represents the total JTRS RDT&E Budget (includes Multifunctional Information Distribution System (MIDS) JTRS, Airborne/Maritime/Fixed Station (AMF) Navy JTRS, Ground Mobile Radio (GMR) JTRS, Handheld/Manpack/Small Form Fit (HMS) JTRS, and JTRS Network Enterprise Domain (JNED).

In FY09-FY13, Program Element (PE) 0604280N represents the Navy share (1/3) of the funding associated with all JTRS Development Projects. JTRS Common Development includes funding for: **MIDS JTRS, AMF JTRS, GMR JTRS, HMS JTRS and JNED**. As part of the JTRS joint program budget strategy, each Military Department (MILDEP) budgets for one-third of the total program. Thus, one-third of JTRS Common Development is represented in this PE, one-third is represented in Army PE 0604280A and one-third in Air Force PE 0604280F.

In February 2005, Mr. Wynne, Acting USD (AT&L) issued a JTRS Acquisition Decision Memorandum (ADM) directing the realignment of the current acquisition management structure for all JTRS programs under the authority of a single JTRS Joint Program Executive Officer (JPEO). In November 2005, the Defense Acquisition Executive (DAE) and Senior JTRS Leadership selected a re-plan option which restructures JTRS to emphasize cost and schedule performance while executing a moderate technical risk plan. The new JTRS development and acquisition strategy was formalized and approved in a March 31st, 2006 ADM signed by Under Secretary Kenneth Krieg, the Under Secretary of Defense for Acquisition, Technology and Logistics.

JTF WARNET funding ended in FY06. Congressional Add (Digital Modular Radio (DMR)) ended in FY06.

**(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:**

**(AMF)** AMF 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. AMF JTRS will provide the Warfighter with a modernized communications capability for more effective battlefield management and interoperability. AMF JTRS is a key enabler for the transformation of airborne communications toward network-centric operations. AMF JTRS is designed to perform as a reliable and dynamic family of advanced communications systems. As a result, AMF JTRS will be a hardware configurable and software-programmable radio system that provides increased interoperability, flexibility and adaptability to support varied mission requirements. The system is multi-functional, multi-band, multi-mode, network capable and capable of providing communications through a range of low probability of intercept, low probability of detection and anti-jam waveforms. AMF JTRS will operate with legacy equipment and waveforms currently used by civilian and military airborne, surface, subsurface, and fixed station platforms. AMF JTRS is intended to replace existing legacy radio systems, which are currently facing long-term sustainment issues and diminishing sources of material support. AMF JTRS capabilities will be developed in an incremental approach, with each increment building on the technological achievements of its predecessor, while providing expanded capabilities.

**(MIDS)** MIDS-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 current 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 re-mapping, and programmable crypto will also be realized in the MIDS JTRS design. In addition to the Link-16 and TACAN functionality, the MIDS JTRS Core terminal includes three 2 MHz to 2 GHz programmable channels that allow the warfighter to use multiple waveforms currently in development with the JTRS Network Enterprise Domain (JNED). Total Core terminal program requirements include: Terminal development, F/A-18 Level 0 integration, software hosting (Operating Environment/Waveforms) and production transition. The Tactical Targeting Network Technology JTRS Platform Capability Package (TTNT JPCP) involves integration of an advanced low latency, high bandwidth, internet protocol-capable waveform that meets Time Sensitive Targeting Networking Technology requirements. TTNT JPCP program requirements include hardware and software changes, terminal development, qualification, and production transition. The TTNT JPCP is the integration of the TTNT waveform as the specific implementation of the Joint Airborne Networking - Tactical Edge (JAN-TE) waveform.

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| <p><b>(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION (continued):</b></p> <p><b>(GMR)</b> GMR JTRS (formerly Cluster 1) is a product line overseen by the JTRS Ground Domain Program Management Office. 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. JTRS will provide transformational communication capabilities for the warfighter. The JTRS GMR will provide networking capability using the Wideband Networking Waveform and Soldier Radio Waveform to connect the unmanned sensors to the decision makers "On-The-Move" (OTM) which will significantly reduce the decision cycle. JTRS GMR will provide the warfighter with mobile Internet-like capabilities such as voice, data, networking and video communications, as well as interoperability with legacy radios across the battlespace.</p> <p><b>(HMS)</b> HMS JTRS (formerly Cluster 5) is a product line overseen by the JTRS Ground Domain Program Management Office. JTRS is the DoD family of common software-defined programmable radios that will form the foundation of information radio frequency transmission for Joint Vision 2020. HMS provides a software re-programmable, networkable, multi-band, multi-mode system capable of simultaneous voice/data/video communication. HMS Increment 1 consists of the following form factors: 2 Channel Handheld, 2 Channel Manpack and Small Form Fit (SFF) embedded applications (SFF-A, B, C, D, H, I and J).</p> <p><b>(JNED)</b> JNED, formerly the Joint Waveform Program Office (JWPO) 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. Service acquisition agencies are responsible for acquiring and fielding host radio hardware and integrating JTRS into Service platforms.</p> <p><b>(JTF WARNET)</b> Joint Task Force Wide Area Relay Network Program Enhancement (JTF WARNET) - This program is a Naval Research Laboratory (NRL) initiative that has grown from an Advanced Concept Technology Demonstration (ACTD). Funding ended in FY06. This program supported JTRS, CONOPS &amp; Tactics, Techniques and Procedures (TTP) development, incorporated Intra-Battle Group Wireless Network (IBGWN) capabilities, supported Advanced Digital Networking System (ADNS) Integration and supported Joint Translator Forwarder (JXF.)</p> <p><b>(DMR)</b> The Digital Modular Radio (DMR) provides improvements for fleet radio requirements in the HF, VHF, and UHF frequency band. The DMR replaces and will be interoperable and backwards compatible with legacy systems. The DMR is a digital, modular, software programmable, multi-channel, multi-function and multi-band (2MHz-2 GHz) radio system.</p> <p>JUSTIFICATION FOR BUDGET ACTIVITY:<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> |   |

Exhibit R-2, RDTE Budget Item Justification

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**PROGRAM CHANGE SUMMARY:**

**(U) Funding:**

|                         | FY 2006 | FY 2007 | FY 2008 | FY 2009 |
|-------------------------|---------|---------|---------|---------|
| FY07 President's Budget | 168.498 | 1.153   | 284.305 | 270.481 |
| FY08 President's Budget | 162.444 | 795.340 | 853.676 | 274.687 |
| Total Adjustments       | -6.054  | 794.187 | 569.371 | 4.206   |

Summary of Adjustments

|   |        |         |         |       |
|---|--------|---------|---------|-------|
| JPEO JTRS Stand Up FY06-08 PA ATR               | -3.902 |         |         |       |
| Small Business Innovative Research (SBIR)       | -4.031 |         |         |       |
| Sec. 8125: Revised Economic Assumptions         | 0.396  |         |         |       |
| Sec. 8106: Revised Economic Assumptions         |        | -3.014  |         |       |
| Sec. 8023: Federally Funded R&D Center          |        | -0.058  |         |       |
| Congressional Action                            | 0.911  |         |         |       |
| Misc. Navy Adjustments                          | 0.572  |         | 3.578   | 4.206 |
| Congressional Transfer from RDT&E, Army Line 81 |        | 797.259 |         |       |
| INV-03A JTRS Funding Transfer                   |        |         | 565.793 |       |
|   | -6.054 | 794.187 | 569.371 | 4.206 |

**(U) Schedule:**

In previous Navy Budget Submissions, only AMF and MIDS schedules were represented in this Project. In support of the revised JTRS acquisition strategy, all JTRS program schedules are now presented in this budget exhibit to include AMF, MIDS, JNED, GMR and HMS JTRS.

**(U) Technical:**

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**(U)OTHER PROGRAM FUNDING SUMMARY:**

| Line Item No. & Name  | FY             | FY 2006        | FY 2007      | FY 2008      | FY 2009        | FY 2010        | FY 2011        | FY 2012        | FY 2013        | To Complete       | Total Cost        |
|---|----------------|----------------|--------------|--------------|----------------|----------------|----------------|----------------|----------------|-------------------|-------------------|
| RDTE, Army PE 0604805A, Project 615 (JTRS Cluster 1)                  | 474.890        | 167.069        |              |              |                |                |                |                |                |                   |                   |
| RDTE, Army PE 0604805A, Project 61A (JTRS Cluster 5)                  | 96.042         | 124.641        |              |              |                |                |                |                |                |                   |                   |
| <b>0604805A Command, Control, Communications Sys. - Eng Dev Total</b> | <b>570.932</b> | <b>291.710</b> | 0.000        | 0.000        | 0.000          | 0.000          | 0.000          | 0.000          | 0.000          | Continuing        | Continuing        |
| RDTE, Army PE 0604280A, Project 162 (AMF JTRS)                        |                |                | 0.000        | 0.000        | 68.720         | 67.402         | 47.058         | 81.794         | 85.602         | Continuing        | Continuing        |
| RDTE, Army PE 0604280A, Project 162 (MIDS JTRS)                       |                |                | 0.000        | 0.000        | 4.959          |                |                |                |                | Continuing        | Continuing        |
| RDTE, Army PE 0604280A, Project 162 (JNED)                            | 606.886        | 131.681        | 0.000        | 0.000        | 93.893         | 67.657         | 27.778         | 18.543         | 16.943         | Continuing        | Continuing        |
| RDTE, Army PE 0604280A, Project 162 (GMR JTRS)                        |                |                | 0.000        | 0.000        | 67.293         | 39.191         | 15.962         |                |                | Continuing        | Continuing        |
| RDTE, Army PE 0604280A, Project 162 (HMS JTRS)                        |                |                | 0.000        | 0.000        | 35.695         | 23.877         | 7.380          |                |                | Continuing        | Continuing        |
| <b>0604280A Joint Tactical Radio System Total</b>                     | <b>606.886</b> | <b>131.681</b> | <b>0.000</b> | <b>0.000</b> | <b>270.560</b> | <b>198.127</b> | <b>98.178</b>  | <b>100.337</b> | <b>102.545</b> | <b>Continuing</b> | <b>Continuing</b> |
| RDTE, Air Force PE 0604280F, Project 5068 (AMF JTRS)                  | 36.109         | 77.130         | 0.000        | 0.000        | 70.181         | 69.583         | 48.691         | 84.363         | 88.116         | Continuing        | Continuing        |
| RDTE, Air Force PE 0604280F, Project 5068 (MIDS JTRS)                 |                |                | 0.000        | 0.000        | 5.055          |                |                |                |                | Continuing        | Continuing        |
| RDTE, Air Force PE 0604280F, Project 5068 (JNED)                      |                |                | 0.000        | 0.000        | 95.649         | 69.380         | 28.407         | 18.749         | 17.106         | Continuing        | Continuing        |
| RDTE, Air Force PE 0604280F, Project 5068 (GMR JTRS)                  |                |                | 0.000        | 0.000        | 68.623         | 40.323         | 16.444         |                |                | Continuing        | Continuing        |
| RDTE, Air Force PE 0604280F, Project 5068 (HMS JTRS)                  |                |                | 0.000        | 0.000        | 36.401         | 24.566         | 7.602          |                |                | Continuing        | Continuing        |
| <b>0604280F Joint Tactical Radio Systems Total</b>                    | <b>36.109</b>  | <b>77.130</b>  | <b>0.000</b> | <b>0.000</b> | <b>275.909</b> | <b>203.852</b> | <b>101.144</b> | <b>103.112</b> | <b>105.222</b> | <b>Continuing</b> | <b>Continuing</b> |
| O&M, 4A6M - Service Wide Communications (JTRS JPEO)                   |                | 9.885          | 5.770        | 16.897       | 5.865          | 5.517          | 5.674          | 5.904          | 6.026          | Continuing        | Continuing        |

**(U) ACQUISITION STRATEGY:**

In Feb 2005, all JTRS programs were realigned under the JPEO JTRS. In Nov 2005, the DAE and Senior JTRS Leadership selected a re-plan option which restructures JTRS to emphasize cost and schedule performance while executing a moderate technical risk plan. The new JTRS development and acquisition strategy was formalized and approved in a March 31st, 2006 Acquisition Decision Memorandum signed by Under Secretary Kenneth Krieg, the Under Secretary of Defense for Acquisition, Technology and Logistics.

(AMF JTRS) A joint AF/Navy/Army team manages the development of a common core radio design that will be the basis for satisfying the AMF requirements. AMF completed Pre-System Development and Demonstration (SDD) contracts in FY06, which were awarded to two, competing vendors in late FY04. These efforts included System and Software Development reviews, Preliminary Design Reviews and technical risk reduction activities. The AMF program is planning a MS B decision in late FY07 resulting in a single, contract award for SDD, using a full and open competition acquisition strategy and a Cost Plus Incentive Fee (CPIF) contract. This effort is expected to leverage technical solutions derived from efforts resulting from the Pre-SDD contracts. A Critical Design Review (CDR) is planned for early FY08. Continued SDD development in FY09 for the AMF JTRS system Engineering Development Models (EDMs), associated testing and integration, development engineering and management support for associated JTR system components.

(MIDS JTRS) MIDS JTRS development will be initiated as a major modification to the MIDS-LVT using an Engineering Change Proposal to the existing production contracts. Development efforts include the Phase 2B Core terminal and the Phase 2C/2D Tactical Targeting Network Technology JTRS Platform Capability Package (TTNT JPCP). The U.S. prime contractors from the MIDS-LVT program (Data Link Solutions and ViaSat, Inc.) will cooperatively design and develop the Core terminal and TTNT JPCP. Each prime contractor will build and qualify Production Verification Terminals. The U.S. will implement a continuous competition strategy between DLS and ViaSat will be maintained throughout the MIDS JTRS production phase. This strategy was successfully used on MIDS-LVT production.

(JNED) 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 FY08 budget supports continued development of waveforms, supporting software, and testing support, as well as the NSA evaluation of the aforementioned software crypto libraries.

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| <p><b>(U) ACQUISITION STRATEGY (Cont.):</b></p> <p>(GMR JTRS) This project supports the JTRS GMR SDD efforts. After a Milestone (MS) B Decision in 3QFY02, the GMR development effort was awarded to develop multi-channel ground and airborne configurations (airborne is now re-aligned under AMF). The JTRS GMR supports an evolutionary acquisition strategy and was based on an aggressive acquisition schedule. In June 2002, a Cost Plus Award Fee (CPAF) contract was competitively awarded to develop and/or acquire numerous SCA compliant waveforms, define common form-fit-function configurations for vehicular versions of the JTRS hardware, and successfully port the waveforms to JTRS hardware produced by two different developers. Although Waveform development is part of the contract, the Waveform development is funded and managed under the JTRS Network Enterprise Domain (JNED). Under GMR, a software reprogrammable radio providing the Warfighter with the multi-band and multi-mode capability, networkable radio system which provides simultaneous voice, data and video communications to increase interoperability, flexibility, and adaptability in support of varied mission requirements for vehicular platforms is being developed as a product under the PM JTRS Ground Domain. In FY05, the program underwent preliminary testing of hardware capabilities along with the program restructuring and on-going development of the operating system. The pre-Engineering Development Models (EDM) design is complete. The FY08 budget supports continued development and support for the GMR sets to include the operating environment, design of ground vehicular A-kits (installation kits) for platforms required for testing for System Integration Test (SIT)/Limited User Test (LUT) and Multi-Service Operational Test and Evaluation (MOT&amp;E) testing for GMR.</p> <p>(HMS JTRS) This project supports the JTRS HMS SDD efforts. A MS B was achieved in Apr 2004 to begin the development of the HMS sets. Following full and open competition, a single CPAF contract was awarded in July 2004. The evolutionary acquisition strategy is based on incremental development, reduced requirements, and better reuse/teaming with other product lines and NSA. The contract is structured to address Increment 1, consisting of Phases 1 and 2. Increment 1, Phase 1 will develop 1 and 2 Channel Type 2 Small Form Fits (SFFs) A, C, and H running SRW waveform for use in a sensitive but unclassified environment (Type 2). Increment 1, Phase 2 will develop 2 Channel Handhelds, 2 Channel Manpacks and 1 and 2 Channel Type 1 and Type 2 Small Form Fits (SFFs) B, D, I and J. The FY08 budget supports continued development of breadboards, prototypes, and Engineering Development Models (EDMs).</p> <p><b>(U) MAJOR PERFORMERS:</b><br/> <u>Prime Contractors:</u> AMF JTRS (Pre SDD): Boeing and Lockheed Martin; MIDS JTRS: Data Link Solutions and ViaSat Inc.; JNED: Boeing, Rockwell Collins, and ITT; GMR JTRS: Boeing; HMS JTRS: General Dynamics Decision Systems</p> <p><b>(U) METRICS:</b><br/> Earned Value Management (EVM) is used for metrics reporting and risk management.</p> |   |                               |

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| EXHIBIT R-2a, RDT&E Project Justification  |   |                |               | DATE: <b>February 2007</b>                |              |              |              |              |
|--|---|----------------|---------------|---|--------------|--------------|--------------|--------------|
| APPROPRIATION/BUDGET ACTIVITY<br><b>RDT&amp;E, N / BA-5</b>  | PROGRAM ELEMENT NUMBER AND NAME<br>PE: 0604280N TITLE: JOINT TACTICAL RADIO SYSTEMS |                |               | PROJECT NUMBER AND NAME<br>3020 MIDS JTRS |              |              |              |              |
| COST (\$ in Millions)  | FY 2006   | FY 2007        | FY 2008       | FY 2009                                   | FY 2010      | FY 2011      | FY 2012      | FY 2013      |
| Total Project Cost   | <b>87.802</b>   | <b>128.976</b> | <b>78.738</b> | <b>5.035</b>                              | <b>0.000</b> | <b>0.000</b> | <b>0.000</b> | <b>0.000</b> |
| 3020 Multifunctional Information Distribution System (MIDS) JTRS   | <b>87.802</b>   | <b>128.976</b> | <b>78.738</b> | <b>5.035</b>                              | <b>0.000</b> | <b>0.000</b> | <b>0.000</b> | <b>0.000</b> |
| RDT&E Articles Qty   |   |                |               |   |              |              |              |              |
| <p>In FY06-FY08, Project No. 3020 represents the total Multifunctional Information Distribution System (MIDS) JTRS RDT&amp;E budget for those years.</p> <p>In FY09, Project No. 3020 represents the Navy share (1/3) of the funding associated with MIDS JTRS. As part of the JTRS joint program acquisition strategy, each Military Department (MILDEP) budgets for one-third of the total program. Thus, one-third of JTRS Common Development is represented in this PE, one-third is represented in Army PE 0604280A and one-third in Air Force PE 0604280F.</p> <p>In February 2005, Mr. Wynne, Acting Under Secretary of Defense for Acquisition, Technology and Logistic issued a JTRS Acquisition Decision Memorandum (ADM) directing the realignment of the current acquisition management structure for all JTRS programs under the authority of a single JTRS Joint Program Executive Officer (JPEO). In November 2005, the Defense Acquisition Executive (DAE) and Senior JTRS Leadership selected a re-plan option which restructures JTRS to emphasize cost and schedule performance while executing a moderate technical risk plan. The new JTRS development and acquisition strategy was formalized and approved in a March 31st, 2006 ADM signed by Under Secretary Kenneth Krieg, the Under Secretary of Defense for Acquisition, Technology and Logistics.</p> <p><b>(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:</b></p> <p>MIDS-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 current 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 re mapping, and programmable crypto will also be realized in the MIDS JTRS design. In addition to the Link-16 and TACAN functionality, the MIDS JTRS Core terminal includes three 2 MHz to 2 GHz programmable channels that allow the warfighter to use multiple waveforms currently in development with the JTRS Network Enterprise Domain (JNED). Total Core terminal program requirements include: Terminal development, F/A-18 Level 0 integration, software hosting (Operating Environment/Waveforms) and production transition. The Tactical Targeting Network Technology JTRS Platform Capability Package (TTNT JPCP) involves integration of an advanced low latency, high bandwidth, internet protocol-capable waveform that meets Time Sensitive Targeting Networking Technology requirements. TTNT JPCP program requirements include hardware and software changes, terminal development, qualification, and production transition. The TTNT JPCP is the integration of the TTNT waveform as the specific implementation of the Joint Airborne Networking - Tactical Edge (JAN-TE) waveform.</p> |   |                |               |   |              |              |              |              |

Exhibit R-2a, RDTE Project Justification

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| APPROPRIATION/BUDGET ACTIVITY<br><b>RDT&amp;E, N / BA-5</b> | PROJECT NUMBER AND NAME<br>3020 MIDS JTRS |
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**(U) B. Accomplishments/Planned Program**

|                         | FY 06  | FY 07   | FY 08  | FY 09 |
|-------------------------|--------|---------|--------|-------|
| MIDS JTRS               | 87.802 | 128.976 | 78.738 | 5.035 |
| RDT&E Articles Quantity |        |         |        |       |

**FY06:** Continued MIDS JTRS Phase 2B Core terminal hardware/software development. Completed detailed design review, exchanged contractor prototypes and held Critical Design Review in April 06. Continued Shop Replaceable Unit (SRU) build and test and began terminal integration and test. Awarded MIDS JTRS Tactical Targeting Network Technology JTRS Platform Capability Package (TTNT JPCP) Phase 2C in March 2006 to initiate specification development addendums to the existing Functional and Allocated baselines. Provided MIDS JTRS support in systems engineering, hardware, software, Communications Security (COMSEC), logistics, networking, configuration and data management and program management. Started F/A-18 Level 0 integration to include integration preparation, Operational Flight Program changes and Engineering Change Proposal preparation.

**FY07:** Continue MIDS JTRS Phase 2B development and qualification of the Core terminal program. Conduct Test Readiness Review and hold a Milestone C decision meeting to receive Low Rate Initial Production authorization. Begin contractor First Article Qualification Testing (FAQT). Initiate production transition efforts. Continue MIDS JTRS TTNT JPCP Phase 2C activities. Award MIDS JTRS TTNT JPCP Phase 2D for full development. Provide MIDS JTRS support in systems engineering, hardware, software, COMSEC, logistics, networking, configuration and data management and program management. Continue F/A-18 Level 0 platform integration, test and evaluation. Procure additional F/A-18 Test Assets for Developmental and Operational test. Begin F/A-18 integrated logistics support planning.

**FY08:** Complete MIDS JTRS Phase 2B development and qualification of the Core terminal program. Obtain Core terminal certifications for Communications Security (COMSEC), Electromagnetic Compatibility (EMC) Features, Air Worthiness, SCA compliance and joint interoperability. Conduct Government testing. Continue MIDS JTRS Phase 2D development and qualification of the TTNT JPCP and production transition. Provide MIDS JTRS support in systems engineering, hardware, software, COMSEC, logistics, networking, configuration and data management and program management. Continue F/A-18 Level 0 platform integration, test and evaluation including developmental and operational test and support equipment development.

**FY09:** Complete MIDS JTRS Phase 2D development and qualification of the TTNT JPCP terminal. Obtain TTNT JPCP terminal certifications for COMSEC, EMC Features, Air Worthiness, SCA compliance and joint interoperability. Conduct Government testing. Provide MIDS JTRS support in systems engineering, hardware, software, COMSEC, logistics, networking, configuration and data management and program management. Complete F/A-18 Level 0 platform integration, test and evaluation and support equipment development.

**Note:**

In FY06-FY08, Project No. 3020 represents the total MIDS JTRS RDT&E budget for those years.

In FY09, Project No. 3020 represents one-third of the total MIDS JTRS RDT&E budget. As part of the JTRS joint program acquisition strategy, each MILDEP budgets for one-third of the total program. Thus, one-third of MIDS is represented in this PE, one-third is represented in Army PE 0604280A, and one-third in Air Force PE 0604280F.

CLASSIFICATION:

| Exhibit R-3 Cost Analysis (MIDS JTRS page 1)   |                        |   |               |           |                 |            |                  |   |                  | DATE:<br>February 2007 |            |                          |
|--|------------------------|---|---------------|-----------|-----------------|------------|------------------|---|------------------|------------------------|------------|--------------------------|
| APPROPRIATION/BUDGET ACTIVITY<br>RDT&E, N / BA-5   |                        | PROGRAM ELEMENT<br>PE: 0604280N TITLE: JOINT TACTICAL RADIO SYSTEMS |               |           |                 |            |                  | PROJECT NUMBER AND NAME<br>3020 MIDS JTRS |                  |                        |            |                          |
| Cost Categories  | Contract Method & Type | Performing Activity & Location                                      | Total PY Cost | FY07 Cost | FY07 Award Date | FY 08 Cost | FY 08 Award Date | FY 09 Cost                                | FY 09 Award Date | Cost to Complete       | Total Cost | Target Value of Contract |
| <b>Product Development</b>   |                        |   |               |           |                 |            |                  |   |                  |                        |            |                          |
| MIDS JTRS HW/SW (Phase 2B Core)  | CPIF                   | DLS Cedar Rapids, IA  | 47.790        | 34.774    | Nov-06          | 8.304      | Oct-07           |   |                  | 0.000                  | 90.868     |                          |
| MIDS JTRS HW/SW (Phase 2B Core)  | CPIF                   | ViaSat Inc. Carlsbad, CA  | 43.194        | 29.310    | Nov-06          | 7.800      | Oct-07           |   |                  | 0.000                  | 80.304     |                          |
| MIDS JTRS HW/SW (Phase 2C TTNT JPCP)   | CPFF                   | DLS Cedar Rapids, IA  | 5.251         | 5.900     | Feb-07          |            |                  |   |                  | 0.000                  | 11.151     |                          |
| MIDS JTRS HW/SW (Phase 2C TTNT JPCP)   | CPFF                   | ViaSat Inc. Carlsbad, CA  | 3.071         | 3.000     | Feb-07          |            |                  |   |                  | 0.000                  | 6.071      |                          |
| MIDS JTRS HW/SW (Phase 2D TTNT JPCP)   | CPIF                   | DLS Cedar Rapids, IA  |               | 6.300     | Mar-07          | 21.342     | Nov-07           | 0.328                                     | Nov-08           | 0.000                  | 27.970     |                          |
| MIDS JTRS HW/SW (Phase 2D TTNT JPCP)   | CPIF                   | ViaSat Inc. Carlsbad, CA  |               | 8.220     | Mar-07          | 21.102     | Nov-07           | 0.217                                     | Nov-08           | 0.000                  | 29.539     |                          |
| MIDS JTRS Preoperational Support   | CPFF                   | DLS Cedar Rapids, IA  |               | 4.428     | Mar-07          |            |                  |   |                  | 0.000                  | 4.428      |                          |
| MIDS JTRS Preoperational Support   | CPFF                   | ViaSat Inc. Carlsbad, CA  |               | 4.500     | Mar-07          |            |                  |   |                  | 0.000                  | 4.500      |                          |
| MIDS JTRS Production Transition  | FFP                    | DLS Cedar Rapids, IA  |               | 2.544     | Mar-07          |            |                  |   |                  | 0.000                  | 2.544      |                          |
| MIDS JTRS Production Transition  | FFP                    | ViaSat Inc. Carlsbad, CA  |               | 2.544     | Mar-07          |            |                  |   |                  | 0.000                  | 2.544      |                          |
| MIDS JTRS Spec. Development (Phase 2A)   | FFP                    | DLS Cedar Rapids, IA  | 1.383         |           |                 |            |                  |   |                  | 0.000                  | 1.383      |                          |
| MIDS JTRS Spec. Development (Phase 2A)   | FFP                    | ViaSat Inc. Carlsbad, CA  | 0.704         |           |                 |            |                  |   |                  | 0.000                  | 0.704      |                          |
| MIDS JTRS Proposal Prep (Phase 2B Core)  | FFP                    | DLS Cedar Rapids, IA  | 0.600         |           |                 |            |                  |   |                  | 0.000                  | 0.600      |                          |
| MIDS JTRS Proposal Prep (Phase 2B Core)  | FFP                    | ViaSat Inc. Carlsbad, CA  | 1.774         |           |                 |            |                  |   |                  | 0.000                  | 1.774      |                          |
| Subtotal Product Development   |                        |   | 103.767       | 101.520   |                 | 58.548     |                  | 0.545                                     |                  | 0.000                  | 264.380    |                          |
| Remarks:<br>The Phase 2C TTNT JPCP original award occurred in Mar 2006 to DLS and ViaSat. Contract modifications to extend the Phase 2C TTNT JPCP effort are underway with planned contract awards in Feb 2007.  |                        |   |               |           |                 |            |                  |   |                  |                        |            |                          |
| <b>Development Support</b>   |                        |   |               |           |                 |            |                  |   |                  |                        |            |                          |
| * F/A-18 Level 0 Development Support (Unique)  | WX                     | China Lake  | 1.527         |           |                 |            |                  |   |                  | 0.000                  | 1.527      |                          |
| * F/A-18 Level 0 Integrated Logistics Support (Unique)   | WX                     | NAVAIR/Pax River/China Lake   | 0.300         |           |                 | 2.115      | Nov-07           | 2.590                                     | Nov-08           | 0.000                  | 5.005      |                          |
| Subtotal Support   |                        |   | 1.827         | 0.000     |                 | 2.115      |                  | 2.590                                     |                  | 0.000                  | 6.532      |                          |
| Remarks:<br>In PYs-FY08, Project No. 3020 represents the total MIDS JTRS RDT&E budget for those years.<br>In FY09, Project No. 3020 represents one-third of the total MIDS JTRS RDT&E budget. As part of the JTRS joint program acquisition strategy, each MILDEP budgets for one-third of the total program. Thus, one-third of MIDS is represented in this PE, one-third is represented in Army PE 0604280A, and one-third in Air Force PE 0604280F.<br>* Items marked with an asterisk (*) designate Navy unique tasks. |                        |   |               |           |                 |            |                  |   |                  |                        |            |                          |

## CLASSIFICATION:

| Exhibit R-3 Cost Analysis (MIDS JTRS page 2)   |                        |  |                 |           |                 |            |                  |                         |                  | DATE: <b>February 2007</b> |            |                          |
|--|------------------------|--|-----------------|-----------|-----------------|------------|------------------|-------------------------|------------------|----------------------------|------------|--------------------------|
| APPROPRIATION/BUDGET ACTIVITY  |                        | PROGRAM ELEMENT                                  |                 |           |                 |            |                  | PROJECT NUMBER AND NAME |                  |                            |            |                          |
| RDT&E, N / BA-5  |                        | PE: 0604280N TITLE: JOINT TACTICAL RADIO SYSTEMS |                 |           |                 |            |                  | 3020 MIDS JTRS          |                  |                            |            |                          |
| Cost Categories  | Contract Method & Type | Performing Activity & Location                   | Total PY's Cost | FY07 Cost | FY07 Award Date | FY 08 Cost | FY 08 Award Date | FY 09 Cost              | FY 09 Award Date | Cost to Complete           | Total Cost | Target Value of Contract |
| <b>Test and Evaluation</b>   |                        |  |                 |           |                 |            |                  |                         |                  |                            |            |                          |
| * F/A-18 Level 0 Developmental Test & Evaluation (Unique)  | WX                     | China Lake                                       | 0.063           |           |                 | 8.250      | Nov-07           |                         |                  |                            | 8.313      |                          |
| * F/A-18 Level 0 Operational Test & Evaluation (Unique)  | WX                     | China Lake                                       |                 |           |                 | 2.025      | Jul-08           |                         |                  |                            | 2.025      |                          |
| * F/A-18 Test Assets   | FFP                    | DLS Cedar Rapids, IA                             |                 | 3.816     | Mar-07          |            |                  |                         |                  |                            | 3.816      |                          |
| * F/A-18 Test Assets   | FFP                    | ViaSat Inc. Carlsbad, CA                         |                 | 3.816     | Mar-07          |            |                  |                         |                  |                            | 3.816      |                          |
| Government Testing   | WX                     | SSC San Diego                                    |                 |           |                 | 1.800      | Jul-08           | 0.400                   | Nov-08           |                            | 2.200      |                          |
| Engineering Support and Labor/SCS Changes  | WX                     | China Lake                                       |                 | 3.942     | Nov-06          |            |                  |                         |                  |                            | 3.942      |                          |
| Labor/SCS Changes  | WX                     | Pax River  |                 | 1.898     | Nov-06          |            |                  |                         |                  |                            | 1.898      |                          |
| ECP 6277 Preparation   | WX                     | Boeing   |                 | 0.327     | Mar-07          |            |                  |                         |                  |                            | 0.327      |                          |
| Subtotal T&E   |                        |  | 0.063           | 13.799    |                 | 12.075     |                  | 0.400                   |                  | 0.000                      | 26.337     |                          |
| Remarks:   |                        |  |                 |           |                 |            |                  |                         |                  |                            |            |                          |
| <b>Management Support</b>  |                        |  |                 |           |                 |            |                  |                         |                  |                            |            |                          |
| Contractor Engineering Support   | Various                | Various  | 5.538           | 6.077     |                 | 2.250      |                  | 0.500                   |                  |                            | 14.365     |                          |
| Government Engineering Support   | WX                     | Various  | 6.126           | 6.455     |                 | 3.000      |                  | 0.750                   |                  |                            | 16.331     |                          |
| Program Management Support   | Various                | Various  | 1.148           | 0.875     |                 | 0.600      |                  | 0.200                   |                  |                            | 2.823      |                          |
| Travel   |                        |  | 0.417           | 0.250     |                 | 0.150      |                  | 0.050                   |                  |                            | 0.867      |                          |
| Transportation   |                        |  |                 |           |                 |            |                  |                         |                  |                            | 0.000      |                          |
| SBIR Assessment  |                        |  |                 |           |                 |            |                  |                         |                  |                            | 0.000      |                          |
| Subtotal Management  |                        |  | 13.229          | 13.657    |                 | 6.000      |                  | 1.500                   |                  | 0.000                      | 34.386     |                          |
| <b>Total Cost</b>  |                        |  |                 |           |                 |            |                  |                         |                  |                            |            |                          |
|  |                        |  | 118.886         | 128.976   |                 | 78.738     |                  | 5.035                   |                  | 0.000                      | 331.635    |                          |
| Remarks:   |                        |  |                 |           |                 |            |                  |                         |                  |                            |            |                          |
| In PYs-FY08, Project No. 3020 represents the total MIDS JTRS RDT&E budget for those years.   |                        |  |                 |           |                 |            |                  |                         |                  |                            |            |                          |
| In FY09, Project No. 3020 represents one-third of the total MIDS JTRS RDT&E budget. As part of the JTRS joint program acquisition strategy, each MILDEP budgets for one-third of the total program. Thus, one-third of MIDS is represented in this PE, one-third is represented in Army PE 0604280A, and one-third in Air Force PE 0604280F. |                        |  |                 |           |                 |            |                  |                         |                  |                            |            |                          |
| * Items marked with an asterisk (*) designate Navy unique tasks.   |                        |  |                 |           |                 |            |                  |                         |                  |                            |            |                          |

Exhibit R-3, Project Cost Analysis

CLASSIFICATION:

| EXHIBIT R4, Schedule Profile            |  |   |   |   |      |   |   |   |      |   |   |   |      |                         |   |   | DATE: <b>February 2007</b> |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   |  |  |  |  |
|---|--|---|---|---|------|---|---|---|------|---|---|---|------|-------------------------|---|---|----------------------------|---|---|---|------|---|---|---|------|---|---|---|------|---|---|---|--|--|--|--|
| APPROPRIATION/BUDGET ACTIVITY           | PROGRAM ELEMENT NUMBER AND NAME                  |   |   |   |      |   |   |   |      |   |   |   |      | PROJECT NUMBER AND NAME |   |   |                            |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   |  |  |  |  |
| <b>RDT&amp;E, N / BA-5</b>              | PE: 0604280N TITLE: JOINT TACTICAL RADIO SYSTEMS |   |   |   |      |   |   |   |      |   |   |   |      | 3020 MIDS JTRS          |   |   |                            |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   |  |  |  |  |
| Fiscal Year                             | 2006   |   |   |   | 2007 |   |   |   | 2008 |   |   |   | 2009 |                         |   |   | 2010                       |   |   |   | 2011 |   |   |   | 2012 |   |   |   | 2013 |   |   |   |  |  |  |  |
|   | 1  | 2 | 3 | 4 | 1    | 2 | 3 | 4 | 1    | 2 | 3 | 4 | 1    | 2                       | 3 | 4 | 1                          | 2 | 3 | 4 | 1    | 2 | 3 | 4 | 1    | 2 | 3 | 4 | 1    | 2 | 3 | 4 |  |  |  |  |
| <b>MIDS JTRS Core Terminal</b>          |  |   |   |   |      |   |   |   |      |   |   |   |      |                         |   |   |                            |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   |  |  |  |  |
|   |  |   |   |   |      |   |   |   |      |   |   |   |      |                         |   |   |                            |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   |  |  |  |  |
|   |  |   |   |   |      |   |   |   |      |   |   |   |      |                         |   |   |                            |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   |  |  |  |  |
| <b>MIDS JTRS TTNT JPCP</b>              |  |   |   |   |      |   |   |   |      |   |   |   |      |                         |   |   |                            |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   |  |  |  |  |
|   |  |   |   |   |      |   |   |   |      |   |   |   |      |                         |   |   |                            |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   |  |  |  |  |
| <b>Test &amp; Evaluation Milestones</b> |  |   |   |   |      |   |   |   |      |   |   |   |      |                         |   |   |                            |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   |  |  |  |  |
| F/A-18 Level 0 Integration              |  |   |   |   |      |   |   |   |      |   |   |   |      |                         |   |   |                            |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   |  |  |  |  |
| TECHEVAL                                |  |   |   |   |      |   |   |   |      |   |   |   |      |                         |   |   |                            |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   |  |  |  |  |
| OPEVAL                                  |  |   |   |   |      |   |   |   |      |   |   |   |      |                         |   |   |                            |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   |  |  |  |  |

\* Not required for Budget Activities 1, 2, 3, and 6

CLASSIFICATION:

| Exhibit R-4a, Schedule Detail                                |  |         |         |                         | DATE: February 2007 |         |         |         |
|--|--|---------|---------|-------------------------|---------------------|---------|---------|---------|
| APPROPRIATION/BUDGET ACTIVITY                                | PROGRAM ELEMENT                                  |         |         | PROJECT NUMBER AND NAME |                     |         |         |         |
| <b>RDTE, N / BA-5</b>  | PE: 0604280N TITLE: JOINT TACTICAL RADIO SYSTEMS |         |         | 3020 MIDS JTRS          |                     |         |         |         |
| Schedule Profile   | FY 2006  | FY 2007 | FY 2008 | FY 2009                 | FY 2010             | FY 2011 | FY 2012 | FY 2013 |
| MIDS JTRS Migration Core Terminal                            |  |         |         |                         |                     |         |         |         |
| Phase 2B: Design, Development, Fabrication and Qualification |  |         |         |                         |                     |         |         |         |
| System Development   |  |         | 2Q      |                         |                     |         |         |         |
| Preliminary Design Review (PDR)                              |  |         |         |                         |                     |         |         |         |
| Critical Design Review (CDR)                                 | 3Q   |         |         |                         |                     |         |         |         |
| Quality Design and Build                                     | 3Q   | 3Q      |         |                         |                     |         |         |         |
| Test Readiness Review (TRR)                                  |  | 3Q      |         |                         |                     |         |         |         |
| Contractor Testing (FAQT)                                    |  | 4Q      | 1Q      |                         |                     |         |         |         |
| Milestone C  |  | 4Q      |         |                         |                     |         |         |         |
| Government Testing   |  |         | 1Q      |                         |                     |         |         |         |
| Production Verification Terminal Delivery (PVT)              |  |         | 2Q      |                         |                     |         |         |         |
| Production Transition Terminal Delivery (PTT)                |  |         | 3Q      |                         |                     |         |         |         |
| Test and Evaluation  |  |         |         |                         |                     |         |         |         |
| F/A-18 Level 0 Integration                                   |  |         |         |                         |                     |         |         |         |
| Technical Evaluation (TECHEVAL)                              |  |         | 1Q, 4Q  |                         |                     |         |         |         |
| Operational Evaluation (OPEVAL)                              |  |         | 4Q      | 1Q                      |                     |         |         |         |
| Initial Operating Capability                                 |  |         |         | 2Q                      |                     |         |         |         |
| Full Rate Production Decision                                |  |         |         | 2Q                      |                     |         |         |         |
| MIDS JTRS TTNT JPCP  |  |         |         |                         |                     |         |         |         |
| Phase 2C: Specification Development                          | 2Q   | 1Q      |         |                         |                     |         |         |         |
| Phase 2D: Design, Development, Fabrication and Qualification |  |         |         |                         |                     |         |         |         |
| System Development   |  | 2Q      |         | 4Q                      |                     |         |         |         |
| Preliminary Design Review (PDR)                              |  | 4Q      |         |                         |                     |         |         |         |
| Critical Design Review (CDR)                                 |  |         | 2Q      |                         |                     |         |         |         |
| Quality Design and Build                                     |  |         | 2Q      | 1Q                      |                     |         |         |         |
| Test Readiness Review (TRR)                                  |  |         |         | 1Q                      |                     |         |         |         |
| Contractor Testing (FAQT)                                    |  |         |         | 1Q, 3Q                  |                     |         |         |         |
| Government Testing   |  |         |         | 3Q                      |                     |         |         |         |
| Production Verification Terminal Delivery (PVT)              |  |         |         | 3Q, 4Q                  |                     |         |         |         |

Exhibit R-4a, Schedule Detail

**Classification:**

|  |                |   |                |                |   |                               |               |               |
|--|----------------|---|----------------|----------------|---|-------------------------------|---------------|---------------|
| Exhibit R-5, Termination Liability Funding for Major Defense Acquisition Programs, RDT&E Funding   |                |   |                |                |   | DATE:<br><b>February 2007</b> |               |               |
| APPROPRIATION/BUDGET ACTIVITY<br><b>RDT&amp;E, N / BA-5</b>  |                | PROGRAM ELEMENT NUMBER AND NAME<br>PE: 0604280N TITLE: JOINT TACTICAL RADIO SYSTEMS |                |                | PROJECT NUMBER AND NAME<br>3020 MIDS JTRS |                               |               |               |
| <b>Program Title</b>   | <b>FY 2006</b> | <b>FY 2007</b>  | <b>FY 2008</b> | <b>FY 2009</b> | <b>FY2010</b>                             | <b>FY2011</b>                 | <b>FY2012</b> | <b>FY2013</b> |
| X3020 Multifunctional Information Distribution System (MIDS JTRS)  | 5.589          | 4.800   | 4.692          | 1.500          | 0.000                                     | 0.000                         | 0.000         | 0.000         |
| <p>Note: In FY06-FY08, MIDS JTRS represents the total termination liability (TL) funding profile. In FY09 MIDS JTRS represents one-third of the total termination liability (TL) funding profile. As part of the JTRS joint program acquisition strategy, each MILDEP budgets for one-third of the total program. Thus, one-third of TL is represented in this PE, one-third is represented in Army PE 0604280A and one-third in Air Force PE 0604280F.</p> <p><u>Instructions:</u></p> <ol style="list-style-type: none"> <li>1. For all ACAT 1 programs with RDT&amp;E funding, indicate the funds by year budgeted for termination liability.</li> <li>2. If not budgeted, provide the appropriate waiver authority.</li> <li>3. For programs with waiver authority, identify the amounts on the contract by year.</li> </ol> |                |   |                |                |   |                               |               |               |

**Exhibit R-5 Termination Liability in  
Major Acquisition Programs RDTE**

**CLASSIFICATION:**

|   |  |  |         |              |         |                            |         |         |         |
|---|--|--|---------|--------------|---------|----------------------------|---------|---------|---------|
| EXHIBIT R-2a, RDT&E Project Justification                   |  |  |         | UNCLASSIFIED |         | DATE: <b>February 2007</b> |         |         |         |
| APPROPRIATION/BUDGET ACTIVITY<br><b>RDT&amp;E, N / BA-5</b> |  | PROJECT NUMBER AND NAME<br>3073 Airborne/Maritime/Fixed Station (AMF) JTRS |         |              |         |                            |         |         |         |
| COST (\$ in Millions)                                       |  | FY 2006  | FY 2007 | FY 2008      | FY 2009 | FY 2010                    | FY 2011 | FY 2012 | FY 2013 |
| Total Project Cost  |  | 72.344   | 93.566  | 152.350      | 69.721  | 68.373                     | 47.460  | 82.052  | 85.444  |
| 3073 Airborne/Maritime/Fixed Station (AMF) JTRS             |  | 64.863   | 93.566  | 152.350      | 69.721  | 68.373                     | 47.460  | 82.052  | 85.444  |
| 3073 Joint Task Force Wide Area Relay Network (JTF WARNET)  |  | 7.481  | 0.000   | 0.000        | 0.000   | 0.000                      | 0.000   | 0.000   | 0.000   |

In FY06, Airborne/Maritime/Fixed Station (AMF) Air Force JTRS funding resides in Air Force PE 0604280F, Project 5068. See R-2 Other Program Funding Summary.

In FY07-FY08, Project No. 3073 represents the total AMF JTRS RDT&E budget for those years.

In FY09-FY13, Project No. 3073 represents the Navy share (1/3) of the funding associated with AMF JTRS. As part of the JTRS joint program acquisition strategy, each Military Department (MILDEP) budgets for one-third of the total program. Thus, one-third of JTRS Common Development is represented in this PE, one-third is represented in Army PE 0604280A and one-third in Air Force PE 0604280F.

In February 2005, Mr. Wynne, Acting Under Secretary of Defense for Acquisition, Technology and Logistics issued a JTRS Acquisition Decision Memorandum (ADM) directing the realignment of the current acquisition management structure for all JTRS programs under the authority of a single JTRS Joint Program Executive Officer (JPEO). In November 2005, the DAE and Senior JTRS Leadership selected a re-plan option which restructures JTRS to emphasize cost and schedule performance while executing a moderate technical risk plan. The new JTRS development and acquisition strategy was formalized and approved in a March 31st, 2006 ADM signed by Under Secretary Kenneth Krieg, the Under Secretary of Defense for Acquisition, Technology and Logistics.

JTF WARNET funding ended in FY06.

**(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:**

AMF JTRS is intended to support communications readiness and mission success, in the 2MHz to 2GHz 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. AMF JTRS will provide the Warfighter with a modernized communications capability for more effective battlefield management and interoperability. AMF JTRS is a key enabler for the transformation of airborne communications toward network-centric operations. AMF JTRS is designed to perform as a reliable and dynamic family of advanced communications systems. As a result, AMF JTRS will be a hardware-configurable and software-programmable radio system that provides increased interoperability, flexibility and adaptability to support varied mission requirements. The system is multi-functional, multi-band, multi-mode, network capable and capable of providing communications through a range of low probability of intercept, low probability of detection and anti-jam waveforms. AMF JTRS will operate with legacy equipment and waveforms currently used by civilian and military airborne, surface, subsurface, and fixed station platforms. AMF JTRS is intended to replace existing legacy radio systems, which are currently facing long-term sustainment issues and diminishing sources of material support. AMF JTRS capabilities will be developed in an incremental approach, with each increment building on the technological achievements of its predecessor, while providing expanded capabilities.

(JTF WARNET) Joint Task Force Wide Area Relay Network Program Enhancement (JTF WARNET) - This program is a Naval Research Laboratory (NRL) initiative that has grown from an Advanced Concept Technology Demonstration (ACTD). Funding ended in FY06. This program supported JTRS, CONOPS & Tactics, Techniques and Procedures (TTP) development, incorporated Intra-Battle Group Wireless Network (IBGWN) capabilities, supported Advanced Digital Networking System (ADNS) Integration and supported Joint Translator Forwarder (JXF.)

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| EXHIBIT R-2a, RDT&E Project Justification | DATE: <b>February 2007</b> |
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| APPROPRIATION/BUDGET ACTIVITY<br><b>RDT&amp;E, N /BA-5</b> | PE: 0604280N TITLE: JOINT TACTICAL RADIO SYSTEMS | PROJECT NUMBER AND NAME<br>3073 Airborne/Maritime/Fixed Station (AMF) JTRS |
|--|--|--|

**(U) B. Accomplishments/Planned Program**

|                         | FY 06  | FY 07  | FY 08   | FY 09  |
|-------------------------|--------|--------|---------|--------|
| AMF JTRS                | 64.863 | 93.566 | 152.350 | 69.721 |
| RDT&E Articles Quantity |        |        |         |        |

**FY06:** Completed Pre-System Development & Demonstration phase. Development engineering and management support for associated JTR system components. Provided engineering and Management support for Navy and Air Force specific JTRS implementation efforts.

**FY07:** AMF JTRS is planning a late FY07 Milestone B and subsequent award of a System Design and Development (SDD) contract. Provide engineering and Management support for Nav specific JTRS implementation efforts.

**FY08:** Critical Design Review (CDR) planned for early FY08. Continue SDD development for the AMF JTRS system including Engineering Development Models (EDMs) and associated testing and integration activities. Continue development engineering and management support for associated JTR system components.

**FY09:** Continue SDD development for the AMF JTRS system including EDMs and associated testing and integration activities. Continue development engineering and management support for associated JTR system components.

Note:

In FY06, Air Force AMF JTRS funding resides in Air Force PE 0604280F, Project 5068. The FY06 amount provided above represents the total AMF Navy funding for that year.

In FY07-FY08, Project No. 3073 represents the total AMF JTRS RDT&E budget for those years.

In FY09, Project No. 3073 represents one-third of the total AMF JTRS RDT&E budget. As part of the JTRS joint program acquisition strategy, each MILDEP budgets for one-third of the total program. Thus, one-third of AMF is represented in this PE, one-third is represented in Army PE 0604280A, and one-third in Air Force PE 0604280F.

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| EXHIBIT R-2a, RDT&E Project Justification | DATE:<br><b>February 2007</b> |
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| APPROPRIATION/BUDGET ACTIVITY<br><b>RDT&amp;E, N /BA-5</b> | PE: 0604280N TITLE: JOINT<br>TACTICAL RADIO SYSTEMS | PROJECT NUMBER AND NAME<br>3073 Airborne/Maritime/Fixed Station (AMF) JTRS |
|--|---|--|

**(U) B. Accomplishments/Planned Program**

|                         | FY 06 | FY 07 | FY 08 | FY 09 |
|-------------------------|-------|-------|-------|-------|
| JTF WARNET              | 7.481 | 0.000 | 0.000 | 0.000 |
| RDT&E Articles Quantity |       |       |       |       |

**FY06:** Joint Task Force Wide Area Relay Network Program Enhancement (JTF WARNET) - This program is a NRL initiative that grew from an Advanced Concept Technology Demonstration (ACTD). In FY06, this program supported JTRS, CONOPS & Tactics, Techniques and Procedures (TTP) development, incorporated Intra-Battle Group Wireless Network (IBGWN) capabilities, supported ADNS Integration and Joint Translator Forwarder (JXF). Funding for this program ended in FY06.

CLASSIFICATION:

| Exhibit R-3 Cost Analysis (AMF JTRS page 1)  |                        |  |  |            |                  |   |                  |            | DATE: February 2007 |                  |            |                          |
|--|------------------------|--|--|------------|------------------|---|------------------|------------|---------------------|------------------|------------|--------------------------|
| APPROPRIATION/BUDGET ACTIVITY  |                        |  | PROGRAM ELEMENT                                  |            |                  | PROJECT NUMBER AND NAME                         |                  |            |                     |                  |            |                          |
| RDT&E, N / BA-5  |                        |  | PE: 0604280N TITLE: JOINT TACTICAL RADIO SYSTEMS |            |                  | 3073 Airborne/Maritime/Fixed Station (AMF) JTRS |                  |            |                     |                  |            |                          |
| Cost Categories  | Contract Method & Type | Performing Activity & Location                                 | Total PY s Cost                                  | FY 07 Cost | FY 07 Award Date | FY 08 Cost                                      | FY 08 Award Date | FY 09 Cost | FY 09 Award Date    | Cost to Complete | Total Cost | Target Value of Contract |
| <b>Product Development</b>   |                        |  |  |            |                  |   |                  |            |                     |                  |            |                          |
| MIDS JTRS HW/SW (Phase 2A/2B Core)   | CPIF                   | DLS Cedar Rapids, IA   | 8.563  |            |                  |   |                  |            |                     |                  |            |                          |
| MIDS JTRS HW/SW (Phase 2A/2B Core)   | CPIF                   | ViaSat Inc. Carlsbad, CA                                       | 2.559  |            |                  |   |                  |            |                     |                  |            |                          |
| AMF JTRS Development - JTR System (Pre-SDD)  | CPFF                   | The Boeing Company, Anaheim, CA/ Lockheed Martin, Manassas, VA | 90.937   |            |                  |   |                  |            |                     | Cont.            | Cont.      |                          |
| AMF JTRS Development - JTR SET (SDD)   | CPAF/IF                | TBD  |  | 37.050     | 3Q07             | 90.203  | 1Q08             | 50.361     | 1Q09                | Cont.            | Cont.      |                          |
| AMF JTRS - Requirements Planning and Risk Reduction  | Various                | Various  | 1.490  | 13.114     | 1-3Q07           | 7.654   | 1Q08             | 3.065      | 1Q09                | Cont.            | Cont.      |                          |
| AMF JTRS - Systems Engineering   | Various                | Various  | 16.302   | 22.081     | 1-2Q07           | 25.826  | 1-2Q08           | 8.031      | 1-2Q09              | Cont.            | Cont.      |                          |
| Systems Engineering - JTRS Implementation-Navy Unique  | Various                | Various  | 13.538   | 2.096      | 1-2Q07           |   |                  |            |                     | Cont.            | Cont.      |                          |
| H/W Development: DMR HF Power Amplifier  | FFP                    | GDDS   | 2.800  |            |                  |   |                  |            |                     |                  |            | 2.800                    |
| Systems Engineering - JTF WARNET   | Various                | Various  | 7.481  |            |                  |   |                  |            |                     |                  |            | 7.482                    |
| Subtotal Product Development   |                        |  | 143.670  | 74.341     |                  | 123.683   |                  | 61.457     |                     | Cont.            | Cont.      |                          |
| Remarks:   |                        |  |  |            |                  |   |                  |            |                     |                  |            |                          |
| <b>Development Support</b>   |                        |  |  |            |                  |   |                  |            |                     |                  |            |                          |
| AMF JTRS - Acquisition, and ILS Support  | Various                | Various  | 19.239   | 11.283     | 1-2Q07           | 13.362  | 1-2Q08           | 3.306      | 1-2Q09              | Cont.            | Cont.      |                          |
| Software Dev: DMR Build 6.4  | FFP                    | GDDS   | 12.861   |            |                  |   |                  |            |                     | Cont.            | Cont.      |                          |
| Subtotal Support   |                        |  | 32.100   | 11.283     |                  | 13.362  |                  | 3.306      |                     | Cont.            | Cont.      |                          |
| Remarks:<br>In PYs-FY06, Air Force AMF JTRS funding resides in Air Force PE 0604280F, Project 5068. In PYs-FY06, Navy AMF JTRS funding resides in this PE, Project 3073.<br>In FY07-FY08, Project No. 3073 represents the total AMF JTRS RDT&E budget for those years.<br>In FY09, Project No. 3073 represents one-third of the total AMF JTRS RDT&E budget. As part of the JTRS joint program acquisition strategy, each MILDEP budgets for one-third of the total program. Thus, one-third of AMF is represented in this PE, one-third is represented in Army PE 0604280A, and one-third in Air Force PE 0604280F. |                        |  |  |            |                  |   |                  |            |                     |                  |            |                          |

CLASSIFICATION:

| Exhibit R-3 Cost Analysis (AMF JTRS page 2)  |                        |  |                 |            |                  |   |                  |            |                  | DATE: February 2007 |            |                          |
|--|------------------------|--|-----------------|------------|------------------|---|------------------|------------|------------------|---------------------|------------|--------------------------|
| APPROPRIATION/BUDGET ACTIVITY  |                        | PROGRAM ELEMENT                                  |                 |            |                  | PROJECT NUMBER AND NAME                         |                  |            |                  |                     |            |                          |
| RDT&E, N / BA-5  |                        | PE: 0604280N TITLE: JOINT TACTICAL RADIO SYSTEMS |                 |            |                  | 3073 Airborne/Maritime/Fixed Station (AMF) JTRS |                  |            |                  |                     |            |                          |
| Cost Categories  | Contract Method & Type | Performing Activity & Location                   | Total PY s Cost | FY 07 Cost | FY 07 Award Date | FY 08 Cost                                      | FY 08 Award Date | FY 09 Cost | FY 09 Award Date | Cost to Complete    | Total Cost | Target Value of Contract |
| <b>Developmental Test &amp; Evaluation</b>   |                        |  |                 |            |                  |   |                  |            |                  |                     |            |                          |
| AMF JTRS - Test and Evaluation and Test Support  | Various                | Various  | 3.860           | 3.332      | 1-2Q07           | 8.366   | 1-2Q08           | 2.582      | 1-2Q09           | Cont.               | Cont.      |                          |
| DMR T&E (FOTE)   | WX                     | SSC-SD   | 1.724           |            |                  |   |                  |            |                  |                     |            | 1.724                    |
| DMR T&E (FOTE)   | WX                     | SSC-CH   | 1.732           |            |                  |   |                  |            |                  |                     |            | 1.732                    |
| Subtotal T&E   |                        |  | 7.316           | 3.332      |                  | 8.366   |                  | 2.582      |                  | Cont.               | Cont.      |                          |
| Remarks:   |                        |  |                 |            |                  |   |                  |            |                  |                     |            |                          |
| <b>Management Services</b>   |                        |  |                 |            |                  |   |                  |            |                  |                     |            |                          |
| Business Operations Management and Support   | Various                | Various  | 14.710          | 4.610      | 1-4Q07           | 6.939   | 1-4Q08           | 2.376      | 1-4Q09           | Cont.               | Cont.      |                          |
| Subtotal Management  |                        |  | 14.710          | 4.610      |                  | 6.939   |                  | 2.376      |                  | Cont.               | Cont.      |                          |
| Remarks:   |                        |  |                 |            |                  |   |                  |            |                  |                     |            |                          |
| Total Cost   |                        |  | 197.796         | 93.566     |                  | 152.350   |                  | 69.721     |                  | Continuing          | Continuing |                          |
| Remarks:<br>In PYs-FY06, Air Force AMF JTRS funding resides in Air Force PE 0604280F, Project 5068. In PYs-FY06, Navy AMF JTRS funding resides in this PE, Project 3073.<br>In FY07-FY08, Project No. 3073 represents the total AMF JTRS RDT&E budget for those years.<br>In FY09, Project No. 3073 represents one-third of the total AMF JTRS RDT&E budget. As part of the JTRS joint program acquisition strategy, each MILDEP budgets for one-third of the total program. Thus, one-third of AMF is represented in this PE, one-third is represented in Army PE 0604280A, and one-third in Air Force PE 0604280F. |                        |  |                 |            |                  |   |                  |            |                  |                     |            |                          |

Exhibit R-3, Project Cost Analysis



CLASSIFICATION:

|   |         |  |         |                 |  |         |         |                            |  |
|---|---------|--|---------|-----------------|--|---------|---------|----------------------------|--|
| Exhibit R-4a, Schedule Detail                               |         |  |         | <b>AMF JTRS</b> |  |         |         | DATE: <b>February 2007</b> |  |
| APPROPRIATION/BUDGET ACTIVITY<br><b>RDT&amp;E, N / BA-5</b> |         | PROGRAM ELEMENT<br>PE: 0604280N TITLE: JOINT TACTICAL RA |         |                 | PROJECT NUMBER AND NAME<br>3073 Airborne/Maritime/Fixed Station (AMF) JTRS |         |         |                            |  |
| Schedule Profile  | FY 2006 | FY 2007  | FY 2008 | FY 2009         | FY 2010  | FY 2011 | FY 2012 | FY 2013                    |  |
| Milestone B (MS-B)  |         | 3Q   |         |                 |  |         |         |                            |  |
| Contract Award SDD  |         | 3Q   |         |                 |  |         |         |                            |  |
| System Development  |         | 3Q   |         |                 |  |         |         |                            |  |
| Critical Design Review (CDR)                                |         |  | 2Q      |                 |  |         |         |                            |  |
| Design Readiness Review (DRR)                               |         |  | 2Q      |                 |  |         |         |                            |  |
| Eng Dev Model (EDM)   |         |  |         | 4Q              | 1/4Q   | 1/2Q    |         |                            |  |
| Milestone C (MS C)  |         |  |         |                 | 3Q   |         |         |                            |  |
| Low-Rate Initial Production I Delivery                      |         |  |         |                 |  | 3/4Q    | 1/4Q    | 1/4Q                       |  |
| Multi-Service Operational Test and Evaluation (MOT&E)       |         |  |         |                 |  |         |         | 2/3Q                       |  |
| Full Rate Production (FRP) Decision                         |         |  |         |                 |  |         |         | 4Q                         |  |
| Contract Award Production                                   |         |  |         |                 |  |         |         | 4Q                         |  |

Exhibit R-4a, Schedule Detail

**Classification:**

|  |                |   |                |                |  |                               |               |               |
|--|----------------|---|----------------|----------------|--|-------------------------------|---------------|---------------|
| Exhibit R-5, Termination Liability Funding for Major Defense Acquisition Programs, RDT&E Funding   |                |   |                |                |  | DATE:<br><b>February 2007</b> |               |               |
| APPROPRIATION/BUDGET ACTIVITY<br><b>RDT&amp;E, N / BA-5</b>  |                | PROGRAM ELEMENT NUMBER AND NAME<br>PE: 0604280N TITLE: JOINT TACTICAL RADIO SYSTEMS |                |                | PROJECT NUMBER AND NAME<br>3073 Airborne/Maritime/Fixed Station (AMF) JTRS |                               |               |               |
| <b>Program Title</b>   | <b>FY 2006</b> | <b>FY 2007</b>  | <b>FY 2008</b> | <b>FY 2009</b> | <b>FY2010</b>  | <b>FY2011</b>                 | <b>FY2012</b> | <b>FY2013</b> |
| X3073 Airborne, Maritime, Fixed Site JTRS (AMF JTRS)   | 0.000          | 8.374   | 2.572          | 3.151          | 1.606  | 0.594                         | 0.000         | 0.000         |
| <p>Note: In FY06-08, AMF JTRS represents the total termination liability (TL) funding profile. In FY09 AMF JTRS represents one-third of the total termination liability (TL) funding profile. As part of the JTRS joint program acquisition strategy, each MILDEP budgets for one-third of the total program. Thus, one-third of TL is represented in this PE, one-third is represented in Army PE 0604280A and one-third in Air Force PE 0604280F.</p> <p><u>Instructions:</u></p> <ol style="list-style-type: none"> <li>1. For all ACAT 1 programs with RDT&amp;E funding, indicate the funds by year budgeted for termination liability.</li> <li>2. If not budgeted, provide the appropriate waiver authority.</li> <li>3. For programs with waiver authority, identify the amounts on the contract by year.</li> </ol> |                |   |                |                |  |                               |               |               |

**Exhibit R-5 Termination Liability in  
Major Acquisition Programs RDTEN**

**CLASSIFICATION:**

|   |              |  |                |               |                            |               |              |              |
|---|--------------|--|----------------|---------------|----------------------------|---------------|--------------|--------------|
| EXHIBIT R-2a, RDT&E Project Justification                   |              | UNCLASSIFIED   |                |               | DATE: <b>February 2007</b> |               |              |              |
| APPROPRIATION/BUDGET ACTIVITY<br><b>RDT&amp;E, N / BA-5</b> |              | PROJECT NUMBER AND NAME<br>3074 Ground Mobile Radio (GMR JTRS) |                |               |                            |               |              |              |
| COST (\$ in Millions)                                       | FY 2006      | FY 2007  | FY 2008        | FY 2009       | FY 2010                    | FY 2011       | FY 2012      | FY 2013      |
| Total Project Cost  | <b>0.000</b> | <b>219.061</b>   | <b>236.442</b> | <b>68.319</b> | <b>39.769</b>              | <b>16.116</b> | <b>0.000</b> | <b>0.000</b> |
| 3074 Ground Mobile Radio (GMR) JTRS                         | <b>0.000</b> | <b>219.061</b>   | <b>236.442</b> | <b>68.319</b> | <b>39.769</b>              | <b>16.116</b> | <b>0.000</b> | <b>0.000</b> |

In FY06, Ground Mobile Radio (GMR) JTRS funding resides in Army PE 0604805A, Project 615. See R-2 Other Program Funding Summary.

In FY07-FY08, Project No. 3074 represents the total Ground Mobile Radio (GMR) JTRS RDT&E budget for those years.

In FY09-FY13, Project No. 3074 represents the Navy share (1/3) of the funding associated with GMR JTRS. As part of the JTRS joint program acquisition strategy, each Military Department (MILDEP) budgets for one-third of the total program. Thus, one-third of JTRS Common Development is represented in this PE, one-third is represented in Army PE 0604280A and one-third in Air Force PE 0604280F.

In February 2005, Mr. Wynne, Acting Under Secretary of Defense for Acquisition, Technology and Logistics issued a JTRS Acquisition Decision Memorandum (ADM) directing the realignment of the current acquisition management structure for all JTRS programs under the authority of a single JTRS Joint Program Executive Officer (JPEO). In November 2005, the DAE and Senior JTRS Leadership selected a re-plan option which restructures JTRS to emphasize cost and schedule performance while executing a moderate technical risk plan. The new JTRS development and acquisition strategy was formalized and approved in a March 31st, 2006 ADM signed by Under Secretary Kenneth Krieg, the Under Secretary of Defense for Acquisition, Technology and Logistics.

**(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:**

GMR is a product line overseen by the JTRS Ground Domain Program Management Office. 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. JTRS will provide transformational communication capabilities for the warfighter. The JTRS GMR will provide networking capability using the Wideband Networking Waveform and Soldier Radio Waveform to connect the unmanned sensors to the decision makers "On-The-Move" (OTM) which will significantly reduce the decision cycle. JTRS GMR will provide the warfighter with mobile Internet-like capabilities such as voice, data, networking and video communications, as well as interoperability with legacy radios across the battlespace.

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| EXHIBIT R-2a, RDT&E Project Justification | DATE: <b>February 2007</b> |
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| APPROPRIATION/BUDGET ACTIVITY<br><b>RDT&amp;E, N /BA-5</b> | PE: 0604280N TITLE: JOINT<br>TACTICAL RADIO SYSTEMS | PROJECT NUMBER AND NAME<br>3074 Ground Mobile Radio (GMR JTRS) |
|--|---|--|

**(U) B. Accomplishments/Planned Program**

|                                     | FY 06 | FY 07   | FY 08   | FY 09  |
|-------------------------------------|-------|---------|---------|--------|
| <b>Ground Mobile Radio</b> (Common) | 0.000 | 219.061 | 236.442 | 68.319 |
| RDT&E Articles Quantity             |       |         |         |        |

**FY06:** FY06 funding for GMR JTRS resides in PE 0604805A (Project 615). Continued Product Development including GMR JTRS Vehicular Hardware design and development of prototypes and technical engineering support. Continued Test and Evaluation including JTRS EPG test bed and test planning, test support, Electronic and Information Warfare Test and Evaluation, and labor. Continued JTRS Program Management Office support, and Systems Engineering and Technical support.

**FY07:** In FY07, GMR JTRS efforts were transferred from PE 0604280A to PE 0604280N to support the revised JTRS joint program acquisition strategy. Continue Product Development including GMR JTRS Vehicular Hardware design and development of prototypes and technical engineering support. Continue Test and Evaluation including JTRS EPG test bed and test planning, test support, Electronic and Information Warfare Test and Evaluation, and labor. Continue JTRS Program Management Office support, and Systems Engineering and Technical support.

**FY08:** FY08 GMR JTRS funding supports the design, development and manufacture of Engineering Development Models (EDMs) for Ground Mobile Radio (GMR), technical support, Radio Application SW Functional Qualification Test, and Program Management Office support.

**FY09:** FY09 GMR JTRS funding will support the design, development, manufacture and delivery of EDMs for Ground Mobile Radio (GMR), technical support, Production Qualification Test (PQT), and Project Management Office support.

Note:  
 In FY06, GMR JTRS funding resides in Army PE 0604805A, Project 615.  
 In FY07-FY08, Project No. 3074 represents the total GMR JTRS RDT&E budget for those years.  
 In FY09, Project No. 3074 represents one-third of the total GMR JTRS RDT&E budget. As part of the JTRS joint program acquisition strategy, each MILDEP budgets for one-third of the total program. Thus, one-third of GMR is represented in this PE, one-third is represented in Army PE 0604280A, and one-third in Air Force PE 0604280F.

CLASSIFICATION:

| Exhibit R-3 Cost Analysis (JTRS GMR page 1)   |                        |                                |  |            |                  |                                     |                  |            | DATE: February 2007 |                  |            |                          |
|---|------------------------|--------------------------------|--|------------|------------------|-------------------------------------|------------------|------------|---------------------|------------------|------------|--------------------------|
| APPROPRIATION/BUDGET ACTIVITY   |                        |                                | PROGRAM ELEMENT                                  |            |                  | PROJECT NUMBER AND NAME             |                  |            |                     |                  |            |                          |
| RDT&E, N / BA-5   |                        |                                | PE: 0604280N TITLE: JOINT TACTICAL RADIO SYSTEMS |            |                  | 3074 Ground Mobile Radio (GMR JTRS) |                  |            |                     |                  |            |                          |
| Cost Categories   | Contract Method & Type | Performing Activity & Location | Total PY s Cost                                  | FY 07 Cost | FY 07 Award Date | FY 08 Cost                          | FY 08 Award Date | FY 09 Cost | FY 09 Award Date    | Cost to Complete | Total Cost | Target Value of Contract |
| <b>Product Development</b>  |                        |                                |  |            |                  |                                     |                  |            |                     |                  |            |                          |
| JTRS GMR GFE  | Various                | Various                        | 0.000  | 2.000      | 3Q               |                                     |                  |            |                     | Cont.            | Cont.      |                          |
| JTRS GMR 1 SDD  | C/CPAF                 | BOEING, Anaheim, CA            | 0.000  | 173.312    | 1-3Q             | 170.824                             | 1-3Q             | 43.687     | 1-3Q                | Cont.            | Cont.      |                          |
| JTRS DEVELOPMENT - System Engineering Support   | Various                | Various                        | 0.000  | 1.420      | 1-2Q             | 1.728                               | 1-2Q             | 0.525      | 1-2Q                | Cont.            | Cont.      |                          |
| Technology Development efforts  |                        |                                | 0.000  | 0.000      |                  | 5.100                               | 2Q               | 1.700      | 2Q                  | Cont.            | Cont.      |                          |
| Subtotal Product Development  |                        |                                | 0.000  | 176.732    |                  | 177.652                             |                  | 45.912     |                     | Cont.            | Cont.      |                          |
| Remarks:  |                        |                                |  |            |                  |                                     |                  |            |                     |                  |            |                          |
| <b>Development Support</b>  |                        |                                |  |            |                  |                                     |                  |            |                     |                  |            |                          |
| NTDRS   |                        |                                | 0.000  | 0.000      |                  |                                     |                  |            |                     | Cont.            | Cont.      |                          |
| JTRS Antenna Study  |                        |                                | 0.000  | 0.000      |                  |                                     |                  |            |                     | Cont.            | Cont.      |                          |
| JTRS Tech Support   | Various                | Various                        | 0.000  | 0.000      |                  | 0.675                               | 1-2Q             | 0.572      | 1-2Q                | Cont.            | Cont.      |                          |
| ABCS SE&I Effort  |                        |                                | 0.000  | 0.000      |                  |                                     |                  |            |                     | Cont.            | Cont.      |                          |
|   |                        |                                |  |            |                  |                                     |                  |            |                     | Cont.            | Cont.      |                          |
| Subtotal Support  |                        |                                | 0.000  | 0.000      |                  | 0.675                               |                  | 0.572      |                     | Cont.            | Cont.      |                          |
| Remarks:<br>In PYs-FY06, GMR JTRS funding resides in Army PE 0604805A, Project 615.<br>In FY07-FY08, Project No. 3074 represents the total GMR JTRS RDT&E budget for those years.<br>In FY09, Project No. 3074 represents one-third of the total GMR JTRS RDT&E budget. As part of the JTRS joint program acquisition strategy, each MILDEP budgets for one-third of the total program. Thus, one-third of GMR is represented in this PE, one-third is represented in Army PE 0604280A, and one-third in Air Force PE 0604280F. |                        |                                |  |            |                  |                                     |                  |            |                     |                  |            |                          |

Exhibit R-3, Project Cost Analysis

CLASSIFICATION:

| Exhibit R-3 Cost Analysis (JTRS GMR page 2)  |                        |                                |  |            |                  |                                     |                  |            |                  | DATE: February 2007 |            |                          |
|--|------------------------|--------------------------------|--|------------|------------------|-------------------------------------|------------------|------------|------------------|---------------------|------------|--------------------------|
| APPROPRIATION/BUDGET ACTIVITY  |                        |                                | PROGRAM ELEMENT                                  |            |                  | PROJECT NUMBER AND NAME             |                  |            |                  |                     |            |                          |
| RDT&E, N / BA-5  |                        |                                | PE: 0604280N TITLE: JOINT TACTICAL RADIO SYSTEMS |            |                  | 3074 Ground Mobile Radio (GMR JTRS) |                  |            |                  |                     |            |                          |
| Cost Categories  | Contract Method & Type | Performing Activity & Location | Total PY s Cost                                  | FY 07 Cost | FY 07 Award Date | FY 08 Cost                          | FY 08 Award Date | FY 09 Cost | FY 09 Award Date | Cost to Complete    | Total Cost | Target Value of Contract |
| <b>Developmental Test &amp; Evaluation</b>   |                        |                                |  |            |                  |                                     |                  |            |                  |                     |            |                          |
| JTRS EPG test bed & test planning  | MIPR                   | EPG, Fort Huachuca, AZ         | 0.000  | 1.917      |                  | 4.059                               | 1-4Q             | 1.370      | 1-4Q             | Cont.               | Cont.      |                          |
| JTRS M&S   | MIPR                   | USAIC, Ft. Huachuca, AZ        | 0.000  | 0.500      |                  | 2.000                               | 2Q               | 0.600      | 2Q               | Cont.               | Cont.      |                          |
| JTRS Test Inhouse Spt & Gov activities   | Various                | Various                        | 0.000  | 2.237      |                  | 2.336                               | 1-2Q             | 0.836      | 1-2Q             | Cont.               | Cont.      |                          |
| JTRS EOA/SIT/LUT/MOTE Test Activity  | Various                | EPG, Fort Huachuca, AZ/Various | 0.000  | 0.105      |                  | 0.720                               | 1-3Q             | 0.556      | 1-3Q             | Cont.               | Cont.      |                          |
|  |                        |                                | 0.000  | 0.000      |                  |                                     |                  |            |                  | Cont.               | Cont.      |                          |
|  |                        |                                | 0.000  | 0.000      |                  |                                     |                  |            |                  | Cont.               | Cont.      |                          |
| Subtotal T&E   |                        |                                | 0.000  | 4.759      |                  | 9.115                               |                  | 3.362      |                  | Cont.               | Cont.      |                          |
| Remarks:   |                        |                                |  |            |                  |                                     |                  |            |                  |                     |            |                          |
| <b>Contractor Engineering Support</b>  |                        |                                |  |            |                  |                                     |                  |            |                  |                     |            |                          |
| JTRS Business Engineering Mgmt   | Various                | Various                        | 0.000  | 0.741      | 1-4Q             | 1.328                               | 1-4Q             | 1.450      | 1-4Q             | Cont.               | Cont.      |                          |
| PMO Support  | Various                | Various                        | 0.000  | 36.602     | 1-4Q             | 47.672                              | 1-4Q             | 17.023     | 1-4Q             | Cont.               | Cont.      |                          |
| JTRS Mitre support   | MIPR                   | MITRE, Ft. Monmouth, NJ        | 0.000  | 0.227      | 2Q               | 0.000                               | 1Q               | 0.000      | 1Q               | Cont.               | Cont.      |                          |
| Subtotal Management  |                        |                                | 0.000  | 37.570     |                  | 49.000                              |                  | 18.473     |                  | Cont.               | Cont.      |                          |
|  |                        |                                |  |            |                  |                                     |                  |            |                  |                     |            |                          |
| Total Cost   |                        |                                | 0.000  | 219.061    |                  | 236.442                             |                  | 68.319     |                  | Continuing          | Continuing |                          |
| Remarks: In PYs-FY06, GMR JTRS funding resides in Army PE 0604805A, Project 615.<br>In FY07-FY08, Project No. 3074 represents the total GMR JTRS RDT&E budget for those years.<br>In FY09, Project No. 3074 represents one-third of the total GMR JTRS RDT&E budget. As part of the JTRS joint program acquisition strategy, each MILDEP budgets for one-third of the total program. Thus, one-third of GMR is represented in this PE, one-third is represented in Army PE 0604280A, and one-third in Air Force PE 0604280F. |                        |                                |  |            |                  |                                     |                  |            |                  |                     |            |                          |

Exhibit R-3, Project Cost Analysis

CLASSIFICATION:

| EXHIBIT R4, Schedule Profile  |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   | DATE: <b>February 2007</b>                                     |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   |
|---|------|---|---|---|------|---|---|---|------|---|---|---|------|---|---|--|------|---|---|---|------|---|---|---|------|---|---|---|------|---|---|---|
| APPROPRIATION/BUDGET / PROGRAM ELEMENT NUMBER AND NAME<br><b>RDT&amp;E, N /</b> |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   | PROJECT NUMBER AND NAME<br>3074 Ground Mobile Radio (GMR JTRS) |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   |
| Fiscal Year   | 2006 |   |   |   | 2007 |   |   |   | 2008 |   |   |   | 2009 |   |   |  | 2010 |   |   |   | 2011 |   |   |   | 2012 |   |   |   | 2013 |   |   |   |
|   | 1    | 2 | 3 | 4 | 1    | 2 | 3 | 4 | 1    | 2 | 3 | 4 | 1    | 2 | 3 | 4  | 1    | 2 | 3 | 4 | 1    | 2 | 3 | 4 | 1    | 2 | 3 | 4 | 1    | 2 | 3 | 4 |
| <b>Ground Mobile Radio</b>  |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |  |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   |
| <b>Acquisition Milestones</b>   |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |  |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   |
| EDM Delivery Begin  |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |  |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   |
| Milestone C   |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |  |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   |
| Limited User Test (LUT)   |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |  |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   |
| System Integration Test (SIT)   |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |  |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   |
| Multi-Service Operational Test and Evaluation (MOTE)                            |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |  |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   |
| <b>Radio Development Milestones</b>   |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |  |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   |
| System Readiness Review   |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |  |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   |
| Capstone Prelim Design Review   |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |  |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   |
| NSA Certification   |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |  |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   |
| Capstone Critical Design Review   |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |  |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   |
| EDM Procure/Build   |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |  |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   |
| <b>Test &amp; Evaluation Milestones</b>   |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |  |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   |
| Contractor Development Test   |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |  |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   |
| Production Qualification Test (PQT)   |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |  |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   |

\* Not required for Budget Activities 1, 2, 3, and 6

CLASSIFICATION:

| Exhibit R-4a, Schedule Detail                        |  |  |         | Ground Mobile Radio |                                     |         |         | DATE: February 2007 |         |  |  |
|--|--|--|---------|---------------------|-------------------------------------|---------|---------|---------------------|---------|--|--|
| APPROPRIATION/BUDGET ACTIVITY                        |  | PROGRAM ELEMENT                            |         |                     | PROJECT NUMBER AND NAME             |         |         |                     |         |  |  |
| <b>RDT&amp;E, N / BA-5</b>                           |  | PE: 0604280N TITLE: JOINT TACTICAL RADIO S |         |                     | 3074 Ground Mobile Radio (GMR JTRS) |         |         |                     |         |  |  |
| Schedule Profile                                     |  | FY 2006                                    | FY 2007 | FY 2008             | FY 2009                             | FY 2010 | FY 2011 | FY 2012             | FY 2013 |  |  |
| Contract Dev/Test/Design Verification Test Fault Fix |  | 3-4Q                                       |         |                     |                                     |         |         |                     |         |  |  |
| System Readiness Review (SRR)                        |  |  | 2Q      |                     |                                     |         |         |                     |         |  |  |
| Capstone Preliminary Design Review (PDR)             |  |  | 4Q      |                     |                                     |         |         |                     |         |  |  |
| Capstone Critical Design Review (CDR)                |  |  |         | 1Q                  |                                     |         |         |                     |         |  |  |
| EDM Procure/Build                                    |  |  |         | 1-4Q                | 1-3Q                                |         |         |                     |         |  |  |
| EDM Delivery Begin                                   |  |  |         | 4Q                  |                                     |         |         |                     |         |  |  |
| Production Qualification Test (PQT)                  |  |  |         |                     | 2-4Q                                |         |         |                     |         |  |  |
| JTRS - Army GMR System Integration Test (SIT)        |  |  |         |                     |                                     | 1-2Q    |         |                     |         |  |  |
| Limited User Test                                    |  |  |         |                     |                                     | 2-3Q    |         |                     |         |  |  |
| JTRS GMR Milestone C                                 |  |  |         |                     |                                     | 4Q      |         |                     |         |  |  |
| JTRS - Multi-Service Operational Test and Evaluation |  |  |         |                     |                                     |         |         | 1Q                  |         |  |  |
| NSA Certification                                    |  |  |         |                     |                                     | 3Q      |         |                     |         |  |  |
|  |  |  |         |                     |                                     |         |         |                     |         |  |  |
|  |  |  |         |                     |                                     |         |         |                     |         |  |  |

Exhibit R-4a, Schedule Detail

**Classification:**

|  |   |                |                |                |  |                               |               |               |
|--|---|----------------|----------------|----------------|--|-------------------------------|---------------|---------------|
| Exhibit R-5, Termination Liability Funding for Major Defense Acquisition Programs, RDT&E Funding   |   |                |                |                |  | DATE:<br><b>February 2007</b> |               |               |
| APPROPRIATION/BUDGET ACTIVITY<br><b>RDT&amp;E, N / BA-5</b>  | PROGRAM ELEMENT NUMBER AND NAME<br>PE: 0604280N TITLE: JOINT TACTICAL RADIO SYSTEMS |                |                |                | PROJECT NUMBER AND NAME<br>3074 Ground Mobile Radio (GMR JTRS) |                               |               |               |
| <b>Program Title</b>   | <b>FY 2006</b>  | <b>FY 2007</b> | <b>FY 2008</b> | <b>FY 2009</b> | <b>FY2010</b>  | <b>FY2011</b>                 | <b>FY2012</b> | <b>FY2013</b> |
| X3074 Ground Mobile Radio (GMR JTRS)   | 0.000   | 4.161          | 4.161          | 4.161          | 2.080  | 1.040                         | 0.000         | 0.000         |
| <p>Note: In FY06, GMR JTRS funding resides in Army PE 0604805A, Project 615. In FY07-FY08 GMR JTRS represents the total termination liability (TL) funding profile. In FY09-11 GMR JTRS represents one-third of the total termination liability (TL) funding profile. As part of the JTRS joint program acquisition strategy, each MILDEP budgets for one-third of the total program. Thus, one-third of TL is represented in this PE, one-third is represented in Army PE 0604280A and one-third in Air Force PE 0604280F.</p> <p><u>Instructions:</u></p> <ol style="list-style-type: none"> <li>1. For all ACAT 1 programs with RDT&amp;E funding, indicate the funds by year budgeted for termination liability.</li> <li>2. If not budgeted, provide the appropriate waiver authority.</li> <li>3. For programs with waiver authority, identify the amounts on the contract by year.</li> </ol> |   |                |                |                |  |                               |               |               |

**Exhibit R-5 Termination Liability in  
Major Acquisition Programs RDTEN**

**CLASSIFICATION:**

|   |  |   |         |         |               |         |         |         |         |
|---|--|---|---------|---------|---------------|---------|---------|---------|---------|
| EXHIBIT R-2a, RDT&E Project Justification         |  | UNCLASSIFIED                                    |         |         | DATE:         |         |         |         |         |
|   |  |   |         |         | February 2007 |         |         |         |         |
| APPROPRIATION/BUDGET ACTIVITY                     |  | PROJECT NUMBER AND NAME                         |         |         |               |         |         |         |         |
| RDT&E, N / BA-5                                   |  | 3075 Handheld/Manpack/Small Form Fit (HMS JTRS) |         |         |               |         |         |         |         |
| COST (\$ in Millions)                             |  | FY 2006   | FY 2007 | FY 2008 | FY 2009       | FY 2010 | FY 2011 | FY 2012 | FY 2013 |
| Total Project Cost                                |  | 0.000   | 110.529 | 106.329 | 36.239        | 24.229  | 7.451   | 0.000   | 0.000   |
| 3075 Handheld, Manpack, Small Form Fit (HMS) JTRS |  | 0.000   | 110.529 | 106.329 | 36.239        | 24.229  | 7.451   | 0.000   | 0.000   |

In FY06, Handheld/Manpack/Small Form Fit (HMS) JTRS funding resides in Army Program Element (PE) 0604805A, Project 61A. See R-2 Other Program Funding Summary.

In FY07-FY08, Project No. 3075 represents the total HMS JTRS RDT&E budget for those years.

In FY09-FY13, Project No. 3075 represents the Navy share (1/3) of the funding associated with HMS JTRS. As part of the JTRS joint program acquisition strategy, each Military Department (MILDEP) budgets for one-third of the total program. Thus, one-third of JTRS Common Development is represented in this PE, one-third is represented in Army PE 0604280A and one-third in Air Force PE 0604280F.

In February 2005, Mr. Wynne, Acting Under Secretary of Defense for Acquisition, Technology and Logistics issued a JTRS Acquisition Decision Memorandum (ADM) directing the realignment of the current acquisition management structure for all JTRS programs under the authority of a single JTRS Joint Program Executive Officer (JPEO). In November 2005, the DAE and Senior JTRS Leadership selected a re-plan option which restructures JTRS to emphasize cost and schedule performance while executing a moderate technical risk plan. The new JTRS development and acquisition strategy was formalized and approved in a March 31st, 2006 ADM signed by Under Secretary Kenneth Krieg, the Under Secretary of Defense for Acquisition, Technology and Logistics.

**(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:**

HMS is a product line overseen by the JTRS Ground Domain Program Management Office. JTRS is the DoD family of common software-defined programmable radios that will form the foundation of information radio frequency transmission for Joint Vision 2020. HMS provides a software re-programmable, networkable, multi-band, multi-mode system capable of simultaneous voice/data/video communication. HMS Increment 1 consists of the following form factors: 2 Channel Handheld, 2 Channel Manpack and Small Form Fit (SFF) embedded applications (SFF-A, B, C, D, H, I and J).

|   |                            |
|---|----------------------------|
| EXHIBIT R-2a, RDT&E Project Justification | DATE: <b>February 2007</b> |
|---|----------------------------|

|  |  |  |
|--|--|--|
| APPROPRIATION/BUDGET ACTIVITY<br><b>RDT&amp;E, N /BA-5</b> | PE: 0604280N TITLE: JOINT TACTICAL RADIO SYSTEMS | PROJECT NUMBER AND NAME<br>3075 Handheld/Manpack/Small Form Fit (HMS JTRS) |
|--|--|--|

**(U) B. Accomplishments/Planned Program**

|   | FY 06 | FY 07   | FY 08   | FY 09  |
|---|-------|---------|---------|--------|
| <b>Handheld/Manpack/Small Form Fit (Common)</b> | 0.000 | 110.529 | 106.329 | 36.239 |
| RDT&E Articles Quantity                         |       |         |         |        |

**FY06:** FY06 funding for HMS JTRS resides in PE 0604805A (Project 61A). Continued HMS Product Development of HMS sets, HMS Test and Evaluation, Program Management Office support, and Technical support.

**FY07:** In FY07, JTRS HMS efforts were transferred from PE 0604280A to PE 0604280N to support the revised JTRS joint program acquisition strategy. Continue HMS Product Development of HMS sets, HMS Test and Evaluation, Program Management Office support, and Technical support.

**FY08:** FY08 HMS JTRS funding will support the design, development and manufacture of Engineering Development Models (EDMs) for Small Form Fit H (SFF-H); Technical support; Increment 1, Phase 1 Contractor Development Test (CDT); and Program Management Office support.

**FY09:** FY09 HMS JTRS funding will support the design, development and manufacture of EDMs for SFF-B, D, I, and J, as well as the 2 channel Handheld and Manpack; technical support; Increment 1, Phase 2 Government Development Test (GDT); and Program Management Office support.

**Note:**

In FY06, HMS JTRS funding resides in Army PE 0604805A, Project 61A.

In FY07-FY08, Project No. 3075 represents the total HMS JTRS RDT&E budget for those years.

In FY09, Project No. 3075 represents one-third of the total HMS JTRS RDT&E budget. As part of the JTRS joint program acquisition strategy, each MILDEP budgets for one-third of the total program. Thus, one-third of HMS is represented in this PE, one-third is represented in Army PE 0604280A, and one-third in Air Force PE 0604280F.

CLASSIFICATION:

| Exhibit R-3 Cost Analysis (JTRS HMS page 1)   |                        |  |                 |            |                  |   |                  |            |                  | DATE: February 2007 |            |                          |
|---|------------------------|--|-----------------|------------|------------------|---|------------------|------------|------------------|---------------------|------------|--------------------------|
| APPROPRIATION/BUDGET ACTIVITY   |                        | PROGRAM ELEMENT                                  |                 |            |                  | PROJECT NUMBER AND NAME                         |                  |            |                  |                     |            |                          |
| RDT&E, N / BA-5   |                        | PE: 0604280N TITLE: JOINT TACTICAL RADIO SYSTEMS |                 |            |                  | 3075 Handheld/Manpack/Small Form Fit (HMS JTRS) |                  |            |                  |                     |            |                          |
| Cost Categories   | Contract Method & Type | Performing Activity & Location                   | Total PY s Cost | FY 07 Cost | FY 07 Award Date | FY 08 Cost                                      | FY 08 Award Date | FY 09 Cost | FY 09 Award Date | Cost to Complete    | Total Cost | Target Value of Contract |
| <b>Product Development</b>  |                        |  |                 |            |                  |   |                  |            |                  |                     |            |                          |
| JTRS HMS Design, Development and Manufacture of Engineering Development Models (EDMs)   | C/CPAF                 | General Dynamics C4 Systems, Scottsdale, AZ      | 0.000           | 80.525     | 4Q               | 75.492  | 1Q               | 24.318     | 1Q               | Cont.               | Cont.      |                          |
| JTRS HMS Development System Engineering Support   | Various                | Various  | 0.000           | 8.829      | 1-4Q             | 6.874   | 1-2Q             | 2.162      | 1-2Q             | Cont.               | Cont.      |                          |
| Technology Development efforts  | Various                | Various  | 0.000           | 1.700      | 2Q               | 1.700   | 2Q               | 1.700      | 2Q               | Cont.               | Cont.      |                          |
| Subtotal Product Development  |                        |  | 0.000           | 91.054     |                  | 84.066  |                  | 28.180     |                  | Cont.               | Cont.      |                          |
| Remarks:  |                        |  |                 |            |                  |   |                  |            |                  |                     |            |                          |
| <b>Development Support</b>  |                        |  |                 |            |                  |   |                  |            |                  |                     |            |                          |
| JTRS Technical Support  | Various                | Various  | 0.000           | 5.585      | 1-4Q             | 4.994   | 1-4Q             | 1.610      | 1-3Q             | Cont.               | Cont.      |                          |
| Subtotal Support  |                        |  | 0.000           | 5.585      |                  | 4.994   |                  | 1.610      |                  | Cont.               | Cont.      |                          |
| Remarks:<br>In PYs-FY06, HMS JTRS funding resides in Army PE 0604805A, Project 61A.<br>In FY07-FY08, Project No. 3075 represents the total HMS JTRS RDT&E budget for those years.<br>In FY09, Project No. 3075 represents one-third of the total HMS JTRS RDT&E budget. As part of the JTRS joint program acquisition strategy, each MILDEP budgets for one-third of the total program. Thus, one-third of HMS is represented in this PE, one-third is represented in Army PE 0604280A, and one-third in Air Force PE 0604280F. |                        |  |                 |            |                  |   |                  |            |                  |                     |            |                          |

Exhibit R-3, Project Cost Analysis

CLASSIFICATION:

| Exhibit R-3 Cost Analysis (JTRS HMS page 2)   |                        |                                |  |            |                  |            |   |            |                  | DATE: February 2007 |            |                          |
|---|------------------------|--------------------------------|--|------------|------------------|------------|---|------------|------------------|---------------------|------------|--------------------------|
| APPROPRIATION/BUDGET ACTIVITY   |                        |                                | PROGRAM ELEMENT                                  |            |                  |            | PROJECT NUMBER AND NAME                         |            |                  |                     |            |                          |
| RDT&E, N / BA-5   |                        |                                | PE: 0604280N TITLE: JOINT TACTICAL RADIO SYSTEMS |            |                  |            | 3075 Handheld/Manpack/Small Form Fit (HMS JTRS) |            |                  |                     |            |                          |
| Cost Categories   | Contract Method & Type | Performing Activity & Location | Total PY s Cost                                  | FY 07 Cost | FY 07 Award Date | FY 08 Cost | FY 08 Award Date                                | FY 09 Cost | FY 09 Award Date | Cost to Complete    | Total Cost | Target Value of Contract |
| <b>Developmental Test &amp; Evaluation</b>  |                        |                                |  |            |                  |            |   |            |                  |                     |            |                          |
| JTRS EPG test bed and planning  | MIPR                   | EPG, Ft. Huachuca, AZ          | 0.000  | 0.100      | 4Q               | 0.100      | 1-2Q  | 0.233      | 1Q               | Cont.               | Cont.      |                          |
| JTRS Modeling and Simulation  | MIPR                   | USAIC, Ft. Huachuca, AZ        | 0.000  | 0.300      | 4Q               | 0.600      | 1Q  | 0.200      | 1Q               | Cont.               | Cont.      |                          |
| JTRS Test In-house Support & Government Activities  | Various                | Various                        | 0.000  | 2.413      | 1-4Q             | 5.028      | 1-4Q  | 2.206      | 1-3Q             | Cont.               | Cont.      |                          |
| Phase 1 LUT   | Various                | Various                        | 0.000  | 0.150      | 4Q               | 1.000      | 1-4Q  | 0.167      | 1Q               | Cont.               | Cont.      |                          |
| Phase 1 IO TE   | Various                | Various                        | 0.000  | 0.000      |                  | 0.000      |   | 0.060      | 1-4Q             | Cont.               | Cont.      |                          |
| Subtotal T&E  |                        |                                | 0.000  | 2.963      |                  | 6.728      |   | 2.866      |                  | Cont.               | Cont.      |                          |
| Remarks:  |                        |                                |  |            |                  |            |   |            |                  |                     |            |                          |
| <b>Contractor Engineering Support</b>   |                        |                                |  |            |                  |            |   |            |                  |                     |            |                          |
| Project Management Office Support   | Various                | Various                        | 0.000  | 7.797      | 1-4Q             | 7.683      | 1-4Q  | 2.610      | 1-4Q             | Cont.               | Cont.      |                          |
| JTRS Business/ Engineering Management   | Various                | Various                        | 0.000  | 3.130      | 1-4Q             | 2.858      | 1-4Q  | 0.973      | 1-4Q             | Cont.               | Cont.      |                          |
|   |                        |                                | 0.000  | 0.000      |                  |            |   |            |                  | Cont.               | Cont.      |                          |
| Subtotal Management   |                        |                                | 0.000  | 10.927     |                  | 10.541     |   | 3.583      |                  | Cont.               | Cont.      |                          |
| Remarks:  |                        |                                |  |            |                  |            |   |            |                  |                     |            |                          |
| Total Cost  |                        |                                | 0.000  | 110.529    |                  | 106.329    |   | 36.239     |                  | Continuing          | Continuing |                          |
| Remarks:<br>In PYs-FY06, HMS JTRS funding resides in Army PE 0604805A, Project 61A.<br>In FY07-FY08, Project No. 3075 represents the total HMS JTRS RDT&E budget for those years.<br>In FY09, Project No. 3075 represents one-third of the total HMS JTRS RDT&E budget. As part of the JTRS joint program acquisition strategy, each MILDEP budgets for one-third of the total program. Thus, one-third of HMS is represented in this PE, one-third is represented in Army PE 0604280A, and one-third in Air Force PE 0604280F. |                        |                                |  |            |                  |            |   |            |                  |                     |            |                          |

CLASSIFICATION:

| EXHIBIT R4, Schedule Profile                                |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   | DATE: February 2007                             |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   |  |
|---|------|---|---|---|------|---|---|---|------|---|---|---|------|---|---|---|---|---|---|---|------|---|---|---|------|---|---|---|------|---|---|---|--|
| APPROPRIATION/BUDGET / PROGRAM ELEMENT NUMBER AND NAME      |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   | PROJECT NUMBER AND NAME                         |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   |  |
| RDT&E, N / PE: 0604280N TITLE: JOINT TACTICAL RADIO SYSTEMS |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   | 3075 Handheld/Manpack/Small Form Fit (HMS JTRS) |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   |  |
| Fiscal Year   | 2006 |   |   |   | 2007 |   |   |   | 2008 |   |   |   | 2009 |   |   |   | 2010  |   |   |   | 2011 |   |   |   | 2012 |   |   |   | 2013 |   |   |   |  |
|   | 1    | 2 | 3 | 4 | 1    | 2 | 3 | 4 | 1    | 2 | 3 | 4 | 1    | 2 | 3 | 4 | 1   | 2 | 3 | 4 | 1    | 2 | 3 | 4 | 1    | 2 | 3 | 4 | 1    | 2 | 3 | 4 |  |
| <b>Handheld / Manpack / Small Form Fit</b>                  |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   |   |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   |  |
| <b>Increment 1, Phase 1</b>                                 |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   |   |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   |  |
| SFF-A/C DRR   |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   |   |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   |  |
| SFF-H DRR   |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   |   |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   |  |
| SFF-A/C CDT   |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   |   |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   |  |
| SFF-H CDT   |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   |   |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   |  |
| CDT Regression  |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   |   |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   |  |
| GDT   |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   |   |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   |  |
| MS C  |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   |   |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   |  |
| IOT&E   |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   |   |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   |  |
| <b>Increment 1, Phase 2</b>                                 |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   |   |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   |  |
| DRR   |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   |   |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   |  |
| CDT   |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   |   |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   |  |
| GDT   |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   |   |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   |  |
| MS C  |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   |   |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   |  |
| OT  |      |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   |   |   |   |   |      |   |   |   |      |   |   |   |      |   |   |   |  |

\* Not required for Budget Activities 1, 2, 3, and 6

CLASSIFICATION:

| Exhibit R-4a, Schedule Detail             |         |  |         | <b>Handheld / Manpack / Small Form Fit</b> |   |         |         | DATE: <b>February 2007</b> |  |
|---|---------|--|---------|--|---|---------|---------|----------------------------|--|
| APPROPRIATION/BUDGET ACTIVITY             |         | PROGRAM ELEMENT                          |         |  | PROJECT NUMBER AND NAME                         |         |         |                            |  |
| <b>RDT&amp;E, N / BA-5</b>                |         | PE: 0604280N TITLE: JOINT TACTICAL RADIO |         |  | 3075 Handheld/Manpack/Small Form Fit (HMS JTRS) |         |         |                            |  |
| Schedule Profile                          | FY 2006 | FY 2007                                  | FY 2008 | FY 2009                                    | FY 2010   | FY 2011 | FY 2012 | FY 2013                    |  |
| <b>Increment 1, Phase 1</b>               |         |  |         |  |   |         |         |                            |  |
| SFF-A/C Design Readiness Review (DRR)     |         | 2Q                                       |         |  |   |         |         |                            |  |
| SFF-H DRR                                 |         | 4Q                                       |         |  |   |         |         |                            |  |
| SFF-A/C Contractor Development Test (CDT) |         | 3-4Q                                     |         |  |   |         |         |                            |  |
| SFF-H CDT                                 |         |  | 1-2Q    |  |   |         |         |                            |  |
| CDT Regression                            |         |  | 3Q      |  |   |         |         |                            |  |
| GDT                                       |         |  | 3-4Q    |  |   |         |         |                            |  |
| MS C                                      |         |  |         | 1Q   |   |         |         |                            |  |
| IOTE                                      |         |  |         |  | 3Q  |         |         |                            |  |
| <b>Increment 1, Phase 2</b>               |         |  |         |  |   |         |         |                            |  |
| DRR                                       |         |  | 4Q      |  |   |         |         |                            |  |
| CDT                                       |         |  |         | 1-3Q                                       |   |         |         |                            |  |
| GDT                                       |         |  |         | 3-4Q                                       | 1Q  |         |         |                            |  |
| MS C                                      |         |  |         |  | 2Q  |         |         |                            |  |
| OT  |         |  |         |  |   | 2Q      |         |                            |  |

Exhibit R-4a, Schedule Detail

**Classification:**

|  |                |   |                |                |  |                               |               |               |
|--|----------------|---|----------------|----------------|--|-------------------------------|---------------|---------------|
| Exhibit R-5, Termination Liability Funding for Major Defense Acquisition Programs, RDT&E Funding   |                |   |                |                |  | DATE:<br><b>February 2007</b> |               |               |
| APPROPRIATION/BUDGET ACTIVITY<br><b>RDT&amp;E, N / BA-5</b>  |                | PROGRAM ELEMENT NUMBER AND NAME<br>PE: 0604280N TITLE: JOINT TACTICAL RADIO SYSTEMS |                |                | PROJECT NUMBER AND NAME<br>3075 Handheld/Manpack/Small Form Fit (HMS JTRS) |                               |               |               |
| <b>Program Title</b>   | <b>FY 2006</b> | <b>FY 2007</b>  | <b>FY 2008</b> | <b>FY 2009</b> | <b>FY2010</b>  | <b>FY2011</b>                 | <b>FY2012</b> | <b>FY2013</b> |
| X3075 JTRS Handheld / Manpack / Small Form Fit (HMS)   | 0.000          | 13.885  | 8.553          | 0.914          | 0.000  | 0.000                         | 0.000         | 0.000         |
| <p>Note: In FY06, HMS JTRS funding resides in Army PE 0604805A, Project 61A. In FY07-FY08, HMS JTRS represents the total termination liability (TL) funding profile. In FY09-11, HMS JTRS represents one-third of the total termination liability (TL) funding profile. As part of the JTRS joint program acquisition strategy, each MILDEP budgets for one-third of the total program. Thus, one-third of TL is represented in this PE, one-third is represented in Army PE 0604280A and one-third in Air Force PE 0604280F.</p> <p><u>Instructions:</u></p> <ol style="list-style-type: none"> <li>1. For all ACAT 1 programs with RDT&amp;E funding, indicate the funds by year budgeted for termination liability.</li> <li>2. If not budgeted, provide the appropriate waiver authority.</li> <li>3. For programs with waiver authority, identify the amounts on the contract by year.</li> </ol> |                |   |                |                |  |                               |               |               |

**Exhibit R-5 Termination Liability in Major Acquisition Programs RDTEN**

**CLASSIFICATION:**

|   |              |   |                |               |                               |               |               |               |
|---|--------------|---|----------------|---------------|-------------------------------|---------------|---------------|---------------|
| EXHIBIT R-2a, RDT&E Project Justification                   |              | UNCLASSIFIED  |                |               | DATE:<br><b>February 2007</b> |               |               |               |
| APPROPRIATION/BUDGET ACTIVITY<br><b>RDT&amp;E, N / BA-5</b> |              | PROJECT NUMBER AND NAME<br>3076 JTRS Network Enterprise Domain (JNED) |                |               |                               |               |               |               |
| COST (\$ in Millions)                                       | FY 2006      | FY 2007   | FY 2008        | FY 2009       | FY 2010                       | FY 2011       | FY 2012       | FY 2013       |
| Total Project Cost  | <b>0.000</b> | <b>243.208</b>  | <b>279.817</b> | <b>95.373</b> | <b>68.679</b>                 | <b>28.101</b> | <b>18.717</b> | <b>17.031</b> |
| 3076 JTRS Network Enterprise Domain (JNED)                  | <b>0.000</b> | <b>243.208</b>  | <b>279.817</b> | <b>95.373</b> | <b>68.679</b>                 | <b>28.101</b> | <b>18.717</b> | <b>17.031</b> |

In FY06, funding for JTRS Network Enterprise Domain (JNED) resides in Army PE 0604280A, Project 162. See R-2 Other Program Funding Summary.

In FY07-FY08, Project No. 3076 represents the total JNED RDT&E budget for those years.

In FY09-FY13, Project No. 3076 represents the Navy share (1/3) of the funding associated with the JNED program. As part of the JTRS joint program acquisition strategy, each Military Department (MILDEP) budgets for one-third of the total program. Thus, one-third of JTRS Common Development is represented in this PE, one-third is represented in Army PE 0604280A and one-third in Air Force PE 0604280F.

In February 2005, Mr. Wynne, Acting USD (AT&L) issued a JTRS Acquisition Decision Memorandum (ADM) directing the realignment of the current acquisition management structure for all JTRS programs under the authority of a single JTRS Joint Program Executive Officer (JPEO). In November 2005, the DAE and Senior JTRS Leadership selected a re-plan option which restructures JTRS to emphasize cost and schedule performance while executing a moderate technical risk plan. The new JTRS development and acquisition strategy was formalized and approved in a March 31st, 2006 ADM signed by Under Secretary Kenneth Krieg, the Under Secretary of Defense for Acquisition, Technology and Logistics.

**(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:**

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. Service acquisition agencies are responsible for acquiring and fielding host radio hardware and integrating JTRS into Service platforms.

**CLASSIFICATION:**

|   |                            |
|---|----------------------------|
| EXHIBIT R-2a, RDT&E Project Justification | DATE: <b>February 2007</b> |
|---|----------------------------|

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|--|--|---|
| APPROPRIATION/BUDGET ACTIVITY<br><b>RDT&amp;E, N /BA-5</b> | PE: 0604280N TITLE: JOINT TACTICAL RADIO SYSTEMS | PROJECT NUMBER AND NAME<br>3076 JTRS Network Enterprise Domain (JNED) |
|--|--|---|

**(U) B. Accomplishments/Planned Program**

|  | FY 06 | FY 07   | FY 08   | FY 09  |
|--|-------|---------|---------|--------|
| <b>JTRS Network Enterprise Domain (JNED)</b> | 0.000 | 243.208 | 279.817 | 95.373 |
| RDT&E Articles Quantity                      |       |         |         |        |

**FY06:** FY06 funding for JNED resides in PE 0604280A (Project 162). Continued development and acquisition of Increment 1 networking waveforms that support Net-Centric operational warfare at sea, air and on the ground to extend the GIG to the last tactical mile and the warfighter. Continued JNED program support and other related activities to support the networking waveform development. Network Waveforms include:

**Wideband Networking Waveform (WNW)** is a high data rate networking waveform application that provides the lower tactical Internet backbone and connects tactical forces across the battle sphere. WNW will feature two signals-in-space (SiS), which are the Orthogonal Frequency Division Multiplexing (OFDM) and Anti-Jam (AJ). WNW will provide high throughput, dynamically adaptable connectivity for the exchange of Internet Protocol (IP) based voice, data, and video traffic. WNW will support network nodes on mobile, airborne, and maritime platforms. WNW includes networking services, security, High Assurance IP Equipment (HAiPE) capabilities, red-black switching, and internal routing of other WNW signals. Completed development of Version 1.1 in 4Q FY06 to support FCS test events. Platforms include: GMR and AMF.

**Soldier Radio Waveform (SRW)** will operate on JTR sets to provide a networked battlefield communications capability for disadvantage users engaged in land combat operations and will support voice, data, and video communications 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 IP capable networks and sub-networks. SRW will be interoperable with higher throughput, IP-based network waveforms, such as WNW, through gateways. 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: GMR, AMF and HMS.

**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: AMF.

**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. Platforms include: MIDS and Battlefied Airborne Communications Node (BACN).

Continued the development and acquisition of software-defined **legacy radio waveforms**, JTRS Hardware Domain support, JNED program support, and other waveform related activities to support the legacy waveform development of High Frequency (HF) and Link 16. High Frequency (HF) radios provide beyond line-of-sight (BLOS) and some LOS voice and data communications for military platforms in all domains. The JTRS HF capabilities comprise an aggregation of four (4) different legacy radio system types: HF Independent Side Band (ISB) w/Automatic Link Establishment (ALE), HF Single Side Band (SSB) w/Automatic Link Establishment (ALE) and with anti-jam (AJ), STANAG 5066 (HF Message Protocol), and STANAG 4529 (HF Narrow Band Modem). Completed development of Enhanced Position Location and Reporting System (EPLRS) version 1.5 and performed FQT in 4Q FY06. Continued to develop EPLRS Build 2.1. Continued the development of Ultra High Frequency Satellite Communication Demand Assigned Multiple Access (UHF SATCOM DAMA). Continued to develop Single-Channel Ground and Airborne Radio System (SINCGARS) Enhanced Operating Mode version 1.3 and the Internet Controller (INC). Began the development and acquisition of JTRS Network Enterprise Services (JNES) to include a Network Manager, Common Network Services (CNS), and the JTRS unique Gateway. Continued to provide NED technical support, including waveform development, systems engineering, spectrum allocation, system security engineering and problem resolution and support of Software Communications Architecture (SCA) activities. Provided technical guidance to Platform Program Management Offices (PMO). 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.

Note:

In FY06, funding for the JNED program resides in Army PE 0604280A, Project 162.

In FY07-FY08, Project No. 3076 represents the total JNED RDT&E budget for those years.

In FY09, Project No. 3076 represents one-third of the total JNED RDT&E budget. As part of the JTRS joint program acquisition strategy, each MILDEP budgets for one-third of the total program.

Thus, one-third of JNED is represented in this PE, one-third is represented in Army PE 0604280A, and one-third in Air Force PE 0604280F.

**CLASSIFICATION:**

|  |   |   |
|--|---|---|
| EXHIBIT R-2a, RDT&E Project Justification                  |   | DATE: <b>February 2007</b>  |
| APPROPRIATION/BUDGET ACTIVITY<br><b>RDT&amp;E, N /BA-5</b> | PE: 0604280N TITLE: JOINT<br>TACTICAL RADIO SYSTEMS | PROJECT NUMBER AND NAME<br>3076 JTRS Network Enterprise Domain (JNED) |

**(U) B. Accomplishments/Planned Program**

|  | FY 06 | FY 07   | FY 08   | FY 09  |
|--|-------|---------|---------|--------|
| <b>JTRS Network Enterprise Domain (JNED)</b> | 0.000 | 243.208 | 279.817 | 95.373 |
| RDT&E Articles Quantity                      |       |         |         |        |

**FY07 (\$243.208):** In FY07, JNED efforts were transferred from PE 0604280A to PE 0604280N to support the revised JTRS joint program acquisition strategy. Continue development and acquisition of Increment 1 networking waveforms that support Net-Centric operational warfare at sea, air and on the ground to extend the GIG to the last tactical mile and the warfighter. Continue JNED program support and other related activities to support the networking waveform development. Network Waveforms include:

**Wideband Networking Waveform (WNN)** (\$67.772) is a high data rate networking waveform application that provides the lower tactical Internet backbone and connects tactical forces across the battle sphere. WNN will feature two signals-in-space (SiS), which are the Orthogonal Frequency Division Multiplexing (OFDM) and Anti-Jam (AJ). WNN will provide high throughput, dynamically adaptable connectivity for the exchange of Internet Protocol (IP) based voice, data, and video traffic. WNN will support network nodes on mobile, airborne, and maritime platforms. WNN includes networking services, security, High Assurance IP Equipment (HAIZE) capabilities, red-black switching, and internal routing of other WNN signals. Complete development of Version 2.0 in 2Q FY07 to support FCS test events. Platforms include: GMR and AMF.

**Soldier Radio Waveform (SRW)** (\$35.200) will operate on JTR sets to provide a networked battlefield communications capability for disadvantage users engaged in land combat operations and will support voice, data, and video communications 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 IP capable networks and sub-networks. SRW will be interoperable with higher throughput, IP-based network waveforms, such as WNN, through gateways. 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. Complete development of SLICE Version 2.1 in 1Q FY07 to support FCS test events. Platforms include: GMR, AMF and HMS.

**Mobile User Objective System (MUOS)** (\$10.000) 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: AMF.

**Joint Airborne Networking - Tactical Edge (JAN-TE)** (\$17.000) 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. Platforms include: MIDS and BACN.

(\$113.236) Continue the development and acquisition of software defined **legacy radio waveforms**, JNED program support and other related activities to support the legacy waveform development of High Frequency (HF) and Link 16. Complete development and perform FQT for Link 16 in 4Q FY07. Continue to develop Build 2.1 of the Enhanced Position Location and Reporting System (EPLRS) development. Perform FQT for UHF SATCOM DAMA version 3.1 in 2Q FY07. Perform FQT for the The Single-Channel Ground and Airborne Radio System (SINGARS) Enhanced Operating Mode version 1.3 in 3Q FY07. Continue development and acquisition of JTRS Network Enterprise Services (JNES) to include a Network Manager, Common Network Services (CNS), and the JTRS unique Gateway. Continue to provide JNED technical support, including waveform development, systems engineering, spectrum allocation, system security engineering and problem resolution and support of Software Communications Architecture (SCA) activities. Provide technical guidance to Platform Program Management offices (PMO). 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. Begin Software Trouble Report (STR) correction to both software-defined legacy radio and networking waveforms.

**Note:**

In FY06, funding for JNED resides in Army PE 0604280A, Project 162.

In FY07-FY08, Project No. 3076 represents the total JNED RDT&E budget for those years.

In FY09, Project No. 3076 represents one-third of the total JNED RDT&E budget. As part of the JTRS joint program acquisition strategy, each MILDEP budgets for one-third of the total program. Thus, one-third of JNED is represented in this PE, one-third is represented in Army PE 0604280A, and one-third in Air Force PE 0604280F.

|   |                            |
|---|----------------------------|
| EXHIBIT R-2a, RDT&E Project Justification | DATE: <b>February 2007</b> |
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| APPROPRIATION/BUDGET ACTIVITY<br><b>RDT&amp;E, N /BA-5</b> | PE: 0604280N TITLE: JOINT TACTICAL RADIO SYSTEMS | PROJECT NUMBER AND NAME<br>3076 JTRS Network Enterprise Domain (JNED) |
|--|--|---|

**(U) B. Accomplishments/Planned Program**

|  | FY 06 | FY 07   | FY 08   | FY 09  |
|--|-------|---------|---------|--------|
| <b>JTRS Network Enterprise Domain (JNED)</b> | 0.000 | 243.208 | 279.817 | 95.373 |
| RDT&E Articles Quantity                      |       |         |         |        |

**FY08 (\$279.817):** Continue development and acquisition of Increment 1 networking waveforms that support Net-Centric operational warfare at sea, air and on the ground to extend the GIG to the last tactical mile and the warfighter. Continue JNED program support and other related activities to support the networking waveform development. Network Waveforms include:

**Wideband Networking Waveform (WNNW)** (\$51.869) is a high data rate networking waveform application that provides the lower tactical Internet backbone and connects tactical forces across the battle sphere. WNNW will feature two signals-in-space (SiS), which are the Orthogonal Frequency Division Multiplexing (OFDM) and Anti-Jam (AJ). WNNW will provide high throughput, dynamically adaptable connectivity for the exchange of Internet Protocol (IP) based voice, data, and video traffic. WNNW will support network nodes on mobile, airborne, and maritime platforms. WNNW includes networking services, security, High Assurance IP Equipment (HAIPE) capabilities, red-black switching, and internal routing of other WNNW signals. Complete development and perform FQT for version 3.0 in 2Q FY08. Platforms include: GMR and AMF.

**Soldier Radio Waveform (SRW)** (\$36.580) will operate on JTR sets to provide a networked battlefield communications capability for disadvantage users engaged in land combat operations and will support voice, data, and video communications 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 IP capable networks and sub-networks. SRW will be interoperable with higher throughput, IP-based network waveforms, such as WNNW, through gateways. 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. Complete development and perform FQT for version 1.0 in 2Q FY08. Platforms include: GMR, AMF and HMS.

**Mobile User Objective System (MUOS)** (\$15.000) 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: AMF.

**Joint Airborne Networking -Tactical Edge (JAN-TE)** (\$27.100) 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. Perform FQT for JAN-TE Phase 1 in 4Q FY08. Platforms include: MIDS and BACN.

(\$149.268) Continue the development and acquisition of software defined **legacy radio waveforms**, JNED program support and other related activities to support the legacy waveform development of High Frequency (HF). Perform FQT for the Single-Channel Ground and Airborne Radio System (SINCGARS) Internet Controller in 1Q FY08. Complete Build 2.1 of the Enhanced Position Location and Reporting System (EPLRS) development and perform FQT in 1Q FY08. Continue development and acquisition of JTRS Network Enterprise Services (JNES) to include a Network Manager, Common Network Services (CNS), and the JTRS unique Gateway. Continued to provide NED technical support, including waveform development, systems engineering, spectrum allocation, system security engineering and problem resolution and support of Software Communications Architecture (SCA) activities. Provide technical guidance to Platform Program Management offices (PMO). 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 Trouble Report (STR) correction to both software-defined legacy radio and networking waveforms.

Note:

In FY06, funding for JNED resides in Army PE 0604280A, Project 162.

In FY07-FY08, Project No. 3076 represents the total JNED RDT&E budget for those years.

In FY09, Project No. 3076 represents one-third of the total JNED RDT&E budget. As part of the JTRS joint program acquisition strategy, each MILDEP budgets for one-third of the total program. Thus, one-third of JNED is represented in this PE, one-third is represented in Army PE 0604280A, and one-third in Air Force PE 0604280F.

|   |                               |
|---|-------------------------------|
| EXHIBIT R-2a, RDT&E Project Justification | DATE:<br><b>February 2007</b> |
|---|-------------------------------|

|  |   |   |
|--|---|---|
| APPROPRIATION/BUDGET ACTIVITY<br><b>RDT&amp;E, N /BA-5</b> | PE: 0604280N TITLE: JOINT<br>TACTICAL RADIO SYSTEMS | PROJECT NUMBER AND NAME<br>3076 JTRS Network Enterprise Domain (JNED) |
|--|---|---|

**(U) B. Accomplishments/Planned Program**

|  | FY 06 | FY 07   | FY 08   | FY 09  |
|--|-------|---------|---------|--------|
| <b>JTRS Network Enterprise Domain (JNED)</b> | 0.000 | 243.208 | 279.817 | 95.373 |
| RDT&E Articles Quantity                      |       |         |         |        |

**FY09 (\$95.373):** Continue development and acquisition of Increment 1 networking waveforms that support Net-Centric operational warfare at sea, air and on the ground to extend the GIG to the last tactical mile and the warfighter. Continue JNED program support and other related activities to support the networking waveform development. Network Waveforms include:

**Wideband Networking Waveform (WNW)** (\$14.018) is a high data rate networking waveform application that provides the lower tactical Internet backbone and connects tactical forces across the battle sphere. WNW will feature two signals-in-space (SiS), which are the Orthogonal Frequency Division Multiplexing (OFDM) and Anti-Jam (AJ). WNW will provide high throughput, dynamically adaptable connectivity for the exchange of Internet Protocol (IP) based voice, data, and video traffic. WNW will support network nodes on mobile, airborne, and maritime platforms. WNW includes networking services, security, High Assurance IP Equipment (HAPE) capabilities, red-black switching, and internal routing of other WNW signals. Complete development and perform FQT for version 4.0 in 2Q FY09. Platforms include: GMR and AMF.

**Soldier Radio Waveform (SRW)** (\$11.940) will operate on JTR sets to provide a networked battlefield communications capability for disadvantage users engaged in land combat operations and will support voice, data, and video communications 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 IP capable networks and sub-networks. SRW will be interoperable with higher throughput, IP-based network waveforms, such as WNW, through gateways. 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. Complete development and perform FQT for version 2.0 in 4Q FY09. Platforms include: GMR, AMF and HMS.

**Mobile User Objective System (MUOS)** (\$3.333) 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: AMF.

**Joint Airborne Networking -Tactical Edge (JAN-TE)** (\$9.417) 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. Platforms include: MIDS and BACN.

(\$56.665) Continue the development and acquisition of software defined **legacy radio waveforms**, JNED program support and other related activities to support the legacy waveform development of High Frequency (HF). HF to complete development and perform FQT in 2Q FY09. Continue development and acquisition of JTRS Network Enterprise Services (JNES) to include a Network Manager, Common Network Services, and the JTRS unique Gateway. Continue to provide JNED technical support, including waveform development, systems engineering, spectrum allocation, system security engineering and problem resolution and support of Software Communications Architecture (SCA) activities. Provide technical guidance to the Platform Program Management offices (PMO). 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 Trouble Report (STR) correction to both software-defined legacy radio and networking waveforms.

Note:

In FY06, funding for JNED resides in Army PE 0604280A, Project 162.

In FY07-FY08, Project No. 3076 represents the total JNED RDT&E budget for those years.

In FY09, Project No. 3076 represents one-third of the total JNED RDT&E budget. As part of the JTRS joint program acquisition strategy, each MILDEP budgets for one-third of the total program. Thus, one-third of JNED is represented in this PE, one-third is represented in Army PE 0604280A, and one-third in Air Force PE 0604280F.

CLASSIFICATION:

| Exhibit R-3 Cost Analysis (JTRS NED page 1)   |                        |  |                 |            |                  |  |                  |            |                  | DATE: February 2007 |            |                          |
|---|------------------------|--|-----------------|------------|------------------|--|------------------|------------|------------------|---------------------|------------|--------------------------|
| APPROPRIATION/BUDGET ACTIVITY   |                        | PROGRAM ELEMENT                                  |                 |            |                  | PROJECT NUMBER AND NAME                    |                  |            |                  |                     |            |                          |
| RDT&E, N / BA-5   |                        | PE: 0604280N TITLE: JOINT TACTICAL RADIO SYSTEMS |                 |            |                  | 3076 JTRS Network Enterprise Domain (JNED) |                  |            |                  |                     |            |                          |
| Cost Categories   | Contract Method & Type | Performing Activity & Location                   | Total PY s Cost | FY 07 Cost | FY 07 Award Date | FY 08 Cost                                 | FY 08 Award Date | FY 09 Cost | FY 09 Award Date | Cost to Complete    | Total Cost | Target Value of Contract |
| <b>Product Development</b>  |                        |  |                 |            |                  |  |                  |            |                  |                     |            |                          |
| Architecture Development and Validation, Evolve and Provide CM Mgmt of SCA  | Various                | Various  | 0.000           | 1.035      | 2Q               | 1.060                                      | 2Q               | 0.655      | 2Q               | Cont.               | Cont.      | Cont.                    |
| <b>Waveform Development:</b>  |                        |  |                 |            |                  |  |                  |            |                  |                     |            |                          |
| Wideband Networking Waveform (WNN)  | CPAF                   | Boeing, Anaheim CA                               | 0.000           | 67.772     | 1-2Q             | 51.869                                     | 1-2Q             | 14.018     | 1-2Q             | Cont.               | Cont.      | Cont.                    |
| Soldier Radio Waveform (SRW)  | Various                | Various  | 0.000           | 35.200     | 1Q               | 36.580                                     | 1Q               | 11.940     | 1-2Q             | Cont.               | Cont.      | Cont.                    |
| Mobile User Objective System (MUOS)   | Various                | Various  | 0.000           | 10.000     | 1Q               | 15.000                                     | 1Q               | 3.333      | 1-2Q             | Cont.               | Cont.      | Cont.                    |
| Joint Airborne Networking -Tactical Edge (JAN-TE)   | Various                | Various  | 0.000           | 17.700     | 1-2Q             | 27.100                                     | 2Q               | 9.417      | 1-2Q             | Cont.               | Cont.      | Cont.                    |
| Legacy Software-Defined Radio Waveforms   | Various                | Various  | 0.000           | 24.235     | 1-2Q             | 19.251                                     | 1-2Q             | 3.673      | 1-2Q             | Cont.               | Cont.      | Cont.                    |
| Network Enterprise Services Development   | Various                | Various  | 0.000           | 60.444     | 2-3Q             | 94.284                                     | 1-2Q             | 38.230     | 1-2Q             | Cont.               | Cont.      | Cont.                    |
| Software Sustainment And STR Engineering  | Various                | Various  | 0.000           | 2.600      | 2-3Q             | 6.680                                      | 1-2Q             | 4.384      | 1-2Q             | Cont.               | Cont.      | Cont.                    |
| Certification (interim SCA Compliance Testing)  | Various                | Various  | 0.000           | 6.030      | 1-2Q             | 7.469                                      | 1-2Q             | 2.561      | 1-2Q             | Cont.               | Cont.      | Cont.                    |
| Subtotal Product Development  |                        |  | 0.000           | 225.016    |                  | 259.293                                    |                  | 88.211     |                  | Cont.               | Cont.      | Cont.                    |
| Remarks:  |                        |  |                 |            |                  |  |                  |            |                  |                     |            |                          |
| <b>Development Support</b>  |                        |  |                 |            |                  |  |                  |            |                  |                     |            |                          |
| FFRDC - MITRE Technical Support   | MIPR                   | MITRE, Ft. Monmouth, NJ                          | 0.000           | 10.220     | 1-2Q             | 10.782                                     | 1-2Q             | 4.310      | 1-2Q             | Cont.               | Cont.      | Cont.                    |
| Subtotal Support  |                        |  | 0.000           | 10.220     |                  | 10.782                                     |                  | 4.310      |                  | Cont.               | Cont.      | Cont.                    |
| Remarks: In PYs-FY06, funding for JNED resides in Army PE 0604280A, Project 162.<br>In FY07-FY08, Project No. 3076 represents the total JNED RDT&E budget for those years.<br>In FY09, Project No. 3076 represents one-third of the total JNED RDT&E budget. As part of the JTRS joint program acquisition strategy, each MILDEP budgets for one-third of the total program. Thus, one-third of JNED is represented in this PE, one-third is represented in Army PE 0604280A, and one-third in Air Force PE 0604280F. |                        |  |                 |            |                  |  |                  |            |                  |                     |            |                          |

CLASSIFICATION:

| Exhibit R-3 Cost Analysis (JTRS NED page 2)   |                        |                                |  |            |                  |  |                  |            |                  | DATE: February 2007 |            |                          |
|---|------------------------|--------------------------------|--|------------|------------------|--|------------------|------------|------------------|---------------------|------------|--------------------------|
| APPROPRIATION/BUDGET ACTIVITY   |                        |                                | PROGRAM ELEMENT                                  |            |                  | PROJECT NUMBER AND NAME                    |                  |            |                  |                     |            |                          |
| RDT&E, N / BA-5   |                        |                                | PE: 0604280N TITLE: JOINT TACTICAL RADIO SYSTEMS |            |                  | 3076 JTRS Network Enterprise Domain (JNED) |                  |            |                  |                     |            |                          |
| Cost Categories   | Contract Method & Type | Performing Activity & Location | Total PY s Cost                                  | FY 07 Cost | FY 07 Award Date | FY 08 Cost                                 | FY 08 Award Date | FY 09 Cost | FY 09 Award Date | Cost to Complete    | Total Cost | Target Value of Contract |
| <b>Developmental Test &amp; Evaluation</b>  |                        |                                |  |            |                  |  |                  |            |                  |                     |            |                          |
| N/A   | N/A                    | N/A                            | 0.000  | 0.000      |                  | 0.000                                      |                  | 0.000      |                  | 0.000               | 0.000      |                          |
| Subtotal T&E  |                        |                                | 0.000  | 0.000      |                  | 0.000                                      |                  | 0.000      |                  | Cont.               | Cont.      | Cont.                    |
| Remarks:  |                        |                                |  |            |                  |  |                  |            |                  |                     |            |                          |
| <b>Contractor Engineering Support</b>   |                        |                                |  |            |                  |  |                  |            |                  |                     |            |                          |
| Program Management Support  | Various                | Various                        | 0.000  | 7.972      | 1-2Q             | 9.742                                      | 1-2Q             | 2.852      | 1-2Q             | Cont.               | Cont.      | Cont.                    |
| Subtotal Management   |                        |                                | 0.000  | 7.972      |                  | 9.742                                      |                  | 2.852      |                  | Cont.               | Cont.      | Cont.                    |
| Remarks:  |                        |                                |  |            |                  |  |                  |            |                  |                     |            |                          |
| Total Cost  |                        |                                | 0.000  | 243.208    |                  | 279.817                                    |                  | 95.373     |                  | Continuing          | Continuing |                          |
| Remarks: In PYs-FY06, funding for JNED resides in Army PE 0604280A, Project 162.<br>In FY07-FY08, Project No. 3076 represents the total JNED RDT&E budget for those years.<br>In FY09, Project No. 3076 represents one-third of the total JNED RDT&E budget. As part of the JTRS joint program acquisition strategy, each MILDEP budgets for one-third of the total program. Thus, one-third of JNED is represented in this PE, one-third is represented in Army PE 0604280A, and one-third in Air Force PE 0604280F. |                        |                                |  |            |                  |  |                  |            |                  |                     |            |                          |

Exhibit R-3, Project Cost Analysis





**Classification:**

|  |                |   |                |                |   |                               |               |               |
|--|----------------|---|----------------|----------------|---|-------------------------------|---------------|---------------|
| Exhibit R-5, Termination Liability Funding for Major Defense Acquisition Programs, RDT&E Funding   |                |   |                |                |   | DATE:<br><b>February 2007</b> |               |               |
| APPROPRIATION/BUDGET ACTIVITY<br><b>RDT&amp;E, N / BA-5</b>  |                | PROGRAM ELEMENT NUMBER AND NAME<br>PE: 0604280N TITLE: JOINT TACTICAL RADIO SYSTEMS |                |                | PROJECT NUMBER AND NAME<br>3076 JTRS Network Enterprise Domain (JNED) |                               |               |               |
| <b>Program Title</b>   | <b>FY 2006</b> | <b>FY 2007</b>  | <b>FY 2008</b> | <b>FY 2009</b> | <b>FY2010</b>   | <b>FY2011</b>                 | <b>FY2012</b> | <b>FY2013</b> |
| X3076 JTRS Network Enterprise Domain (JNED)  | 0.000          | 0.000   | 4.800          | 0.640          | 0.256   | 0.102                         | 0.000         | 0.000         |
| <p>Note: In FY06 JNED funding resides in Army PE 0604280A, Project 162. FY07-FY08 funding above represents the total JNED termination liability (TL) funding profile. FY09-11 funding above represents one-third of the total JNED termination liability (TL) funding profile. As part of the JTRS joint program acquisition strategy, each MILDEP budgets for one-third of the total program. Thus, for FY09 and beyond, one-third of TL is represented in this PE, one-third is represented in Army PE 0604280A and one-third in Air Force PE 0604280F.</p> <p><u>Instructions:</u></p> <ol style="list-style-type: none"> <li>1. For all ACAT 1 programs with RDT&amp;E funding, indicate the funds by year budgeted for termination liability.</li> <li>2. If not budgeted, provide the appropriate waiver authority.</li> <li>3. For programs with waiver authority, identify the amounts on the contract by year.</li> </ol> |                |   |                |                |   |                               |               |               |

**Exhibit R-5 Termination Liability in Major Acquisition Programs RDTEN**

CLASSIFICATION:

|   |              |   |         |                            |   |         |         |         |
|---|--------------|---|---------|----------------------------|---|---------|---------|---------|
| EXHIBIT R-2a, RDT&E Project Justification                   |              |   |         | DATE: <b>February 2007</b> |   |         |         |         |
| APPROPRIATION/BUDGET ACTIVITY<br><b>RDT&amp;E, N / BA-5</b> |              | PROGRAM ELEMENT NUMBER AND NAME<br>PE: 0604280N TITLE: JOINT TACTICAL RADIO SYS |         |                            | PROJECT NUMBER AND NAME<br>9999 Congressional Increases |         |         |         |
| COST (\$ in Millions)                                       | FY 2006      | FY 2007   | FY 2008 | FY 2009                    | FY 2010   | FY 2011 | FY 2012 | FY 2013 |
| Total Project Cost  | <b>2.298</b> |   |         |                            |   |         |         |         |
| 9999 Digital Modular Radio (DMR)                            | <b>2.298</b> |   |         |                            |   |         |         |         |
|   |              |   |         |                            |   |         |         |         |
|   |              |   |         |                            |   |         |         |         |

**(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:**

The Digital Modular Radio (DMR) provides improvements for fleet radio requirements in the HF, VHF, and UHF frequency band. The DMR replaces and will be interoperable and backwards compatible with legacy systems. The DMR is a digital, modular, software programmable, multi-channel, multi-function and multi-band (2MHz-2 GHz) radio system.

**CLASSIFICATION:**

|   |   |   |       |       |
|---|---|---|-------|-------|
| EXHIBIT R-2a, RDT&E Project Justification                         |   | DATE: <b>February 2007</b>                              |       |       |
| APPROPRIATION/BUDGET ACTIVITY<br><b>RDT&amp;E, N /BA-5</b>        | PROGRAM ELEMENT NUMBER AND NAME<br>PE: 0604280N TITLE: JOINT TACTICAL RADIO SYSTEMS | PROJECT NUMBER AND NAME<br>9999 Congressional Increases |       |       |
| <b>(U) B. Accomplishments/Planned Program</b>                     |   |   |       |       |
|   | FY 06   | FY 07   | FY 08 | FY 09 |
| DMR (9378)  | 2.298   | 0.000   | 0.000 | 0.000 |
| RDT&E Articles Quantity   |   |   |       |       |
| <p><b>FY06:</b> Developed software 6.4.2 and DT/OT prep work.</p> |   |   |       |       |