**CLASSIFICATION:**

| EXHIBIT R-2, RDT&E Budget Item Justification | | | | | | **DATE:** | **February 2005** | |
|---|---|---|---|---|---|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY<br>**RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY/BA-7** | | | | R-1 ITEM NOMENCLATURE<br>**0205604N Tactical Data Links** | | | | |
| COST ($ in Millions) | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 |
| Total PE Cost | 41.599 | 18.744 | 86.364 | 54.032 | 34.267 | 23.669 | 34.197 | 31.838 |
| 1743 Link-16 Improvements | 12.611 | 3.614 | 2.383 | 0.498 | | | | |
| 2126 ATDLS Integration | 28.988 | 15.130 | 83.981 | 53.534 | 34.267 | 23.669 | 34.197 | 31.838 |
| Quantity of RDT&E Articles | **7** | | **6** | | | | | |

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

(U) This program element (PE) develops and improves the Navy's tactical data link systems. It includes the Link-16 Improvements and Advanced Tactical Data Link Systems (ATDLS) Integration Programs.

(U) Link-16 Improvements extends Link-16 technological improvements to existing and new U.S. Navy tactical data link (TDL) systems, including Link-16 and Link-22. Link-16 Joint Range Extension (JRE) transfers Link-16 data via satellite communications and other non-RF paths. High Throughput Link-16 provides improved data transmission rates by altering the modulation characteristics of Link-16. Link-22 will pass TADIL-J data elements beyond the line-of-sight using a Time Division Multiple Access (TDMA) protocol and improved waveform with existing high-frequency (HF) and ultra-high-frequency (UHF) radios. This project allows more effective employment of fleet units by increasing timeliness, accuracy, and content of tactical data transfer and eliminate line-of-sight transmission limitations thereby improving operational flexibility. The Common Data Link Monitoring System (CDLMS) will be upgraded to Next Generation Command and Control Processor (NGC2P) to provide higher CPU speeds, update rate and memory capacity required for advanced multi-TADIL processing functions. NGC2P will update CDLMS with advanced processors required to support critical data link functions including Link-16 JRE and Link-22.

(U) The ATDLS Integration program will integrate the Multifunctional Information Distribution System – Low Volume Terminal (MIDS-LVT) Link-16 terminal into U.S. Navy platforms. This multinational (U.S., France, Germany, Italy, and Spain) cooperative development program was established to design, develop, and deliver low-volume lightweight tactical information system terminals for U.S. and foreign fighter aircraft, helicopters, ships and ground sites. The terminals are designed as a Pre-Planned Product Improvement (P3I) of the Joint Tactical Information Distribution System (JTIDS) Time Division Multiple Access (TDMA) Class II terminal. The goal of the MIDS-LVT program is to produce a terminal that is smaller, lighter, fully compatible with, and as capable as the JTIDS TDMA Class II terminals, but suitable for use in platforms that cannot accommodate the bulkier, heavier JTIDS TDMA Class II equipment. This project includes the costs to integrate and test MIDS on the Navy's F/A-18 and selected ship platforms. ATDLS Integration of the MIDS-LVT will also provide selected U.S. Navy and U.S. Marine Corps tactical aircraft such as the F/A-18, P-3, EA-6B, AV-8B and SH-60; U.S. Navy ships, and U.S. Marine Corps ground units with crypto-secure, jam resistant, low-probability-of-exploitation communication of tactical data and voice at a high data rate. It will have additional capabilities of common grid navigation and automatic relay inherent in the equipment that will enable long-range communication and provide jam resistance. The system will be interoperable among all services and NATO/Allied users equipped with MIDS-LVT or JTIDS Class II/IIA.

R-1 SHOPPING LIST - Item No. 179

**CLASSIFICATION:**

| EXHIBIT R-2, RDT&E Budget Item Justification | DATE: **February 2005** |
|---|---|
| APPROPRIATION/BUDGET ACTIVITY<br>**RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY/BA-7** | R-1 ITEM NOMENCLATURE<br>**0205604N Tactical Data Links** |

U) ATDLS Integration Program also develops new and improved capabilities for Navy TADIL-J users. The Command and Control Processor is a software development effort that provides an interface between the TADILs (Links 4A, 11, and 16) and major surface ship Command and Control Systems (Advanced Combat Direction System (ACDS) and AEGIS Command and Decision (C&D)). The Common Data Link Management System is a pre-planned product improvement of the Command and Control Processor. The CDLMS will provide translation between TADILs and isolate all tactical data link equipment, message standards and protocols from tactical information processors. This will provide a flexible capability for rapidly exchanging tactical information using a single database for translating various link formats while remaining completely independent of communications equipment and tactical data computing systems. Development of new capabilities in ATDLS includes the Joint Interface Control Officer Support System (JSS), Common Link Integration Processing (CLIP) and Dynamic Network Management (DNM). The Joint Interface Control Officer (JICO) Support System (JSS) will be the standard joint service toolset to monitor and control Multi-TADIL network architectures. The Common Link Integration Processing (CLIP) concept will introduce open system software required to reduce life cycle support costs and COTS technology refresh objectives and high throughput Link-16. The CLIP development concept addresses fundamental interoperability and affordability of tactical data link capabilities through cooperative development program under both USN and USAF sponsorship. The principal goal of CLIP is to develop a multi-TDL software capability that can be utilized by multiple platforms (aircraft, ships, and ground) for all services. Dynamic Network Management (DNM) will provide automatic reconfiguration of Link-16 networks that respond instantly to emergent warfighter requirements in the field. DNM consists of different capabilities including network control technologies (NCT), new terminal protocols (time slot reallocation (TSR) and Stochastic Unified Multiple Access (SHUMA)) and has been significantly expanded to include a more robust TSR and adaptive multinetting. The DNM capability will be integrated into the JSS host system and also JTIDS, MIDS and Joint Tactical Radio System (JTRS) terminals. Tactical Data Link Shipboard Integration provides for the integration of transformational software (i.e. CLIP, MIDS-JTRS) onto shipboard platforms.

(U) This program element also funds: (1) the development required to accommodate expanded Link-16 operational capabilities for additional warfare areas, (2) development of automated network management aids, and (3) related systems engineering and contractor support efforts.

(U) JUSTIFICATION FOR BUDGET ACTIVITY: This program is funded under OPERATIONAL SYSTEMS DEVELOPMENT because it encompasses engineering and manufacturing development for upgrade of existing, operational systems.

R-1 SHOPPING LIST - Item No. 179

**CLASSIFICATION:**

| EXHIBIT R-2a, RDT&E Project Justification | | | | | | DATE: **February 2005** | | |
|---|---|---|---|---|---|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY<br>**RDT&E,N/BA-7** | PROGRAM ELEMENT NUMBER AND NAME<br>**0205604N Tactical Data Links** | | | PROJECT NUMBER AND NAME<br>**1743 Link-16 Improvements** | | | | |
| COST ($ in Millions) | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 |
| Project Cost | 12.611 | 3.614 | 2.383 | 0.498 | | | | |
| RDT&E Articles Qty | **6** | | | | | | | |

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

(U) Link-16 Improvements extends Link-16 technological improvements to existing and new U.S. Navy tactical data link (TDL) systems, including Link-16 and Link-22. Link-16 Joint Range Extension (JRE) transfers Link-16 data via satellite communications and other non-RF paths. High Throughput Link-16 provides improved data transmission rates by altering the modulation characteristics of Link-16. Link-22 will pass TADIL-J data elements beyond the line-of-sight using a Time Division Multiple Access (TDMA) protocol and improved waveform with existing high-frequency (HF) and ultra-high-frequency (UHF) radios. This project allows more effective employment of fleet units by increasing timeliness, accuracy, and content of tactical data transfer and eliminate line-of-sight transmission limitations thereby improving operational flexibility. The Common Data Link Monitoring System (CDLMS) will be upgraded to Next Generation Command and Control Processor (NGC2P) to provide higher CPU speeds, update rate and memory capacity required for advanced multi-TADIL processing functions. NGC2P will update CDLMS with advanced processors required to support critical data link functions including Link-16 JRE and Link-22.

R-1 SHOPPING LIST - Item No. 179

**CLASSIFICATION:**

| EXHIBIT R-2a, RDT&E Project Justification | | DATE: **February 2005** |
|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY | PROGRAM ELEMENT NUMBER AND NAME | PROJECT NUMBER AND NAME |
| **RDT&E,N/BA-7** | **0205604N Tactical Data Links** | **1743 Link-16 Improvements** |

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

| **CDLMS / LINK-22 PROGRAM ENHANCEMENTS** | FY 04 | FY 05 | FY 06 | FY 07 |
|---|---|---|---|---|
| Accomplishments/Effort/Subtotal Cost | 0.980 | | | |
| RDT&E Articles Quantity | | | | |

FY 04 Accomplishments: Incorporated enhanced capabilities into NGC2P design. Completed design assessment of MTP Prototype and incorporate results into CDR.

| **NGC2P CAPABILITY** | FY 04 | FY 05 | FY 06 | FY 07 |
|---|---|---|---|---|
| Accomplishments/Effort/Subtotal Cost | 11.631 | 3.614 | 2.383 | 0.498 |
| RDT&E Articles Quantity | 6 | | | |

FY 04 Accomplishments: Continued development of NGC2P capability. Continued development of EHF MDR BLOS capability and Link-16 throughput enhancements. Continued the rehosting of current C2P software from CMS-2 to Modern Higher Order Software language. Conducted Critical Design Review. Conducted development testing on the adjunct processor units to demonstrate JRE, Dual Net Multi-Frequency Link-11, GCCS-M Interface and Link-22 capabilities. Continued development of CDLMS field change and technical manual development. Continued development of training curricula update.
FY 05 Plan: Continue development of NGC2P capability and development of training curricula. Conduct development testing, combat systems integration testing and link certification testing for NGC2P JRE capability.
FY 06 Plan: Conduct TECHEVAL/OPEVAL of NGC2P JRE capability. Achieve MS C decision for NGC2P JRE. Conduct development testing, combat systems integration testing, link certification testing and TECHEVAL for NGC2P Link-22 capability.
FY 07 Plan: Conduct OPEVAL of NGC2P Link-22 capability. Achieve MS C decision for NGC2P Link-22.

R-1 SHOPPING LIST - Item No. 179

**CLASSIFICATION:**

| EXHIBIT R-2a, RDT&E Project Justification | | | DATE: February 2005 |
|---|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY | PROGRAM ELEMENT NUMBER AND NAME | PROJECT NUMBER AND NAME | |
| **RDT&E,N/BA-7** | **0205604N Tactical Data Links** | **1743 Link-16 Improvements** | |

**(U) C. PROGRAM CHANGE SUMMARY:**

| (U) Funding: | FY 2004 | FY 2005 | FY 2006 | FY 2007 |
|---|---|---|---|---|
| FY 05 President's Budget | 11.509 | 3.647 | 2.381 | - |
| FY 06 President's Budget | 12.611 | 3.614 | 2.383 | 0.498 |
| Total Adjustments | 1.102 | -0.033 | 0.002 | 0.498 |
| Summary of Adjustments | | | | |
| Congressional Adjustments | | | | |
| Congressional Recissions | | -0.032 | | |
| Reprogrammings | 1.362 | | | |
| Programmatic Adjustments | | -0.001 | | 0.500 |
| Economic Assumptions | | | 0.010 | 0.004 |
| Pricing Adjustments | | | -0.008 | -0.006 |
| SBIR/STTR Transfers | -0.26 | | | |
| Subtotal | 1.102 | -0.033 | 0.002 | 0.498 |

(U) Schedule: The NGC2P program schedule has been updated to properly reflect the software development schedule of JRE and Link-22.

(U) Technical: Not applicable.

R-1 SHOPPING LIST - Item No. 179

**CLASSIFICATION:**

| EXHIBIT R-2a, RDT&E Project Justification | | DATE: **February 2005** |
|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY | PROGRAM ELEMENT NUMBER AND NAME | PROJECT NUMBER AND NAME |
| **RDT&E,N/BA-7** | **0205604N Tactical Data Links** | **1743 Link-16 Improvements** |

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

| Line Item No. & Name | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 | To Complete | Total Cost |
|---|---|---|---|---|---|---|---|---|---|---|
| OPN Line 2614 ATDLS | 15.267 | 2.371 | 14.102 | 19.246 | 28.458 | 26.245 | 4.081 | 0.000 | Continuing | Continuing |

**(U) E. ACQUISITION STRATEGY:**

Next Generation Command and Control Processor software development is utilizing an existing Northrop Grumman IT cost plus contract.

R-1 SHOPPING LIST - Item No. 179

**CLASSIFICATION:**

Exhibit R-3 Cost Analysis (page 1)

DATE: **February 2005**

APPROPRIATION/BUDGET ACTIVITY: **RDT&E,N/BA-7**

PROGRAM ELEMENT: **0205604N Tactical Data Links**

PROJECT NUMBER AND NAME: **1743 Link-16 Improvements**

| Cost Categories | Contract Method & Type | Performing Activity & Location | Total PY s Cost | FY 05 Cost | FY 05 Award Date | FY 06 Cost | FY06 Award Date | FY 07 Cost | FY 07 Award Date | Cost to Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NILE Subphase 2 | CPIF | Logicon, San Diego, CA | 3.171 | | | | | | | | 3.171 | 3.171 |
| NILE LLC Dev | CPIF | VIASAT, San Diego, CA | 0.500 | | | | | | | | 0.500 | 0.500 |
| Link-22 Engineering/Integration | WX | SPAWARSYSCEN, San Diego, CA | 3.547 | | | | | | | | 3.547 | 3.547 |
| Link-22 Integration | CPFF | Logicon, San Diego, CA | 0.116 | | | | | | | | 0.116 | 0.116 |
| Link-22 Network Design | WX | NCTSI, San Diego, CA | 0.690 | | | | | | | | 0.690 | 0.690 |
| Command and Control Processor (C2P) | Various | Various | 2.377 | | | | | | | | 2.377 | 2.377 |
| Multi-TADIL Capability MTC | Various | Various | 1.696 | | | | | | | | 1.696 | 1.696 |
| Next Generation C2P Engineering/Integration | WX | SPAWARSYSCEN, San Diego, CA | 7.227 | 1.190 | 11/04 | 0.864 | 11/05 | | | | 9.281 | 9.281 |
| Next Generation C2P Engineering/Integration | Various | Various | 1.770 | | | | | | | | 1.770 | 1.770 |
| Next Generation C2P GFE | Various | Various | 0.796 | | | | | | | | 0.796 | 0.796 |
| Next Generation C2P Design/Dev | CPFF | APC, Austin, TX | 8.013 | | | | | | | | 8.013 | 8.013 |
| Next Generation C2P Design/Dev TDA | CPFF | APL/JHU, Laurel, MD | 11.038 | | | | | | | | 11.038 | 11.038 |
| Next Generation C2P Design/Dev | CPFF | Northrop Grumman IT, Reston, VA | 7.759 | 0.705 | 11/04 | | | | | | 8.464 | 8.464 |
| | | | | | | | | | | | | |
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| | | | | | | | | | | | | |
| Subtotal Product Development | | | 48.700 | 1.895 | | 0.864 | | 0.000 | | | | |

Remarks:

R-1 SHOPPING LIST - Item No. 179

**CLASSIFICATION:**

| Exhibit R-3 Cost Analysis (page 2) | | | | | | | | | DATE: **February 2005** | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY **RDT&E,N/BA-7** | | | PROGRAM ELEMENT **0205604N Tactical Data Links** | | | PROJECT NUMBER AND NAME **1743 Link-16 Improvements** | | | | | | |
| Cost Categories | Contract Method & Type | Performing Activity & Location | Total PY s Cost | FY 05 Cost | FY 05 Award Date | FY 06 Cost | FY06 Award Date | FY 07 Cost | FY 07 Award Date | Cost to Complete | Total Cost | Target Value of Contract |
| Development Support | | | | | | | | | | | | |
| Software Development | | | | | | | | | | | | |
| Integrated Logistics Support | | | | | | | | | | | | |
| Configuration Management | | | | | | | | | | | | |
| Technical Data | | | | | | | | | | | | |
| Studies & Analyses | | | | | | | | | | | | |
| GFE | | | | | | | | | | | | |
| Award Fees | | | | | | | | | | | | |
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| Subtotal Support | | | | | | | | | | | | |

Remarks:

R-1 SHOPPING LIST - Item No. 179

**CLASSIFICATION:**

Exhibit R-3 Cost Analysis (page 3) | DATE: **February 2005**

APPROPRIATION/BUDGET ACTIVITY: **RDT&E,N/BA-7** | PROGRAM ELEMENT: **0205604N Tactical Data Links** | PROJECT NUMBER AND NAME: **1743 Link-16 Improvements**

| Cost Categories | Contract Method & Type | Performing Activity & Location | Total PY s Cost | FY 05 Cost | FY 05 Award Date | FY 06 Cost | FY 06 Award Date | FY 07 Cost | FY 07 Award Date | Cost to Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NGC2P Test & Evaluation | WX | SPAWARSYSCEN, San Diego, CA | 4.626 | 0.972 | 11/04 | 0.630 | 10/05 | 0.236 | 10/06 | | 6.464 | 6.464 |
| NGC2P Test & Evaluation | WX | NCTSI, San Diego, CA | 0.270 | | | 0.167 | 10/05 | | | | 0.437 | 0.437 |
| NGC2P Test & Evaluation | WX | OPTEVFOR, Norfolk, VA | | | | 0.097 | 10/05 | 0.099 | 10/06 | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| Subtotal T&E | | | 4.896 | 0.972 | | 0.894 | | 0.335 | | | | |

Remarks:

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Engineering Support and Travel | Various | Various | 3.947 | 0.747 | Various | 0.625 | Various | 0.163 | Various | | 5.482 | 5.482 |
| | | | | | | | | | | | | |
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| | | | | | | | | | | | | |
| Subtotal Management | | | 3.947 | 0.747 | | 0.625 | | 0.163 | | | | |

Remarks:

Remarks:

R-1 SHOPPING LIST - Item No. 179

**CLASSIFICATION:**

EXHIBIT R4, Schedule Profile | DATE: **February 2005**

APPROPRIATION/BUDGET ACTIVITY: **RDT&E,N/BA-7**

PROGRAM ELEMENT NUMBER AND NAME: **0205604N Tactical Data Links**

PROJECT NUMBER AND NAME: **1743 Link-16 Improvements**

| Fiscal Year | 2004 | | | | 2005 | | | | 2006 | | | | 2007 | | | | 2008 | | | | 2009 | | | | 2010 | | | | 2011 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 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 |
| **Program Milestones** NGC2P | | | | | | | | | | JRE MS C | | | | Link-22 MS C | | | | | | | | | | | | | | | | | | |
| **Engineering Milestones** NGC2P | | CDR | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Test & Evaluation Milestones** NGC2P - JRE | | | DT | | | DT | DT | CSIT/ | LINK CERT TECHEVAL | | OPEVAL | | | | | | | | | | | | | | | | | | | | | |
| NGC2P - LINK-22 | | | | | | | | | DT | DT | CSIT/LINK CERT DT TECHEVAL | | OPEVAL | | | | | | | | | | | | | | | | | | | |
| **Contract Milestones** NGC2P | | | | | | AEGIS BMD LRIP | | | | LRIP | | FRP | | | | | | | | | | | | | | | | | | | | |

R-1 SHOPPING LIST - Item No. 179

**CLASSIFICATION:**

| Exhibit R-4a, Schedule Detail | | | | | | | DATE: **February 2005** | |
|---|---|---|---|---|---|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY **RDT&E,N/BA-7** | PROGRAM ELEMENT **0205604N Tactical Data Links** | | | | PROJECT NUMBER AND NAME **1743 Link-16 Improvements** | | | |
| Schedule Profile | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 |
| NGC2P CDR | 2Q | | | | | | | |
| NGC2P JRE DT | 3Q | | | | | | | |
| NGC2P JRE DT | | 2Q | | | | | | |
| AEGIS BMD LRIP | | 2Q | | | | | | |
| NGC2P JRE DT | | 3Q | | | | | | |
| NGC2P JRE CSIT/Link Certification | | 4Q | | | | | | |
| NGC2P JRE TECHEVAL | | | 1Q | | | | | |
| NGC2P JRE MS C | | | 2Q | | | | | |
| NGC2P JRE OPEVAL | | | 2Q | | | | | |
| NGC2P Link-22 DT | | | 2Q | | | | | |
| NGC2P Link-22 DT | | | 2Q | | | | | |
| NGC2P LRIP | | | 2Q | | | | | |
| NGC2P Link-22 CSIT/Link Certification | | | 3Q | | | | | |
| NGC2P Link-22 DT | | | 3Q | | | | | |
| NGC2P Link-22 TECHEVAL | | | 4Q | | | | | |
| NGC2P FRP | | | 4Q | | | | | |
| NGC2P Link-22 OPEVAL | | | | 1Q | | | | |
| NGC2P Link-22 MS C | | | | 3Q | | | | |

R-1 SHOPPING LIST - Item No. 179

**CLASSIFICATION:**

| EXHIBIT R-2a, RDT&E Project Justification | | | | | DATE: **February 2005** | | | |
|---|---|---|---|---|---|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY<br>**RDT&E,N/BA-7** | PROGRAM ELEMENT NUMBER AND NAME<br>**0205604N Tactical Data Links** | | PROJECT NUMBER AND NAME<br>**2126 ATDLS Integration** | | | | | |
| COST ($ in Millions) | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 |
| Project Cost<br>**Total** | 28.988 | 15.130 | 83.981 | 53.534 | 34.267 | 23.669 | 34.197 | 31.838 |
| RDT&E Articles Qty | **1** | | **6** | | | | | |

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

(U) The ATDLS Integration program will integrate the Multifunctional Information Distribution System – Low Volume Terminal (MIDS-LVT) Link-16 terminal into U.S. Navy platforms. This multinational (U.S., France, Germany, Italy, and Spain) cooperative development program was established to design, develop, and deliver low-volume lightweight tactical information system terminals for U.S. and foreign fighter aircraft, helicopters, ships and ground sites. The terminals are designed as a Pre-Planned Product Improvement (P3I) of the Joint Tactical Information Distribution System (JTIDS) Time Division Multiple Access (TDMA) Class II terminal. The goal of the MIDS-LVT program is to produce a terminal that is smaller, lighter, fully compatible with, and as capable as the JTIDS TDMA Class II terminals, but suitable for use in platforms that cannot accommodate the bulkier, heavier JTIDS TDMA Class II equipment. This project includes the costs to integrate and test MIDS on the Navy's F/A-18 and selected ship platforms. ATDLS Integration of the MIDS-LVT will also provide selected U.S. Navy and U.S. Marine Corps tactical aircraft such as the F/A-18, P-3, EA-6B, AV-8B and SH-60; U.S. Navy ships, and U.S. Marine Corps ground units with crypto-secure, jam resistant, low-probability-of-exploitation communication of tactical data and voice at a high data rate. It will have additional capabilities of common grid navigation and automatic relay inherent in the equipment that will enable long-range communication and provide jam resistance. The system will be interoperable among all services and NATO/Allied users equipped with MIDS-LVT or JTIDS Class II/IIA.

(U) ATDLS Integration Program also develops new and improved capabilities for Navy TADIL-J users. The Command and Control Processor is a software development effort that provides an interface between the TADILs (Links 4A, 11, and 16) and major surface ship Command and Control Systems (Advanced Combat Direction System (ACDS) and AEGIS Command and Decision (C&D)). The Common Data Link Management System is a pre-planned product improvement of the Command and Control Processor. The CDLMS will provide translation between TADILs and isolate all tactical data link equipment, message standards and protocols from tactical information processors. This will provide a flexible capability for rapidly exchanging tactical information using a single database for translating various link formats while remaining completely independent of communications equipment and tactical data computing systems. Development of new capabilities in ATDLS includes the Joint Interface Control Officer Support System (JSS), Common Link Integration Processing (CLIP) and Dynamic Network Management (DNM). The Joint Interface Control Officer (JICO) Support System (JSS) will be the standard joint service toolset to monitor and control Multi-TADIL network architectures. The Common Link Integration Processing (CLIP) concept will introduce open system software required to reduce life cycle support costs and COTS technology refresh objectives and high throughput Link-16. The CLIP development concept addresses fundamental interoperability and affordability of tactical data link capabilities through cooperative development program under both USN and USAF sponsorship. The principal goal of CLIP is to develop a multi-TDL software capability that can be utilized by multiple platforms (aircraft, ships, and ground) for all services. Dynamic Network Management (DNM) will provide automatic reconfiguration of Link-16 networks that respond instantly to emergent warfighter requirements in the field. DNM consists of different capabilities including network control technologies (NCT), new terminal protocols (time slot reallocation (TSR) and Stochastic Unified Multiple Access (SHUMA)) and has been significantly expanded to include a more robust TSR and adaptive multinetting. The DNM capability will be integrated into the JSS host system and also JTIDS, MIDS and Joint Tactical Radio System (JTRS) terminals. Tactical Data Link Shipboard Integration provides for the integration of transformational software (i.e. CLIP, MIDS-JTRS) onto shipboard platforms.

(U) This project also funds: (1) the development required to accommodate expanded Link-16 operational capabilities for additional warfare areas, (2) development of automated network management aids, and (3) related systems engineering and contractor support efforts.

(U) Additional terminal development costs are funded in program element 0604771D.

R-1 SHOPPING LIST - Item No. 179

**CLASSIFICATION:**

| EXHIBIT R-2a, RDT&E Project Justification | | | DATE: **February 2005** |
|---|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY | PROGRAM ELEMENT NUMBER AND NAME | PROJECT NUMBER AND NAME | |
| **RDT&E,N/BA-7** | **0205604N Tactical Data Links** | **2126 ATDLS Integration** | |

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

| **F/A-18 MIDS** | FY 04 | FY 05 | FY 06 | FY 07 |
|---|---|---|---|---|
| Accomplishments/Effort/Subtotal Cost | 4.778 | 0.000 | 0.000 | 0.000 |
| RDT&E Articles Quantity | | | | |

FY 04 Accomplishments: Conducted F/A-18 MIDS Verification of Correction of Deficiencies (VCD) of remaining deficiencies identified during OPEVAL. Achieved Milestone C decision.

| **Joint Interface Cont. Officer Spt Sys (JSS)** | FY 04 | FY 05 | FY 06 | FY 07 |
|---|---|---|---|---|
| Accomplishments/Effort/Subtotal Cost | 9.550 | 4.200 | 27.568 | 18.437 |
| RDT&E Articles Quantity | | | 6 | |

This funding includes the Navy's contribution to the JSS joint development initiative with the Air Force. The Air Force is funding the majority of the software development contract in FY 05.
FY 04 Accomplishments: Achieved Milestone B decision. Awarded Phase I contract to develop a standard joint service toolset software to monitor and control multi-TADIL network architectures.
FY 05 Plan: Conduct JSS Preliminary Design Review (PDR) of developed software. Award Phase II development contract for the continued development of the standard joint service toolset software to monitor and control multi-TADIL network architectures. Perform laboratory integration testing on engineering development model at contractor site.
FY 06 Plan: Conduct development testing, operational testing and early operational assessment on JSS software capabilities and functionalities developed and to demonstrate readiness for Navy LRIP decision. Conduct Critical Design Review (CDR). Test DNM network control technology capabilities in JSS during development testing. Continue software development to fully implement the multi-TADIL architecture (MTA) planning capability and generation of OPTASK Link message on-line/off-line mode, the local JICO database repository (JDR); database management and joint symbology; Joint Range Extension (JRE); interfaces to the Theater Battle Management Core System (TBMCS); Network Design Facility (NDF) for assessing JTIDS Network Library; Spectrum toolkit for submit/receive frequency request; software for calculation of Time Slot Duty Factor (TSDF) and Link-16 dynamic network management. Procure six engineering development models (EDM) for TECHEVAL.
FY 07 Plan: Continue software development to include the implementation of remote JDR; dynamic network management and reconfiguration lists in Link-16 message standards; gateways to be interfaced to variable message format (VMF) and Intelligent Broadcast System (IBS); interface and network management for Link-22; on-line and off-line training mode via simulation and computer based training; and system security administration/profile management to ensure data security integrity. Conduct development test and TECHEVAL on all software developed. Achieve Navy LRIP Decision.

R-1 SHOPPING LIST - Item No. 179

**CLASSIFICATION:**

| EXHIBIT R-2a, RDT&E Project Justification | | DATE: **February 2005** |
|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY | PROGRAM ELEMENT NUMBER AND NAME | PROJECT NUMBER AND NAME |
| **RDT&E,N/BA-7** | **0205604N Tactical Data Links** | **2126 ATDLS Integration** |

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

| **Common Link Integration Processing (CLIP)** | FY 04 | FY 05 | FY 06 | FY 07 |
|---|---|---|---|---|
| Accomplishments/Effort/Subtotal Cost | 2.700 | 2.495 | 41.365 | 27.446 |
| RDT&E Articles Quantity | | | | |

This funding line includes the Navy's contribution to the CLIP joint development initiative with the Air Force. The Air Force is funding the software development contract in FY 05.
FY 04 Accomplishments: Completed program specifications, requirements and documentation including contract request for proposal (RFP), statement of work, CDRLs and systems requirements document. Released RFP for CLIP Increments 1 through 4 software development. Commenced evaluation of CLIP software development proposals.
FY 05 Plan: Achieve Milestone B Decision. Commence development of CLIP to provide a common interpretation of data link message standards and to minimize interoperability issues while reducing platform integration costs through a common software solution. Commence development of Increment 1 software and documentation to implement the CLIP architecture, Common Host Interface (CHI), Link-16/Joint Range Extension, data translation and forwarding capabilities. Conduct CLIP Increment 1 Systems Requirement Review (SRR) and PDR.
FY 06 Plan: Conduct CLIP Increment 1 CDR. Conduct development testing of Increment 1 software capabilities and functionality. Commence development of Increment 2 software and documentation to implement the remaining Link-16 functionality, incorporate JRE, Variable Message Format (VMF), Wide-band Networking Waveform (WNW) messages, IP based applications, and N-series message standards. Conduct CLIP Increment 2 SRR, PDR and CDR.
FY 07 Plan: Conduct CLIP Acceptance Testing (CAT) of Increment 1 software capabilities and functionality. Commence platform integration testing of Increment 1 software on lead air platform. Conduct development testing and CAT of Increment 2 software capabilities and functionality. Commence development of Increment 3 software and documentation to implement the functionality for Link-4A, Link-11, Link-11B, Link-22 and IP enterprise services. Incorporate JRE and VMF messages and complete data translation and forwarding capability. Complete N-series message interface. Conduct Increment 3 SRR, PDR and CDR. Commence development of Increment 4 software for Intelligence Broadcast Service (IBS) message and Tactical Targeting Network Technology (TTNT) interfaces. Conduct Increment 4 SRR. Achieve CLIP Increment 1 Milestone C Decision.

| **Dynamic Network Management** | FY 04 | FY 05 | FY 06 | FY 07 |
|---|---|---|---|---|
| Accomplishments/Effort/Subtotal Cost | 11.960 | 8.435 | 15.048 | 7.651 |
| RDT&E Articles Quantity | 1 | | | |

FY 04 Accomplishments: Continued DNM development to provide automatic reconfiguration of Link-16 networks and dynamic reallocation of network capacity to meet emergent warfighter requirements in the field as operations evolve. Supported the development, test and evaluation of Link-16 terminal and test bed hardware and software modifications to implement DNM capability. Developed improved Link-16 capabilities including organic navigation. Conducted NCT/SHUMA Critical Design Review. Conducted development test on an interim JSS unit to test manual DNM technology.
FY 05 Plan: Continue DNM development to provide automatic reconfiguration of Link-16 networks and dynamic reallocation of network capacity to meet emergent warfighter requirements in the field as operations evolve. Complete Link-16 terminal and test bed modifications. Perform software formal qualification tests (SFQT), link certification and participate in Fleet exercise to evaluate DNM maturity. Conduct TSR CDR. Commence design and development of platform integration of DNM into ship and aircraft. Integrate NCT capabilities into JSS. Develop DNM integrated logistics support products including system-operating procedures.
FY 06 Plan: Continue DNM development expanding capability to support full multinet capability allowing for data forwarding between Link-16, Internet Protocol (IP) networks and New Joint Tactical Radio System (JTRS) waveforms. Complete integration of NCT capabilities into JSS. Conduct Multinetting CDR. Conduct SHUMA development and operational tests. Commence shipboard and aircraft integration of the DNM capabilities including the expanded TSR. Conduct TSR development test. Commence terminal recertification test. Conduct development test of multinetting capabilities. Continue support on DNM integrated logistic support products.
FY07 Plan: Continue development of multinetting capabilities and migration efforts to Wideband Networking Waveform (WNW) and JTRS waveforms. Continue platform integration of DNM capabilities.

R-1 SHOPPING LIST - Item No. 179

**CLASSIFICATION:**

| EXHIBIT R-2a, RDT&E Project Justification | | | DATE: February 2005 |
|---|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY | PROGRAM ELEMENT NUMBER AND NAME | PROJECT NUMBER AND NAME | |
| **RDT&E,N/BA-7** | **0205604N Tactical Data Links** | **2126 ATDLS Integration** | |

**(U) C. PROGRAM CHANGE SUMMARY:**

| (U) Funding: | FY 2004 | FY 2005 | FY 2006 | FY 2007 |
|---|---|---|---|---|
| FY 05 President's Budget | 32.462 | 15.330 | 28.703 | 24.866 |
| FY 06 President's Budget | 28.988 | 15.130 | 83.981 | 53.534 |
| Total Adjustments | -3.474 | -0.200 | 55.278 | 28.668 |
| Summary of Adjustments | | | | |
| Congressional Adjustments | | | | |
| Congressional Recissions | | -0.197 | | |
| Reprogrammings | -3.108 | -0.003 | | |
| Programmatic Adjustments | | | 54.817 | 28.027 |
| Economic Assumptions | | | 0.684 | 0.566 |
| Pricing Adjustments | | | -0.223 | 0.075 |
| SBIR/STTR Transfers | -0.366 | | | |
| Subtotal | -3.474 | -0.200 | 55.278 | 28.668 |

(U) Schedule:
Commencement of the F/A-18 Verification and Correction of Deficiencies (VCD) slipped from 2nd to 3rd quarter FY 04 due to the schedule slippage of the Joint Mission Planning System which was being concurrently tested with the F/A-18 MIDS.
Contract award for the JSS software development slipped two months from June 2004 to August 2004 due to an administrative delay at the Air Force in releasing the Request for Proposal (RFP). The current JSS Program Schedule is shown.
Contract award for the CLIP software development slipped from June 2004 to March 2005 due to a delay in release of the RFP and an extended proposal evaluation period. The current CLIP Program Schedule is shown.
(U) Technical: Not applicable.

R-1 SHOPPING LIST - Item No. 179

**CLASSIFICATION:**

| EXHIBIT R-2a, RDT&E Project Justification | | DATE: **February 2005** |
|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY | PROGRAM ELEMENT NUMBER AND NAME | PROJECT NUMBER AND NAME |
| **RDT&E,N/BA-7** | **0205604N Tactical Data Links** | **2126 ATDLS Integration** |

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

| Line Item No. & Name | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 | To Complete | Total Cost |
|---|---|---|---|---|---|---|---|---|---|---|
| APN LINE LI 052500 F/A-18 | 37.619 | 47.000 | 39.600 | 46.200 | 48.100 | 49.100 | 27.993 | 20.962 | Continuing | Continuing |
| RDT&E,DA | 10.478 | 18.515 | 18.649 | 18.939 | 19.496 | 20.045 | 20.427 | 20.864 | Continuing | Continuing |
| OPN LI 2614 ATDLS | 15.267 | 2.371 | 14.102 | 19.246 | 28.458 | 26.245 | 4.081 | 0.000 | Continuing | Continuing |
| RDT&E,AF 0207434F/5050 | 60.122 | 131.737 | 204.481 | 208.619 | 153.259 | 146.223 | | | Continuing | Continuing |

SCN - Funding for ATDLS hardware is not separately identified in the SCN budget exhibits.
RELATED RDT&E:
PE 0604771D/P771 - Link-16: System development and demonstration for a Joint Tactical Data Link (TDL).
PE 0604771D/P773 - MIDS: MIDS-LVT terminal development.
PE 0207434F/5050 - TDL System Integration

**(U) E. ACQUISITION STRATEGY:**

F/A-18 MIDS aircraft integration is utilizing cost plus fixed fee contracts on an R&D Basic Ordering Agreement with Boeing. For Common Link Integration Processing (CLIP), a competitive cost plus award fee/incentive fee contract will be awarded by the Navy to develop a single common data link integration solution that can be configured to satisfy a broad-range of platforms. The Air Force was designated as the acquisition executive for JICO Support System (JSS). For JSS Phase I, the government competed and awarded three firm fixed price contracts to Northrop Grumman Defense Missions, Lockheed Martin Corporation and Advanced Information Engineering Services Inc. for EDM system development and demonstration. For JSS Phase II, there will be a downselect to one vendor to complete the Phase II development, integration and test utilizing cost plus award fee, firm fixed price, time and material and cost reimbursable contract options. The Dynamic Network Management Network Controller Technology will be incorporated into JSS Block 1 and will utilize the contract for JSS. Remaining Dynamic Network Management development efforts will utilize existing development contracts with NGIT, DLS and BAE.

**CLASSIFICATION:**

Exhibit R-3 Cost Analysis (page 1) — DATE: **February 2005**

APPROPRIATION/BUDGET ACTIVITY: **RDT&E,N/BA-7** | PROGRAM ELEMENT: **0205604N Tactical Data Links** | PROJECT NUMBER AND NAME: **2126 ATDLS Integration**

| Cost Categories | Contract Method & Type | Performing Activity & Location | Total PY s Cost | FY 05 Cost | FY 05 Award Date | FY 06 Cost | FY 06 Award Date | FY 07 Cost | FY 07 Award Date | Cost to Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MIDS F/A-18 Integration | WX | Various | 153.119 | | | | | | | | 153.119 | 153.119 |
| TADIL-J System Engineering | WX | SPAWARSYSCEN, San Diego, CA | 28.233 | | | | | | | | 28.233 | 28.233 |
| TADIL-J System Engineering | Various | Various | 4.654 | | | | | | | | 4.654 | 4.654 |
| MIDS on Ship | CPIF | BAE Systems, Wayne, NJ (DLS) | 15.944 | | | | | | | | 15.944 | 15.944 |
| MIDS on Ship | Various | Various | 44.331 | | | | | | | | 44.331 | 44.331 |
| Performance Upgrades | WX | SPAWARSYSCEN, San Diego, CA | 14.213 | | | | | | | | 14.213 | 14.213 |
| Performance Upgrades | Various | Various | 5.236 | | | | | | | | 5.236 | 5.236 |
| Air Defense System Integrator | CPFF | APC, Austin, TX | 2.059 | | | | | | | | 2.059 | 2.059 |
| Dual Net Link-11 | WX | Various | 1.866 | | | | | | | | 1.866 | 1.866 |
| Korean Air Defense Sys Impr | CPFF | JHU/APL, Laurel, MD | 0.900 | | | | | | | | 0.900 | 0.900 |
| DNMFL Prototypes | Various | Various | 2.127 | | | | | | | | 2.127 | 2.127 |
| JSS Software Dev and Integration | FFP | ESC Hanscom AFB, MA* | 8.778 | | | | | | | | | |
| JSS Software Dev and Integration | CPAF/FFP | ESC Hanscom AFB, MA/TBD | | 3.508 | 11/04 | 19.396 | 11/05 | 13.856 | 11/06 | Continuing | Continuing | Continuing |
| JSS Systems Engineering | CPFF | Galaxy Scientific, Arlington, VA | 0.249 | 0.240 | 11/04 | 0.231 | 11/05 | 0.228 | 11/06 | Continuing | Continuing | Continuing |
| JSS Systems Engineering | WX | SPAWARSYSCEN, San Diego, CA | 0.193 | | | 1.015 | 11/05 | 0.590 | 11/06 | Continuing | Continuing | |
| JSS Systems Engineering | Various | Various | | | | 0.560 | Various | 0.457 | Various | Continuing | Continuing | |
| CLIP Dev | WX | SPAWARSYSCEN, San Diego, CA | 0.568 | 1.021 | 11/04 | 1.789 | 11/05 | 1.738 | 11/06 | Continuing | Continuing | Continuing |
| CLIP Dev | Various | Various | 3.383 | 1.330 | Various | 1.351 | Various | 1.435 | Various | Continuing | Continuing | Continuing |
| CLIP SW Dev | CPAF/IF | TBD | | | | 36.596 | 11/05 | 22.075 | 11/06 | Continuing | Continuing | Continuing |
| DNM System Engineering & Integration | WX | SPAWARSYSCEN, San Diego, CA | 4.438 | 2.678 | 11/04 | 5.292 | 11/05 | 3.083 | 11/06 | Continuing | Continuing | Continuing |
| DNM Development | CPFF | Northrop Grumman IT, Reston, VA | 3.747 | | | | | | | | 3.747 | 3.747 |
| DNM Development | MIPR | Warner Robbins AFB, GA | 0.761 | 0.064 | 11/04 | 0.660 | 11/05 | 0.434 | 11/06 | Continuing | Continuing | Continuing |
| DNM Development | CPIF | BAE Systems, Wayne, NJ (DLS) | 0.117 | | | | | | | | 0.117 | 0.117 |
| DNM Systems Engineering | Various | Various | 1.194 | 1.886 | Various | 0.574 | Various | 0.760 | Various | Continuing | Continuing | Continuing |
| DNM Software Development | CPFF | TBD | | | | 1.430 | 12/05 | 0.651 | 11/06 | Continuing | Continuing | |
| DNM Host Platform Integration | MIPR | GSA/SAIC, Arlington, VA | | | | 3.287 | 12/05 | 1.107 | 11/06 | Continuing | Continuing | |
| Subtotal Product Development | | | 296.110 | 10.727 | | 72.181 | | 46.414 | | | | |

*JSS Phase I Software Development contracts awarded to three vendors: Northrop Grumman Defense Missions, Reston, VA; Lockheed Martin Corporation, Moorestown, NJ; and to Advanced Information Engineering Services, Inc., Buffalo, NY.

R-1 SHOPPING LIST - Item No. 179

**CLASSIFICATION:**

| Exhibit R-3 Cost Analysis (page 2) | | | | | DATE: **February 2005** | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY<br>**RDT&E,N/BA-7** | | PROGRAM ELEMENT<br>**0205604N Tactical Data Links** | | | PROJECT NUMBER AND NAME<br>**2126 ATDLS Integration** | | | | | | |
| Cost Categories | Contract Method & Type | Performing Activity & Location | Total PY s Cost | FY 05 Cost | FY 05 Award Date | FY 06 Cost | FY 06 Award Date | FY 07 Cost | FY 07 Award Date | Cost to Complete | Total Cost | Target Value of Contract |
| Development Support | | | | | | | | | | | | |
| Software Development | | | | | | | | | | | | |
| Integrated Logistics Support | | | | | | | | | | | | |
| Configuration Management | | | | | | | | | | | | |
| Technical Data | | | | | | | | | | | | |
| Studies & Analyses | | | | | | | | | | | | |
| GFE | | | | | | | | | | | | |
| Award Fees | | | | | | | | | | | | |
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| Subtotal Support | | | 0.000 | 0.000 | | 0.000 | | 0.000 | | 0.000 | 0.000 | |

Remarks:

R-1 SHOPPING LIST - Item No. 179

**CLASSIFICATION:**

| Exhibit R-3 Cost Analysis (page 3) | | | | | | | | | | DATE: **February 2005** | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY **RDT&E,N/BA-7** | | | PROGRAM ELEMENT **0205604N Tactical Data Links** | | | PROJECT NUMBER AND NAME **2126 ATDLS Integration** | | | | | | |
| Cost Categories | Contract Method & Type | Performing Activity & Location | Total PY s Cost | FY 05 Cost | FY 05 Award Date | FY 06 Cost | FY 06 Award Date | FY 07 Cost | FY 07 Award Date | Cost to Complete | Total Cost | Target Value of Contract |
| Test and Evaluation | Various | Various | 4.025 | | | | | | | | 4.025 | 4.025 |
| MIDS F/A-18 T&E | WX | SPAWARSYSCEN, San Diego, CA | 12.774 | | | | | | | | 12.774 | 12.774 |
| MIDS F/A-18 T&E | Various | Various | 11.706 | | | | | | | | 11.706 | 11.706 |
| MIDS on Ship T&E | PD | OPTEVFOR, Norfolk, VA | 0.092 | | | | | | | | 0.092 | 0.092 |
| MIDS on Ship T&E | WX | SPAWARSYSCEN, San Diego, CA | 1.340 | | | | | | | | 1.340 | 1.340 |
| MIDS Test Assets | SS/CPAF/IF | MIDSCO, Fairfield, NJ | 6.594 | | | | | | | | 6.594 | 6.594 |
| JSS T&E | WX | SPAWARSYSCEN, San Diego, CA | | | | 0.430 | 11/05 | 0.571 | 11/06 | Continuing | Continuing | |
| JSS T&E | WX | OPTEVFOR, Norfolk, VA | | | | 0.440 | 11/05 | 0.457 | 11/06 | Continuing | Continuing | |
| JSS T&E | WX | NCTSI, San Diego, CA | | | | 0.110 | 11/05 | 0.111 | 11/06 | Continuing | Continuing | |
| JSS Test Articles | CPAF/FFP | ESC Hanscom AFB, MA/TBD | | | | 4.488 | 11/05 | 0.118 | 11/06 | | | |
| JSS Test Articles | WX | SPAWARSYSCEN, San Diego, CA | | | | 0.440 | 11/05 | 1.542 | 11/06 | | | |
| CLIP T&E | WX | SPAWARSYSCEN, San Diego, CA | | | | 0.660 | 11/05 | 0.971 | 11/06 | Continuing | Continuing | Continuing |
| Dynamic Network Management T&E | WX | SPAWARSYSCEN, San Diego, CA | 3.167 | 1.046 | 11/04 | 1.650 | 11/05 | 0.717 | 11/06 | Continuing | Continuing | Continuing |
| Dynamic Network Management T&E | WX | OPTEVFOR, Norfolk, VA | 0.214 | 0.333 | 11/04 | 0.660 | 11/05 | 0.151 | 11/06 | Continuing | Continuing | Continuing |
| Dynamic Network Management T&E | WX | Various | 0.428 | 1.190 | Various | 0.787 | Various | 0.368 | Various | Continuing | Continuing | Continuing |
| ATDLS T&E Support | MIPR | GSA/SAIC | | 0.267 | 11/04 | 0.272 | 11/05 | 0.272 | 11/06 | Continuing | Continuing | |
| Subtotal T&E | | | 40.340 | 2.836 | | 9.937 | | 5.278 | | | | |
| Remarks: | | | | | | | | | | | | |
| Engineering Support and Travel | Various | Various | 11.753 | 1.567 | Various | 1.863 | Various | 1.842 | Various | Continuing | Continuing | Continuing |
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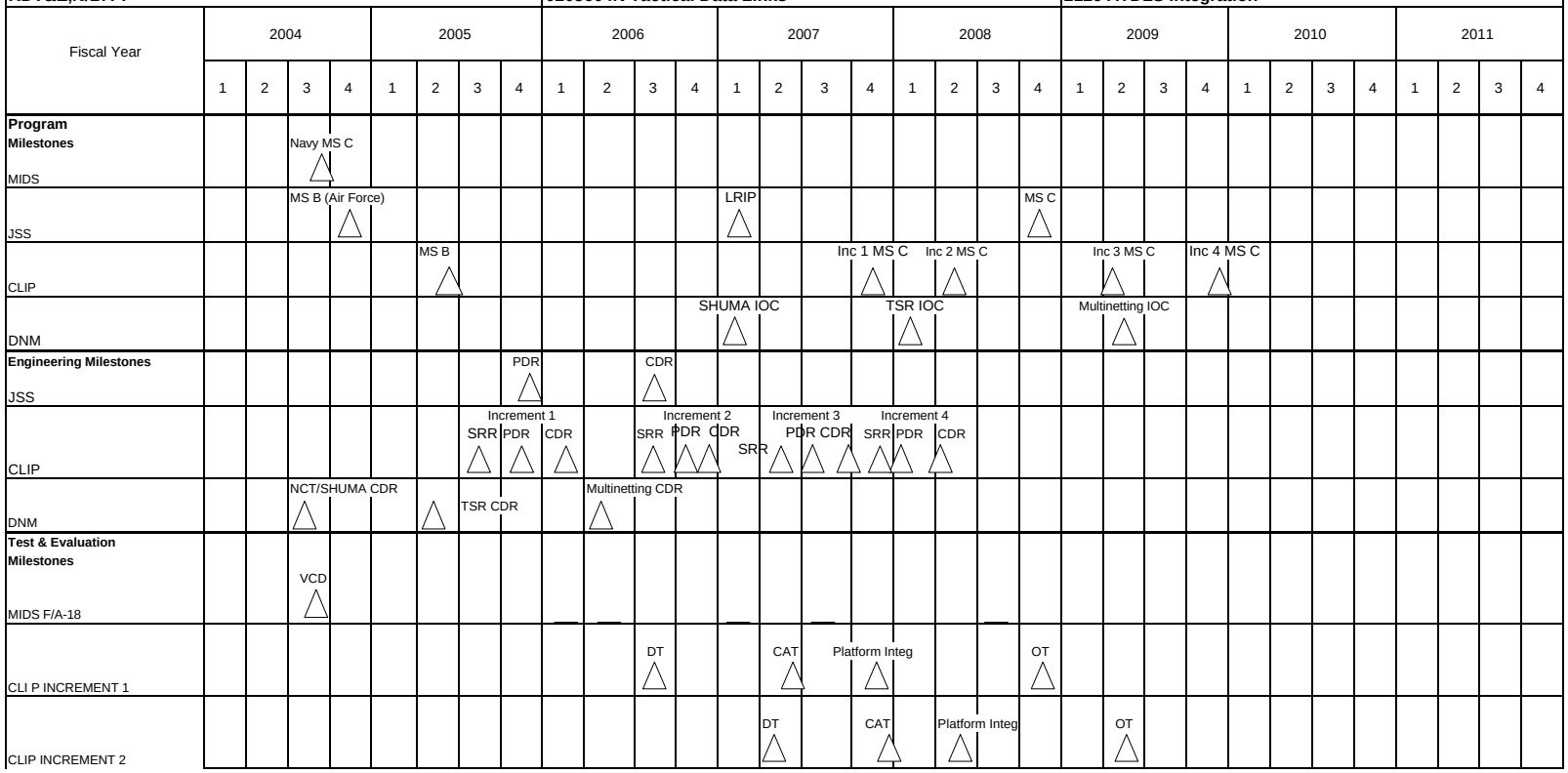
| | | | | | | | | | | | | |
| Subtotal Management | | | 11.753 | 1.567 | | 1.863 | | 1.842 | | | | |
| Remarks: | | | | | | | | | | | | |
| Total Cost | | | 348.203 | 15.130 | | 83.981 | | 53.534 | | | | |

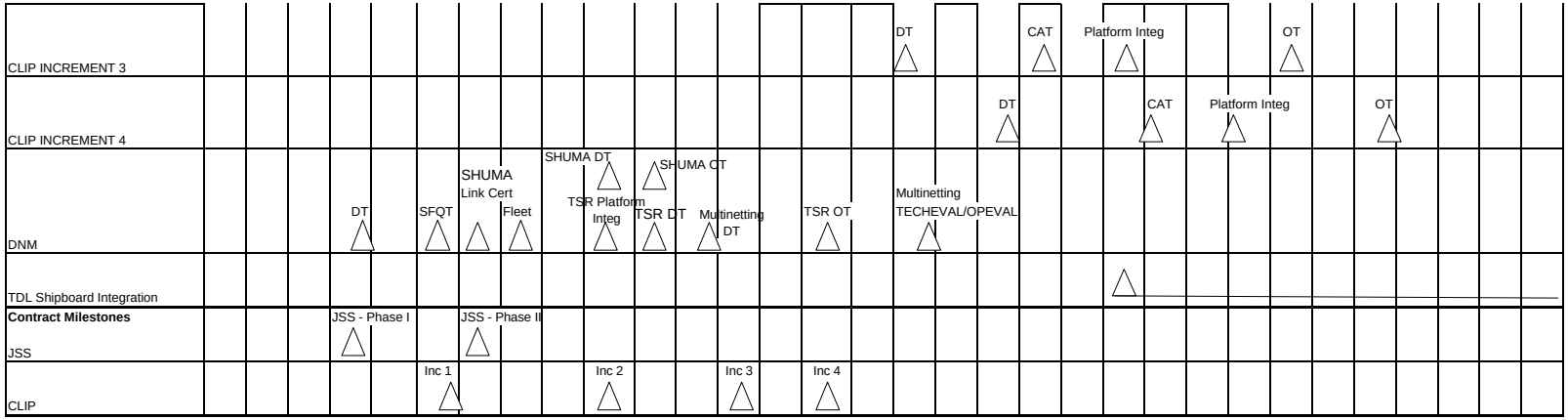
R-1 SHOPPING LIST - Item No. 179

**CLASSIFICATION:**

EXHIBIT R4, Schedule Profile | DATE: **February 2005**

| APPROPRIATION/BUDGET ACTIVITY | PROGRAM ELEMENT NUMBER AND NAME | PROJECT NUMBER AND NAME |
|---|---|---|
| **RDT&E,N/BA-7** | **0205604N Tactical Data Links** | **2126 ATDLS Integration** |






R-1 SHOPPING LIST - Item No. 179

The Joint Interface Control Officer (JICO) Support System (JSS) is a multi-service development effort and is currently funded by the Navy's Tactical Data Links International Program Office (PE 0205604N/2126) and the Air Force's Electronic Systems Center Tactical Data Links System Program Office (TDL SPO) (PE 0207434F/5050). The JSS Program schedule is shown above.
The CLIP Program is a joint initiative and is funded by various programs. The development of the CLIP software is funded by the Navy's Tactical Data Links International Program Office (PE 0205604N/2126) and the Air Force Tactical Data Links (TDL) Gateways and Network Management (TGN) System Program Office (PE 0207434F/5050). The integration of CLIP software is funded by platforms. The CLIP Program schedule is shown above.

**CLASSIFICATION:**

| Exhibit R-4a, Schedule Detail | | | | | DATE: **February 2005** | | | |
|---|---|---|---|---|---|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY **RDT&E,N/BA-7** | PROGRAM ELEMENT **0205604N Tactical Data Links** | | | | PROJECT NUMBER AND NAME **2126 ATDLS Integration** | | | |
| Schedule Profile | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 |
| MIDS US Navy MS C | 3Q | | | | | | | |
| DNM NCT/SHUMA CDR | 3Q | | | | | | | |
| MIDS F/A-18 VCD | 3Q | | | | | | | |
| JSS Air Force MS B | 4Q | | | | | | | |
| DNM SHUMA DT | 4Q | | | | | | | |
| JSS Phase I Contract Award | 4Q | | | | | | | |
| CLIP MS B | | 2Q | | | | | | |
| DNM TSR CDR | | 2Q | | | | | | |
| DNM SHUMA SFQT | | 2Q | | | | | | |
| CLIP Increment I Contract Award | | 2Q | | | | | | |
| CLIP Increment I SRR | | 3Q | | | | | | |
| DNM SHUMA Link Certification Test | | 3Q | | | | | | |
| JSS Phase II Contract Award | | 3Q | | | | | | |
| JSS PDR | | 4Q | | | | | | |
| CLIP Increment 1 PDR | | 4Q | | | | | | |
| DNM SHUMA Fleet Exercise | | 4Q | | | | | | |
| CLIP Increment 1 CDR | | | 1Q | | | | | |
| JSS DT/OT/Integration Testing | | | 1Q | | | | | |
| DNM Multinetting CDR | | | 2Q | | | | | |
| JSS EOA | | | 2Q | | | | | |
| SHUMA DT | | | 2Q | | | | | |
| DNM TSR Platform Integration | | | 2Q | | | | | |
| CLIP Increment 2 Contract Award | | | 2Q | | | | | |
| JSS CDR | | | 3Q | | | | | |
| CLIP Increment 2 SRR | | | 3Q | | | | | |
| CLIP Increment 1 DT | | | 3Q | | | | | |
| DNM SHUMA OT | | | 3Q | | | | | |
| DNM TSR DT | | | 3Q | | | | | |
| CLIP Increment 2 PDR | | | 4Q | | | | | |
| CLIP Increment 2 CDR | | | 4Q | | | | | |
| DNM Mutinetting DT | | | 4Q | | | | | |
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R-1 SHOPPING LIST - Item No. 179

**CLASSIFICATION:**

| Exhibit R-4a, Schedule Detail | | | | | | DATE: **February 2005** | | |
|---|---|---|---|---|---|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY **RDT&E,N/BA-7** | PROGRAM ELEMENT **0205604N Tactical Data Links** | | | | PROJECT NUMBER AND NAME **2126 ATDLS Integration** | | | |
| Schedule Profile | FY 2004 | FY 2005 | FY 2006 | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 |
| JSS LRIP | | | | 1Q | | | | |
| DNM SHUMA IOC | | | | 1Q | | | | |
| JSS DT | | | | 1Q | | | | |
| CLIP Inc 3 Contract Award | | | | 1Q | | | | |
| CLIP Increment 3 SRR | | | | 2Q | | | | |
| CLIP Increment 1 CAT | | | | 2Q | | | | |
| CLIP Increment 2 DT | | | | 2Q | | | | |
| CLIP Increment 3 PDR | | | | 3Q | | | | |
| CLIP Increment 3 CDR | | | | 3Q | | | | |
| JSS TECHEVAL | | | | 3Q | | | | |
| DNM TSR OT | | | | 3Q | | | | |
| CLIP Increment 4 Contract Award | | | | 3Q | | | | |
| CLIP Increment 1 MS C | | | | 4Q | | | | |
| CLIP Increment 4 SRR | | | | 4Q | | | | |
| CLIP Increment 1 Platform Integration | | | | 4Q | | | | |
| CLIP Increment 2 CAT | | | | 4Q | | | | |
| DNM TSR IOC | | | | | 1Q | | | |
| CLIP Increment 4 PDR | | | | | 1Q | | | |
| CLIP Increment 3 DT | | | | | 1Q | | | |
| DNM Multinetting TECHEVEL/OPEVAL | | | | | 1Q | | | |
| CLIP Increment 2 MS C | | | | | 2Q | | | |
| CLIP Increment 4 CDR | | | | | 2Q | | | |
| CLIP Increment 2 Platform Integration | | | | | 2Q | | | |
| JSS OPEVAL | | | | | 3Q | | | |
| CLIP Increment 4 DT | | | | | 3Q | | | |
| JSS MS C | | | | | 4Q | | | |
| CLIP Increment 1 OT | | | | | 4Q | | | |
| CLIP Increment 3 CAT | | | | | 4Q | | | |
| CLIP Increment 3 MS C | | | | | | 2Q | | |
| DNM Multinetting IOC | | | | | | 2Q | | |
| CLIP Increment 2 OT | | | | | | 2Q | | |
| CLIP Increment 4 CAT | | | | | | 3Q | | |
| CLIP Increment 4 MS C | | | | | | 4Q | | |
| CLIP Increment 4 Platform Integration | | | | | | | 1Q | |
| CLIP Increment 3 OT | | | | | | | 2Q | |
| CLIP Increment 4 OT | | | | | | | 4Q | |
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R-1 SHOPPING LIST - Item No. 179