| CLASSIFICATION: | UNCLASSIFIED | | | | | | |
|---|---|---|---|---|---|---|---|
| **EXHIBIT R-2, RDT&E BUDGET ITEM JUSTIFICATION** | | | | | DATE February 2008 | | |
| APPROPRIATION/BUDGET ACTIVITY<br>**RDTEN/BA 7** | R-1 ITEM NOMENCLATURE<br>**0204311N/INTEGRATED SURVEILLANCE SYSTEM** | | | | | | |
| COST (In Millions) | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 | FY 2012 | FY 2013 |
| Total PE Cost | 40.429 | 31.138 | 20.565 | 25.180 | 25.286 | 25.915 | 26.375 |
| 0766 / IUSS Detect/Classif System | 37.589 | 27.561 | 20.565 | 25.180 | 25.286 | 25.915 | 26.375 |
| 9999 / CONGRESSIONAL ADDS | 2.840 | 3.577 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

*FY 2008 does not include Congressional add of $1.2M under technical adjustment review

**A. MISSION DESCRIPTION:**

This Program Element (P.E.) comprises five projects - 0766, 9A71N and9A72N. Project 0766 provides for Integrated Undersea Surveillance Systems (IUSS) Research and Development Projects under the Maritime Surveillance Systems (MSS) Program Office (PEO LMW PMS 485). IUSS provides the Navy with its primary means of submarine detection both nuclear and diesel. The program has undergone a major transition from emphasis on maintaining a large dispersed surveillance force keyed to detection and tracking of submarines to a much smaller force that is effective against modern diesel and nuclear submarines in regional/littoral or broad ocean areas of interest. This transition preserves the ability to continue open ocean surveillance. A portion of project 0766 (FSS) is classified, with details available at a higher classification level. In 2007, Congress provided a Program Increase which supports continued expansion of the ISS Common Processor Automation (ICPA) efforts in line tracking, in-buoy processing, bandwidth management, data fusion/view management and alerting, execution and prosecution aids, and operator interfaces for tactical view manipulation and assessments. Projects 9A71N (High Channel Count Interrogator for Sensor Arrays) and 9A72N (Tunable Laser and Laser Array) are both FY07 Congressional Plus-Ups. Project 9A71N supports development of a universal fiber sensor interrogator required for deploying next generation advanced towed arrays. Project 9A72N supports development of a low cost, non-microphonic, Tunable Laser and Laser Array suitable for driving the interferometric fiber sensor interrogators required for deploying next generation advanced towed arrays. (U) JUSTIFICATION FOR BUDGET ACTIVITY: The IUSS Research and Development project (0766) funds SURTASS Passive and SURTASS Low Frequency Active (LFA) developments. SURTASS provides the mobile, tactical arm of the Integrated Undersea Surveillance System, providing long range detection and cueing for tactical weapons platforms against both diesel and nuclear powered submarines. SURTASS LFA provides an active adjunct capability for IUSS passive and tactical sensors to assist in countering the quieter diesel and nuclear threats of the 1990s and beyond. The LFA tasks are directed at detection of slow quiet threats in harsh littoral waters.

(U) In order to continue with reductions in life cycle costs and continue with system-wide consolidation, a short-term goal is to develop a common IUSS processor based on NAVSEA'S Acoustic Rapid COTS Insertion (ARCI) program. The IUSS Integrated Common Processor (ICP) will have the capability to process and display data from all fixed and mobile underwater systems. The IUSS ICP will be used for all new system installations and replace the legacy systems as they reach end of life and require upgrading. Additionally, SURTASS is consolidating on the TB-29A Twin-line array, a variant of the Submarine TB-29A Long line array. This will reduce the number of array variants employed by SURTASS from 3 to 1, and will enable development and logistics cost savings by leveraging off the submarine TB-29A program.

(U) Future efforts will be focused on upgrading the LFA capability to the ICP baseline, support bi-static processing utilizing the TL-29A, support activation of fixed sensors, develop smaller, lighter weight acoustic sources for augmentation of small SWATH platforms (under the Compact LFA program), and for replacement of aging LFA sources. Together these efforts support an Active Improvement Program within IUSS.

| CLASSIFICATION: | UNCLASSIFIED | |
|---|---|---|
| EXHIBIT R-2, RDT&E BUDGET ITEM JUSTIFICATION (CONTINUATION) | | DATE<br>February 2008 |
| APPROPRIATION/BUDGET ACTIVITY<br>**RDTEN/BA 7** | R-1 ITEM NOMENCLATURE<br>**0204311N/INTEGRATED SURVEILLANCE SYSTEM** | |

**B. PROGRAM CHANGE SUMMARY:**

| Funding: | FY 2007 | FY 2008 | FY 2009 |
|---|---|---|---|
| FY08 President's Budget | 40.429 | 27.740 | 23.628 |
| *FY 2008 does not include Congressional add of $1.2M under technical adjustment review | | | |
| FY09 President's Budget | 40.429 | 31.138 | 20.565 |
| Total Adjustments | 0.000 | 3.398 | -3.063 |
| Summary of Adjustments: | | | |
| MISC Program Adjustments | | -0.179 | -0.008 |
| Congressional Adds | | 3.577 | |
| Reduction RE:PBD 706 | | | -3.071 |

**C. OTHER PROGRAM FUNDING SUMMARY:**

| Line Item No. and Name | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 | FY 2012 | FY 2013 | To Complete | Total Cost |
|---|---|---|---|---|---|---|---|---|---|
| OPN 2237 | 7.850 | 1.260 | 26.675 | 23.906 | 1.190 | 1.192 | 1.252 | CONT | CONT |

**D. ACQUISITION STRATEGY:**

| Title | FY 2006 | FY2007 | FY 2008 | FY2009 |
|---|---|---|---|---|
| Program Milestones | | | | |
| Engineering Milestones | Integrated Common Processor(ICP) | ICP | ICP | ICP |
| | TL-29A Variant 9/06 | CLFA Variant (7/07) | CLFA Variant(9/08) | Bi-Static Variant (9/09) |
| T&E Millestones | | | CLFA SEA TESTS | CLFA SEA TESTS |
| | | | CFLA/TL-29/ICP DT | CLFA/TL-29A/ICP OT&E |
| LFA/TL-29A/ICP FOT&E | | | | |
| Contract Milestones | CLFA | | | CLFA |
| Production | | | | |

**E. MAJOR PERFORMERS:**

| PERFORMER | LOCATION | DESCRIPTION OF WORK | AWARD DATE |
|---|---|---|---|
| BAE SYSTEMS | Nashua NH | CLFA Engineering Development Model | 2006 |

| | | | |
|---|---|---|---|
| SPAWAR SYSTEMS CENTER | San Diego CA | Technical Direction Agent for LFA/CLFA | Annually |
| NAVAL FACILITY ENGINEERING SERVICES CENTER | Port Hueneme CA | Technical Direction Agent for Handling Systems | Annually |
| LOCKHEED MARTIN | Manassas VA | ICP Development | 2006 |
| GENERAL DYNAMICS ADVANCED INFORMATION SYS | Anaheim CA | Active ICP Development | 2004 |

*FY 2008 does not include Congressional add of $1.2M under technical adjustment review

| CLASSIFICATION: | UNCLASSIFIED | | | | | | |
|---|---|---|---|---|---|---|---|
| EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION | | | | | DATE February 2008 | | |
| APPROPRIATION/BUDGET ACTIVITY **RDTEN/BA 7** | PROGRAM ELEMENT NUMBER AND NAME **0204311N/INTEGRATED SURVEILLANCE SYSTEM** | | | | PROJECT NUMBER AND NAME **0766/IUSS Detect/Classif System** | | |
| COST (In Millions) | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 | FY 2012 | FY 2013 |
| Project Cost | 37.589 | 27.561 | 20.565 | 25.180 | 25.286 | 25.915 | 26.375 |
| RDT&E Articles Qty | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

**A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:**

***FY 2008 does not include Congressional add of $1.2M under technical adjustment review**

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

A. (U) This project includes efforts for both FSS* and SURTASS. The SURTASS project comprises the mobile, tactical arm of the Integrated Undersea Surveillance System, providing long range detection and cueing for tactical weapons platforms against both diesel and nuclear powered submarines. SURTASS also provides the undersea surveillance necessary to support regional conflicts and sea-lane protection. SURTASS has experienced recent passive and active success against diesel submarines operating in shallow water. SURTASS is leveraging existing developments and reducing costs by using Non-Developmental Items and commercial hardware; supporting common Navy Undersea Warfare processing and towed array developments; and increasing operator efficiency through computer aided detection and classification processing. SURTASS development efforts include: LFA improvements, common IUSS processing, twin-line array development and processing, improved detection and classification/passive automation to counter quieter threats; additional signal processing and bi-static active capability; integrated active and passive operations; improved Battle Group support; and improved information processing.

(U) LFA provides an active adjunct capability for IUSS passive and tactical sensors to counter the quieter diesel and nuclear threats of the 1990s and beyond. The LFA tasks are directed at detection of slow quiet threats in harsh littoral waters. Improvements include TL-29A/LFA integration enhancements; advanced waveforms for littoral/shallow water operations including Doppler sensitive waveforms; and processing algorithms to reduce clutter and reverberation false alarms in shallow water. The LFA task includes development and testing of a compact LFA transmit source array for SWATH-P ships, and upgrade of LFA processing capability into the IUSS Integrated Common Processing architecture. The Integrated Common Processor (ICP) is a derivitive of the NAVSEA Submarine Acoustic Rapid COTS Insertion (ARCI) program, and is being augmented for IUSS requirements. Together, the LFA improvements, TL-29A, and the ICP support the SURTASS Active Improvement Program.

(U) Functional improvements are delivered to the Fleet in software "Builds", while hardware improvements are delivered through the "Tech Insertion" (TI) process. Software builds are based upon the Advanced Processor Build (APB) process begun by the NAVSEA Submarine USW program. Each APB will introduce new capabilities into SURTASS systems including improved automation, normalizer techniques, adaptive beam forming, and display enhancements. SURTASS participates in the process by contributing algorithms for consideration, supplying peer group members for review of candidate algorithms, participating in test evolutions, and incorporating improved algorithms into operational systems. The "Tech Insertion" process, modelled after the NAVSEA Submarine USW hardware improvement program, delivers processing technology improvements to platforms on roughly a 4-year cycle. Hardware upgrades for active and passive arrays and communications systems will also be provided during "TI" upgrades, but not on a regular planned development cycle as for the processing upgrades.

B. (U) PEO LMW is involved with the development and maintenance of various IUSS systems. These systems include FDS, FDS-C, SDS, SURTASS, and ADS. The near-term goal is

development of ICP, which will result in a a single IUSS processor baseline, with minor maintenance efforts continuing on fielded systems. The existing system architecture, signal processing, contact management, and reporting requirements will be evaluated as well as the requirements for future systems. The development of the ICP will take advantage of automation advancement, array technology improvements, and IUSS, submarine, and surface USW system commonality. Additionally, a long term goal is to activate all IUSS sensors as part of a coordinated Active Improvement Program. In 2007, Congress provided a Program Increase which supports continued expansion of the ISS Common Processor

*FY 2008 does not include Congressional add of $1.2M under technical adjustment review

Automation (ICPA) efforts in line tracking, in-buoy processing, bandwidth management, data fusion/view management and alerting, execution and prosecution aids, and operator interfaces for tactical view manipulation and assessments.

*A portion of project 0766 (FSS) is classified, with details available at a higher classification level.

| CLASSIFICATION: | UNCLASSIFIED | |
|---|---|---|
| EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION | | DATE February 2008 |
| APPROPRIATION/BUDGET ACTIVITY<br>**RDTEN/BA 7** | PROGRAM ELEMENT NUMBER AND NAME<br>**0204311N/INTEGRATED SURVEILLANCE SYSTEM** | PROJECT NUMBER AND NAME<br>**0766/IUSS Detect/Classif System** |

**B. ACCOMPLISHMENTS/PLANNED PROGRAM:**

| | FY 2007 | FY 2008 | FY 2009 |
|---|---|---|---|
| **N74 ASW Study** | 0.700 | 0.700 | 0.700 |
| RDT&E Articles Quantity | 0 | 0 | 0 |

*FY 2008 does not include Congressional add of $1.2M under technical adjustment review

FY07: N74 ASW Study - Continue conducting trade-off and mission studies to explore networked ASW system concepts, investment alternatives and development of a community-wide strategy for common performance models.

FY08: N74 ASW Study - Continue conducting trade-off and mission studies to explore networked ASW system concepts, investment alternatives and development of a community-wide strategy for common performance models.

FY09: N74 ASW Study - Continue conducting trade-off and mission studies to explore networked ASW system concepts, investment alternatives and development of a community-wide strategy for common performance models.

| | FY 2007 | FY 2008 | FY 2009 |
|---|---|---|---|
| **Compact Low Frequency Active** | 10.200 | 5.385 | 6.643 |
| RDT&E Articles Quantity | 0 | 0 | 0 |

FY 07: Complete development of Compact Low Frequency Active (CLFA) capability for SWATH-P platforms. Convert first SWATH-P platform to support CLFA system.

FY 08: Install EDM and begin at-sea development testing and begin incorporation offinal design changes.

FY 09: Complete incorporation and at-sea test of final design changes in support of CLFA production program.

| | FY 2007 | FY 2008 | FY 2009 |
|---|---|---|---|
| **TB-29A/Twin-Line** | 1.000 | 2.000 | 2.000 |
| RDT&E Articles Quantity | 0 | 0 | 0 |

FY 07: Complete developments of Single-Line Tow Capability and fishing net mitigation approaches.

FY 08: Development of connectionless array technologies and true fiber-optic arrays. Investigate Twin-line variants of new submarine Long-line arrays for future application to SURTASS.

FY 09: Continue development of connectionless array technologies and true fiber-optic arrays. Continue efforts to explore Twin-line variants of new submarine Long-line arrays for future application to SURTASS.

| | FY 2007 | FY 2008 | FY 2009 |
|---|---|---|---|
| **SURTASS Active Improvement Program** | 1.500 | 1.500 | 0.000 |
| RDT&E Articles Quantity | 0 | 0 | 0 |

FY07: Continue planningfor Active Improvement Program (CLFA/LFA/TL-29A/IUSS Common Processor). Continue development of Off-Board Sensor capabilities.

FY08: Conduct DT for Active Improvement Program (CLFA/TL-29A/IUSS Common Processor). Continue development of Off-Board Sensor capabilities. Begin development of Bi-static processing capabilities and activation of fixed sensors.

FY09: Conduct OT for CLFA/TL-29A/IUSS Common Processor. Conduct FOT&E for LFA/TL-29A/IUSS Common Processor. Continue development of Off-Board Sensor capabilities. Continue

| CLASSIFICATION: | UNCLASSIFIED | |
|---|---|---|
| EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION (CONTINUATION) | | DATE February 2008 |
| APPROPRIATION/BUDGET ACTIVITY<br>**RDTEN/BA 7** | PROGRAM ELEMENT NUMBER AND NAME<br>**0204311N/INTEGRATED SURVEILLANCE SYSTEM** | PROJECT NUMBER AND NAME<br>**0766/IUSS Detect/Classif System** |

development of Bi-static processing capabilities and activation of fixed sensors.

| | FY 2007 | FY 2008 | FY 2009 |
|---|---|---|---|
| **Integrated Common Processor (ICP)** | 13.111 | 6.020 | 4.629 |
| RDT&E Articles Quantity | 0 | 0 | 0 |

*FY 2008 does not include Congressional add of $1.2M under technical adjustment review

FY 07: Complete development of SURTASS passive processing capability. Continue development of SURTASS active processing capability. Develop new automation algorithms and techniques for addressing multi-array, high beam count requirements. In FY07, Congress provided a Program Increase which supports continued expansion of the ISS Common Processor Automation (ICPA) efforts in line tracking, in-buoy processing, bandwidth management, data fusion/view management and alerting, execution and prosecution aids, and operator interfaces for tactical view manipulation and assessments.

FY 08: Complete development of SURTASS active processing capability. Continue development of new automation algorithms and techniques for addressing multi-array, high beam count requirements. Development of bi-static receive processing for SURTASS. Begin development of littoral LFA improvements.

FY 09: Begin development of Active Receive processing capability for fixed sensors. Continue development of new automation algorithms and techniques for addressing multi-array, high beam count requirements. Continue development of Littoral LFA improvements. Begin tech refresh development in coordination with the Submarine Acoustic Rapid COTS Insertion (ARCI) Program Advanced Processing Build (APB) tech refresh.

| | FY 2007 | FY 2008 | FY 2009 |
|---|---|---|---|
| **Classified Effort** | 11.078 | 11.956 | 6.593 |
| RDT&E Articles Quantity | 0 | 0 | 0 |

A portion of project 0766 (FSS) is classified, with details available at a higher classification level.

| CLASSIFICATION: | UNCLASSIFIED | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| EXHIBIT R-3, RDT&E PROJECT COST ANALYSIS | | | | | | | | | DATE February 2008 | | | |
| APPROPRIATION/BUDGET ACTIVITY<br>**RDTEN/BA 7** | | PROGRAM ELEMENT NUMBER AND NAME<br>**0204311N/INTEGRATED SURVEILLANCE SYSTEM** | | | | | PROJECT NUMBER AND NAME<br>**0766/IUSS Detect/Classif System** | | | | | |
| Cost Categories | Contract Method & Type | Performing Activity & Location | Total PY Cost ($000) | FY 2007 Cost ($000) | FY 2007 Award Date | FY 2008 Cost ($000) | FY 2008 Award Date | FY 2009 Cost ($000) | FY 2009 Award Date | Cost to Complete ($000) | Total Cost ($000) | Target Value of Contract |
| IUSS COMMON ARCHITECTURE | CPFF | GDAIS/LM/ARL | 46.621 | 4.242 | NOV-06 | 2.220 | NOV-07 | 2.313 | NOV-08 | CONT | CONT | 0.000 |
| *FY 2008 does not include Congressional add of $1.2M under technical adjustment review | | | | | | | | | | | | |
| ENVIRONMENTAL RESEARCH | WR | ONR / VARIOUS | 8.500 | 0.000 | | 0.000 | | 0.000 | | 0.000 | 8.500 | 0.000 |
| ACTIVE IMPROVEMENT/CLFA/LFA | CPFF/AF | BAE / GDAIS / NFESC/VARIOUS | 105.224 | 7.700 | NOV-06 | 4.300 | NOV-07 | 2.400 | NOV-08 | CONT | CONT | 0.000 |
| C4I INTEGRATION | CPFF | VARIOUS | 31.768 | 0.000 | | 0.000 | | 0.000 | | 0.000 | 31.768 | 0.000 |
| N74 ASW STUDY | WR/PD | NUWC / APL | 5.254 | 0.700 | NOV-06 | 0.700 | NOV-07 | 0.700 | NOV-08 | CONT | CONT | 0.000 |
| VARIOUS | WR | VARIOUS | 47.169 | 0.000 | | 0.000 | | 0.000 | | 0.000 | 47.169 | 0.000 |
| PASSIVE SIGNAL PROCESSING/SONAR | CPFF | APL / GDAIS | 2.202 | 0.000 | | 0.000 | | 0.000 | | 0.000 | 2.202 | 0.000 |
| ARRAY IMPROVEMENTS | CPFF/WR | APL / SSC / VARIOUS | 3.554 | 0.500 | NOV-06 | 1.800 | NOV-07 | 1.800 | NOV-08 | CONT | CONT | 0.000 |
| TASK FORCE ASW | | VARIOUS | 7.000 | 0.000 | | 0.000 | | 0.000 | | | 7.000 | 0.000 |
| ISS COMMON PROCESSOR AUTOMATION | CPFF/AF | LM/GDAIS/VARIOUS | 0.000 | 8.169 | APR-07 | 0.000 | | 0.000 | | 0.000 | 8.169 | 0.000 |
| **Subtotal Product Development** | | | **257.292** | **21.311** | | **9.020** | | **7.213** | | **CONT** | **CONT** | **0.000** |
| Remarks: | | | | | | | | | | | | |
| IUSS COMMON ARCHITECTURE | WR | VARIOUS | 1.500 | 0.200 | NOV-06 | 0.400 | NOV-07 | 0.600 | NOV-08 | CONT | CONT | 0.000 |
| ACTIVE IMPROVEMENTS/CLFA/LFA | CPFF | NGC/VARIOUS | 6.120 | 0.600 | NOV-06 | 0.400 | NOV-07 | 0.200 | NOV-08 | CONT | CONT | 0.000 |
| C4ISR INTEGRATION | CPFF | NGC/VARIOUS | 1.819 | 0.000 | | 0.000 | | 0.000 | | 0.000 | 1.819 | 0.000 |
| PASSIVE SIGNAL PROCESSING/SONAR | VAR / WR | VARIOUS | 0.600 | 0.000 | | 0.000 | | 0.000 | | 0.000 | 0.600 | 0.000 |
| ARRAY IMPROVEMENTS | VAR / WR | VARIOUS | 0.820 | 0.000 | | 0.000 | | 0.000 | | 0.000 | 0.820 | 0.000 |
| VARIOUS | VAR / WR | VARIOUS | 1.216 | 0.000 | | 0.000 | | 0.000 | | 0.000 | 1.216 | 0.000 |
| **Subtotal Support Costs** | | | **12.075** | **0.800** | | **0.800** | | **0.800** | | **CONT** | **CONT** | **0.000** |
| Remarks: | | | | | | | | | | | | |
| IUSS COMMON ARCHITECTURE | VAR / WR | VARIOUS | 2.337 | 0.500 | NOV-06 | 0.500 | NOV-07 | 0.500 | NOV-08 | CONT | CONT | 0.000 |
| ACTIVE IMPROVEMENTS/CLFA/LFA | VAR / WR | VARIOUS | 11.719 | 3.000 | NOV-06 | 4.685 | NOV-07 | 4.859 | NOV-08 | CONT | CONT | 0.000 |
| PASSIVE SIGNAL PROCESSING | VAR / WR | VARIOUS | 1.300 | 0.000 | | 0.000 | | 0.000 | | 0.000 | 1.300 | 0.000 |
| ARRAY IMPROVEMENTS | VAR / WR | VARIOUS | 1.690 | 0.500 | NOV-06 | 0.200 | NOV-07 | 0.200 | NOV-08 | CONT | CONT | 0.000 |
| **Subtotal Test and Evaluation** | | | **17.046** | **4.000** | | **5.385** | | **5.559** | | **CONT** | **CONT** | **0.000** |
| Remarks: | | | | | | | | | | | | |

| CLASSIFICATION: | UNCLASSIFIED | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| EXHIBIT R-3, RDT&E PROJECT COST ANALYSIS | | | | | | | | | DATE February 2008 | | | |
| APPROPRIATION/BUDGET ACTIVITY<br>**RDTEN/BA 7** | | PROGRAM ELEMENT NUMBER AND NAME<br>**0204311N/INTEGRATED SURVEILLANCE SYSTEM** | | | | | PROJECT NUMBER AND NAME<br>**0766/IUSS Detect/Classif System** | | | | | |
| Cost Categories | Contract Method & Type | Performing Activity & Location | Total PY Cost ($000) | FY 2007 Cost ($000) | FY 2007 Award Date | FY 2008 Cost ($000) | FY 2008 Award Date | FY 2009 Cost ($000) | FY 2009 Award Date | Cost to Complete ($000) | Total Cost ($000) | Target Value of Contract |
| ACTIVE IMPROVEMENTS/CLFA/LFA | VAR / WR | VARIOUS | 2.817 | 0.400 | NOV-06 | 0.400 | NOV-07 | 0.400 | NOV-08 | CONT | CONT | 0.000 |
| *FY 2008 does not include Congressional add of $1.2M under technical adjustment review | | | | | | | | | | | | |
| PASSIVE SIGNAL PROCESSING | VAR / WR | VARIOUS | 0.250 | 0.000 | | 0.000 | | 0.000 | | 0.000 | 0.250 | 0.000 |
| ARRAY IMPROVEMENTS | VAR / WR | VARIOUS | 0.600 | 0.000 | | 0.000 | | 0.000 | | 0.000 | 0.600 | 0.000 |
| **Subtotal Management Services** | | | **3.667** | **0.400** | | **0.400** | | **0.400** | | **CONT** | **CONT** | **0.000** |
| Remarks: | | | | | | | | | | | | |
| **Total Cost (less classified effort)** | | | **290.080** | **26.511** | | **15.605** | | **13.972** | | **CONT** | **CONT** | **0.000** |

| CLASSIFICATION: | UNCLASSIFIED | |
|---|---|---|
| EXHIBIT R-4, SCHEDULE PROFILE | | DATE<br>February 2008 |
| APPROPRIATION/BUDGET ACTIVITY<br>**RDTEN/BA 7** | PROGRAM ELEMENT NUMBER AND NAME<br>**0204311N/INTEGRATED SURVEILLANCE SYSTEM** | PROJECT NUMBER AND NAME<br>**0766/IUSS Detect/Classif System** |

*FY 2008 does not include Congressional add of $1.2M under technical adjustment review

| CLASSIFICATION: | UNCLASSIFIED | | | | | | |
|---|---|---|---|---|---|---|---|
| EXHIBIT R-4a, SCHEDULE DETAIL | | | | | DATE February 2008 | | |
| APPROPRIATION/BUDGET ACTIVITY<br>**RDTEN/BA 7** | PROGRAM ELEMENT NUMBER AND NAME<br>**0204311N/INTEGRATED SURVEILLANCE SYSTEM** | | | PROJECT NUMBER AND NAME<br>**0766/IUSS Detect/Classif System** | | | |
| Schedule Profile | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 | FY 2012 | FY 2013 |
| TB29A TL SYSTEM INSTALLATION / TEST | 1Q | | | | | | |
| FOT & E (TB29A TL / ICP / LFA) | | | 1Q - 2Q | | | | |
| CLFA DEVELOPMENT TEST SHAKEDOWN | | 4Q | 1Q | | | | |
| *FY 2008 does not include Congressional add of $1.2M under technical adjustment review | | | | | | | |
| CLFA DEVELOPMENT EVALUATION | | | 1Q - 2Q | | | | |
| ICP PRODUCTION SYSTEMS | 1Q - 3Q | | | | | | |
| CLFA PRODUCTION SYSTEMS | | | 1Q - 4Q | 1Q - 4Q | 1Q | | |
| TECH INSERTION | | | | 1Q - 4Q | | | 1Q - 4Q |

| CLASSIFICATION: | UNCLASSIFIED | | |
|---|---|---|---|
| EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION | | | DATE February 2008 |
| APPROPRIATION/BUDGET ACTIVITY<br>**RDTEN/BA 7** | PROGRAM ELEMENT NUMBER AND NAME<br>**0204311N/INTEGRATED SURVEILLANCE SYSTEM** | PROJECT NUMBER AND NAME<br>**9999/CONGRESSIONAL ADDS** | |

**B. ACCOMPLISHMENTS/PLANNED PROGRAM:**

| | FY 2007 | FY 2008 | FY 2009 |
|---|---|---|---|
| **9A71N/High Channel Count Interrogator For Sensor Arrays** | 1.445 | 0.000 | 0.000 |
| RDT&E Articles Quantity | 0 | 0 | 0 |

*FY 2008 does not include Congressional add of $1.2M under technical adjustment review
Funding for development of a universal fiber sensor interrogator that is required for deploying next generation advanced towed arrays in support of multiple Navy undersea surveillance programs.

| | FY 2007 | FY 2008 | FY 2009 |
|---|---|---|---|
| **9A72N/Tunable Laser and Laser Array** | 1.395 | 0.000 | 0.000 |
| RDT&E Articles Quantity | 0 | 0 | 0 |

Funding for development of a low cost, non-microphonic, Tunable Laser and Laser Array suitable for driving the interferometric fiber sensor interrogators that are required for deploying next generation advanced towed arrays.

| | FY 2007 | FY 2008 | FY 2009 |
|---|---|---|---|
| **Autonomous Anti-Submarine Vertical Beam Array** | 0.000 | 0.994 | 0.000 |
| RDT&E Articles Quantity | 0 | 0 | 0 |

Funds will be used to investigate incorporation of vertical beam arrays into existing fixed surveillance system hardware designs to provide a volumetric array capability for increased detection and system performance.

| | FY 2007 | FY 2008 | FY 2009 |
|---|---|---|---|
| **Low-Cost, Expendable, Fiber Optic Sensor Array** | 0.000 | 0.994 | 0.000 |
| RDT&E Articles Quantity | 0 | 0 | 0 |

Funding for continued development of a low cost, expendable, ultra-thin fiber-optic array with applications to littoral, high fishing density OPAREAs.

| | FY 2007 | FY 2008 | FY 2009 |
|---|---|---|---|
| **Distributed Maritime Surveillance System** | 0.000 | 1.589 | 0.000 |
| RDT&E Articles Quantity | 0 | 0 | 0 |

Funding for anchored buoy-based underwater acoustic system.