**CLASSIFICATION:**

| EXHIBIT R-2, RDT&E Budget Item Justification | | | | | DATE: **May 2009** | | | |
|---|---|---|---|---|---|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY<br>**RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-5** | | | R-1 ITEM NOMENCLATURE<br>0604231N - TACTICAL COMMAND SYSTEM | | | | | |
| COST ($ in Millions) | FY 2008 | FY 2009 | FY 2010 | FY 2011 | FY2012 | FY 2013 | FY 2014 | FY 2015 |
| Total PE Cost | 87.363 | 102.164 | 86.462 | | | | | |
| 2213 MISSION PLANNING | 29.753 | 18.588 | 18.782 | | | | | |
| 0486 TACTICAL/MOBILE (TACMOBILE) SYSTEMS | 2.402 | 8.919 | 10.897 | | | | | |
| 0521 SHIPBOARD TACTICAL INTEL/GCCS-M INTELLIGENCE APPLICATIONS | 3.717 | 3.803 | 0.000 | | | | | |
| 0709 GCCS-M MARITIME APPLICATIONS | 13.104 | 20.726 | 19.389 | | | | | |
| 2009 TRUSTED INFORMATION SYSTEMS JOINT CROSS DOMAIN EXCHANGE (JCDX) RADIANT MERCURY (RM) | 0.510 | 1.084 | 1.311 | | | | | |
| 2305 GCCS-M COMMON APPLICATIONS | 4.039 | 0.000 | 0.000 | | | | | |
| 2307 SHIPBOARD LAN/WAN | 12.271 | 11.284 | 1.768 | | | | | |
| 2351 MARITIME DOMAIN AWARENESS (MDA) | 0.000 | 0.000 | 21.199 | | | | | |
| 3032 NTCSS ENTERPRISE DATABASE AND MLDN | 0.049 | 0.050 | 6.358 | | | | | |
| 9123 FORCEnet | 19.108 | 33.721 | 6.758 | | | | | |
| 9999 CONGRESSIONAL INCREASES | 2.410 | 3.989 | 0.000 | | | | | |

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

**The Tactical Command System (TCS) upgrades the Navy's Command, Control, Computer and Intelligence (C3I) systems and processes C3I information for all warfare mission areas including planning, direction and reconstruction of missions for peacetime, wartime and times of crises.**

**Global Command and Control System - Maritime (GCCS-M):** Global Command and Control System - Maritime (GCCS-M) is the Maritime implementation of the Global Command and Control System (GCCS) Family of Systems (FoS). It provides Maritime Commanders at all echelons of command, afloat and ashore, with a single, integrated, scalable Command, Control, Communications, Computers and Intelligence (C4I) system that fuses, correlates, filters, maintains and displays location and attribute information on friendly, hostile and neutral land, sea and air forces. It integrates this data with available intelligence and environmental information in support of command decision-making. The system operates in near real-time and constantly updates unit positions and other situational awareness data. GCCS-M also records data in appropriate databases and maintains a history of changes to those records. The user can use the data to construct relevant tactical pictures using maps, charts, topography overlays, oceanographic overlays, meteorological overlays, imagery data and all-source intelligence information coordinated into a Common Operational Picture (COP) that can be shared locally and with other sites. Navy Commanders can review and evaluate the general tactical situation, plan actions and operations, direct forces, synchronize tactical movements and integrate force maneuver with firepower. The system operates in a variety of environments and supports joint, coalition and allied forces. As part of the evolutionary acquisition strategy and transition to the Joint Net-Enabled Command Capability (NECC), GCCS-M versions being fielded and in development will be hosted within the Common Computing Environment (CCE) and will provide a Service Oriented Architecture that delivers net centric capability.

**Mission Planning:** The Joint Mission Planning System (JMPS) is the CNO's designated automated mission planning system for the Navy. JMPS enables weapon system employment by providing the information, automated tools, and decision aids needed to rapidly plan aircraft, weapon, or sensor missions, load mission data into aircraft and weapons, and conduct post-mission analysis. JMPS is a mission critical system which is a co-development effort between the United States Navy (USN), United States Air Force (USAF), United States Army (USA), and United States Special Operations Command (USSOCOM). Common requirements are identified and capabilities are developed and prioritized in an evolutionary approach. An individual JMPS mission-planning environment (MPE) is a combination of the JMPS framework, common capabilities, and the necessary system hardware required to satisfy mission planning objectives. Most Tactical Naval Aviation platforms are dependent solely on JMPS to plan precision guided munitions, sensor systems, tactical data links, secure voice communications, and basic Safety of Flight functions. The following type/model/series naval aircraft are supported by JMPS: F/A-18 A-F, E-2C, EA-6B, S-3, MV-22 and AV-8B. Future JMPS platforms include: CH-46E, CH-53, MH-53E, H-60B/F/H, UH-1N, P-3, KC-130T/J, C-2, AH-1W/Z, EA-18G, H-60 R/S, VH-71, P-8, E-2D, UH-1Y, H-53K, VH-3, VH-60 and C-130. As directed via the CNO's Navy Enterprise Architecture and Data Strategy (NEADS) policy, the next JMPS architecture version (Framework V 1.4) will provide an Afloat Core Services (ACS) that delivers net centric capability.

**Tactical/Mobile (TacMobile) Systems:** The Tactical Mobile (TacMobile) program provides evolutionary systems and equipment upgrades to support the Maritime Component Commanders (Expeditionary Ashore) and Maritime Patrol and Reconnaissance Force Commanders with the capability to plan, direct and control the tactical operations of Joint and Naval Expeditionary Forces and other assigned units within their respective area of responsibility. These operations include littoral, open ocean, and over land surveillance, anti-surface warfare, over-the-horizon targeting, counter-drug operations, power projection, antisubmarine warfare, mining, search and rescue, and special operations. The missions are supported by the Tactical Operations Centers (TOCs) (formerly Tactical Support Centers (TSCs)), the Mobile Tactical Operations Centers (MTOCs) (formerly Mobile Operations Control Centers (MOCCs)), and the Joint Mobile Ashore Support Terminal (JMAST). TacMobile C2 systems are based on the GCCS-M architecture which is Defense Information Infrastructure (DII) Common Operating Environment (COE) compliant.

**CLASSIFICATION:**

| EXHIBIT R-2, RDT&E Budget Item Justification | DATE: **May 2009** |
|---|---|
| APPROPRIATION/BUDGET ACTIVITY<br>**RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY BA-5** | R-1 ITEM NOMENCLATURE<br>0604231N - TACTICAL COMMAND SYSTEM |

**Trusted Information Systems (TIS):** Trusted Information Systems (TIS) is a combination of the Joint Cross Domain eXchange (JCDX) system and Radiant Mercury (RM), incorporating Multi-Level Security (MLS) web technologies and Multiple Levels of Security technologies in order to successfully provide accredited Cross Domain Solutions (CDS). Provides the core on-line, automated, near-real time, multi-level secure, information analysis, dissemination, and receipt capabilities that enable Combatant Commanders and Joint Task Force Commanders afloat and ashore to disseminate and receive critical operational and intelligence information with own forces and Coalition/Allied forces via tactical and record communications circuits. Radiant Mercury provides an automated means to sanitize, downgrade, guard, and transliterate formatted data at various classifications, compartments and releasabilities. With the aid of a reliable human reviewer, RM can process nonstandard messages, such as messages with National Imagery Transmission Format (NITF) products and other non/semi-formatted file types.

**Shipboard Local Area Network (LAN)/Wide Area Network (WAN) :** Integrated Shipboard Network System (ISNS): The Integrated Shipboard Network Systems (ISNS) provides Navy ships with reliable, high-speed SECRET and UNCLASSIFIED Local Area Networks (LANs), providing the network infrastructure (switches and drops to the PC), Basic Network Information Distribution Services (BNIDS) and access to the Defense Information Systems Network (DISN) Wide Area Network (WAN), Secure and Nonsecure Internet Protocol Router Network (SIPRNET and NIPRNET) which are used by other hosted applications or systems such as Naval Tactical Command Support System (NTCSS), Global Command and Control System - Maritime (GCCS-M), Defense Messaging System (DMS), Navy Standard Integrated Personnel System (NSIPS), Navy/Marine Corps Portal (NMCP), Naval Mission Planning System (NAVMPS), Theater Battle Management Core Systems (TBMCS), and Tactical Tomahawk Weapons Control System (TTWCS). It enables real-time information exchange within the ship and between afloat units, Component Commanders, and Fleet Commanders, and is a key factor in the implementation of the Navy's portion of Joint Vision 2020. Funding supports the design, development, and testing of the ISNS LAN for surface ships. ISNS includes integrated core services to provide a Service Oriented Architecture (SOA) which is the mechanism to deliver the FORCEnet interface to the warfighter. The (ACS) provides a composeable warfighting environment enabling dynamic configuration of capabilities tailored to meet specific warfighting missions. As the warfighting mission changes, the capabilities or services can be re-configured on the fly to meet the new warfighting requirement. This dynamic reconfiguration of services also known as "plug and fight" meets the composeable services vision of FORCEnet. ACS also provides the common core enterprise services and framework to allow organizations ubiquitous access to reliable, decision-quality information through a net-based services infrastructure and applications to bridge real-time and near-real-time Communities Of Interest (COI). The ACS will empower the end user to pull information from any available source, with minimal latency, to support the mission. Its capabilities will allow Department of the Navy as well as Global Information Grid (GIG) users to task, post, process, use, store, manage, and protect information resources on demand for warfighters, policy makers, and support personnel. ACS will utilize a spiral process for delivering capability to the warfighter. The ISNS Inc 1, Sensitive Compartmented Information (SCI) Networks and Combined Enterprise Regional Information Exchange System (CENTRIXS) programs began migration to ISNS Inc 2/Consolidated Afloat Networks and Enterprise Services (CANES) in FY09. ISNS Inc 2/CANES will serve to transition numerous Fleet networks to a single, adaptive, available, secure computing network infrastructure while delivering enhanced technologies in: Integrated Voice, Video and Data; Common Computing Environment (CCE); ACS; and Multi-Level Security (MLS)/Cross Domain Solutions (CDS). Full transition to CANES Inc 1 occurs in FY 2010.

**Combined Enterprise Regional Information Exchange System (CENTRIXS):** The CENTRIXS program provides US Navy ships with secure, reliable, high-speed Local Area Network (LAN) with access to the Coalition Wide Area Network (WAN) to include CENTRIXS Four-Eyes (CFE), Global Counter Terrorism Task Force (GCTF), North Atlantic Treaty Organization (NATO) Information Data Transfer System (NIDTS), Multinational Coalition Force - Iraq (MCFI), bilateral networks such as CENTRIXS-J (Japan) and CENTRIXS-K (Korea), and Communities Of Interest (COI) virtual networks such as Coalition Naval Forces - U.S. Central Command (CENTCOM) (CNFC), and Cooperative Maritime Forces - Pacific (CMFP). The CENTRIXS system provides real-time tactical and operational information sharing at the SECRET and SECRET REL (Releasable) level between naval afloat units, Component Commanders, Fleet Commanders, Numbered Fleet Commanders and Coalition Forces/Allies. When the CENTRIXS network is combined with other subsystems (Radio/Satellite Communications), it delivers an end-to-end network centric warfighting capability. The CENTRIXS program is comprised of Block 0, I, and II systems fielded across the Fleet, and Increment 1 which provides a network infrastructure that allows simultaneous access to multiple Coalition Wide Area Networks (WAN) and incorporates the Common PC Operating System Environment (COMPOSE) which provides a server and client operating system environment for other applications and collaborative tools such as Same time Chat, Domino and Command and Control PC (C2PC) as means to share a Common Operational Picture (COP) and exchange information using Collaboration At Sea (CAS). The CENTRIXS program uses both Commercial Off The Shelf (COTS) hardware and software and Open Standards to maximize commercial technology and support. In-service engineering and technical support ensures existing systems are upgraded and modified to keep pace with current technology and industry.

**CLASSIFICATION:**

| EXHIBIT R-2, RDT&E Budget Item Justification | DATE: **May 2009** |
|---|---|
| APPROPRIATION/BUDGET ACTIVITY<br>**RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-5** | R-1 ITEM NOMENCLATURE<br>0604231N - Tactical Command System |

**Combined Enterprise Regional Information Exchange System (CENTRIXS)** funding supports the design, development and testing of the CENTRIXS LAN for surface and subsurface platforms and the CENTRIXS Network Operations Center (NOC). The goal of the CENTRIXS program is to provide a cost-efficient, operationally effective network that dramatically reduces current infrastructure requirements while maximizing operational flexibility and war fighter utility in a coalition environment. Multi-Level Thin Client (MLTC) architecture support shipboard Space, Weight and Power (SWAP) reductions and include initiatives for server virtualization (ability to run multiple servers on a single server), drop scalability leveraging existing Secure Internet Protocol Router Network (SIPRNET) drops, remote authentication and remote system management. Additionally funding will provide design, development and testing for a Unit Level MLTC system (provides a compressed shipboard rack/client footprint) and initiatives to include Language Translation, Communities Of Interest (COI) and Network Enclave Agility (ability to dynamically shift between all coalition networks and COIs) and Multi-Level Chat (a Cross Domain Solution (CDS) chat capability). The (CENTRIXS) program started migration to ISNS Inc 2/Consolidated Afloat Networks and Enterprise Services (CANES) in FY09. ISNS Inc 2/CANES will serve to transition numerous Fleet networks to a single, adaptive, available, secure computing network infrastructure while delivering enhanced technologies in: Integrated Voice, Video and Data; Common Computing Environment (CCE); Service Oriented Architecture (SOA); and Multi-Level Security (MLS)/Cross Domain Solutions (CDS). Full transition to CANES Inc 1 occurs in FY 2010.

**Submarine Local Area Network (SubLAN):** The SubLAN program provides Navy submarines with reliable, high-speed Mission Critical SECRET and Mission Essential UNCLASSIFIED Local Area Networks (LANs). When the SubLAN network is combined with other subsystems, it will deliver an end to end network-centric warfare capability. The SubLAN program provides network infrastructure including an Unclassified Wireless Local Area Network (UWLAN), servers, and the Common Personal Computer Operating System Environment (COMPOSE), which provides the server and operating system environment for other applications such as Non-Tactical Data Processing System (NTDPS) and Navy/Marine Corps Portal (NMCP). Funding supports the design, development, and testing of SubLAN for addition of capabilities in support of migration to the Consolidated Afloat Network Enterprise Services (CANES) program effort.

**Naval Tactical Command Support System (NTCSS) Enterprise Database and Maritime Logistics Data Network (MLDN)** : The development of an enterprise database for the NTCSS application suite will place all NTCSS databases into a similar structure and single location, allowing for greater asset visibility and management. MLDN will facilitate the movement of administrative workload from ships to shore. Funding supports design, development, and testing of enterprise database and MLDN technologies for two components of NTCSS mission requirements: maintenance management and supply chain management.

**FORCEnet:** Initiative's mission is to (a) accelerate the transformation to a Distributed, Networked force; (b) achieve interoperability based on Architectures and Standards; and (c) Experiment with, evaluate and employ the enabling technologies. Effort is a non-acquisition program that is the operational instantiation of FORCEnet. The end-state is a distributed network of weapons, sensors, Command and Control (C2), platforms and warriors.

**Maritime Domain Awareness (MDA):** Maritime Domain Awareness is the effective understanding of anything associated with the global maritime domain that could impact the security, safety, economy or environment. MDA objectives include the persistent monitoring of and ability to access and maintain data on vessels, cargo, people, and infrastructure; and the ability to collect, fuse, analyze, and disseminate information to decision makers to facilitate effective understanding. This initiative will identify, develop and transition data fusion and mining, replication, sharing and assessment tools to achieve MDA across the non-classified, unclassified and classified enclaves. This warfighting enhancement is designed to achieve an all-source MDA capability, leveraging existing MDA initiatives in the developmental phase and ensuring the best products transition to strategic, operational and tactical users as well as further development of MDA prototypes. The products will support all-source data fusion, replication of MDA related data gathered in various operations such as expanded-maritime interdiction operations (E-MIO), sharing information with allies, and developing subject matter expertise and assessment tools to achieve MDA and enhance operational decision making.

**Deep Lightning Bolt / Rapid Capability Development (DLB/RCD):** Transformational initiative for the Navy, focused on the introduction of technologies will have the ability to immediately enhance the Navy's Sea Power 21 objectives.

**Congressional Increases:** FY08 includes Congressional increases for Distributed Multi-Platform Sensor Support System. FY09 includes Congressional increases for Intelligence, Surveillance, and Reconnaissance (ISR) Enhancements.

**CLASSIFICATION:**

| EXHIBIT R-2, RDT&E Budget Item Justification | | DATE: **May 2009** |
|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY | | R-1 ITEM NOMENCLATURE |
| **RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY /** | **BA-5** | 0604231N - Tactical Command System |

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

| (U) Funding: | FY08 | FY09 | FY10 |
|---|---|---|---|
| FY09 President's Submit | 87.577 | 128.742 | 73.215 |
| FY10 President's Submit | 87.363 | 102.164 | 86.462 |
| Total Adjustments | -0.214 | -26.578 | 13.247 |
| **Summary of Adjustments** | | | |
| Congressional Rescissions | -0.714 | | |
| Congressional Adjustments | | -26.578 | |
| SBIR/STTR/FTT Assessment | -0.364 | | |
| Program Adjustments | 0.925 | | 14.247 |
| Miscellaneous Adjustments | -0.061 | | -1.000 |
| Subtotal | -0.214 | -26.578 | 13.247 |

**CLASSIFICATION:**

| EXHIBIT R-2, RDT&E Budget Item Justification | | DATE: **May 2009** |
|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY<br>**RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-5** | R-1 ITEM NOMENCLATURE<br>0604231N - Tactical Command System | |

**(U) B. PROGRAM CHANGE SUMMARY (Continued):**

(U) Schedule:

**Mission Planning (Project 2213)**

| | From | To | Reason |
|---|---|---|---|
| Acquisition Milestones | | | |
| JMPS 1.2.4 OTRR | 1Q FY08 | 4Q FY08 | Provide and test additional Capabilities to the Rotary Wing Community (V1.2.4) by adding components to include: Common Mission Data Loader (CMDL) and Weapon Engagement Zone Overlay Tool (WEZOT). |
| JMPS V.1.4 OTRR | 4Q FY09 | 1Q FY10 | Change in the OTRR schedule |
| JMPS V.1.2.4 OT | 2Q FY08 | 1Q – 2Q FY09 | Corresponding change in OT schedule to reflect Change in OTRR schedule. |
| | From | To | Reason |
| Test and Evaluation Milestones | | | |
| MPE Integration/Validation | 1Q FY07 | 4 Q FY13 | MPE Integration/Validation was separated into two distinct milestones. Framework (FW) 1.2.3, which serves the Fixed Wing Community, and FW 1.2.4, which serves the Rotary Wing Community, |
| FW 1.2.3 MPE Integration/Validation | | 2Q FY08-4Q FY10 | Formerly a part of MPE Integration/Validation, FW 1.2.3, serving the Fixed Wing Community, Became a distinct milestone. |
| FW 1.2.4 MPE Integration/Validation | | 2Q FY09-4Q FY13 | Formerly a part of MPE Integration/Validation, FW 1.2.4, serving the Rotary Wing Community, Became a distinct milestone. |
| JMPS V 1.2.4 System Test | 1Q-4Q FY07 | 1Q FY07- 3Q FY08 | Extended to fully integrate and test added Capabilities necessary to meet Fleet needs. |
| JMPS V1.4 FQT | 4Q FY 08 | 3Q FY 09 | Slipped due to Air Force Contracting Delays |
| JMPS V1.4 Systems Test | 1Q – 4Q FY09 | 2Q FY 09 – 1Q FY 10 | Sipped due to Air Force Contracting Delays |
| Production Milestones | | | |
| JMPS V1.2.4 IOC | 2Q FY08 | 3Q FY09 | Slipped due to Air Force Contracting Delays |

**CLASSIFICATION:**

| EXHIBIT R-2, RDT&E Budget Item Justification | DATE: **May 2009** |
|---|---|
| APPROPRIATION/BUDGET ACTIVITY<br>**RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-5** | R-1 ITEM NOMENCLATURE<br>0604231N - Tactical Command System |

**(U) B. PROGRAM CHANGE SUMMARY (Continued):**

(U) Schedule:

**TACTICAL/MOBILE (TACMOBILE) SYSTEMS (Project 0486)**

Tactical/Mobile Systems Increment 2.0 schedule changes are due to Operational Assessment (OA) slipping from 1st Qtr FY08 to 2nd Qtr FY08. Fleet personnel were unavailable to support test event. OA was completed March 2008. This schedule change in OA has caused subsequent impact to program schedule, MSC decision was conducted 3rd Qtr FY08, Operational Test was conducted 1st Qtr FY09. The FRP is scheduled for 3rd Qtr FY09.

**Naval Tactical Command Support System (NTCSS) (Project 3032)**

Program schedule has been updated to include an increase in funds to develop One Naval Aviation Logistics Command/Management Information System (NALCOMIS) and Multi-Unit Identification Code (UIC).

**Global Command and Control System - Maritime (GCCS-M) (Project 0709, 2305)**

The program experienced an 11 month strategic pause endorsed by Milestone Decision Authority. Per the MDA, PMO was directed to restructure the Program of Record (POR) to migrate to a Common Computing Environment (CCE) and a Service Oriented Architecture. MDA also directed Increment 4.1 be redesignated as Increment 2 and be based on GCCS-J 4.2 or later. This implementation will be fielded on Force level platforms only. Additionally, the Program Management Office (PMO) is developing an implementation plan to continue to provide scaled Maritime-unique Command and Control (C2) services at the group and unit level platform. Current plans for NECC to replace GCCS-M currently only extend to the Shore sites and Force level platforms.

**Trusted Information Systems (Project 2009)**

Radiant Mercury Version 5.0 slipped from Q3 FY09 to Q4 FY09 due to delay in award of follow-on developer contract.
Radiant Mercury Version 5.X schedule slip from Q2 FY10 to Q2 FY11 is caused by the delay in delivery of RM Version 5.0 software.

**CENTRIXS (Project 2307)**

The program schedule has been modified to reflect a slip in MS C Inc 1 from 4Q FY08 to 3Q FY09. As a result, there is a shift in Full Rate Production (FRP) to February, 2010 (2Q FY10) for Increment 1 Force Level (FL) & January, 2011 (2Q FY11) for Increment I Unit Level (UL). Full transition to CANES Inc 1 occurs in FY 2010.

**ISNS (Project 2307)**

ISNS Inc 2/Canes Material Development Decision (MDD) shifted Milestone B 1Q FY09 to 3Q FY10. In addition, a fielding decision for D(V)X has been added in 2Q FY09. Full transition to CANES Inc 1 occurs in FY 2010.

(U) Technical: Not applicable

**CLASSIFICATION:**

| EXHIBIT R-2a, RDT&E Project Justification | | | | | | | DATE: **May 2009** | |
|---|---|---|---|---|---|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY<br>**RDT&E, N / BA-5** | PROGRAM ELEMENT NUMBER AND NAME<br>0604231N - TACTICAL COMMAND SYSTEM | | | | PROJECT NUMBER AND NAME<br>2213 Mission Planning | | | |
| COST ($ in Millions) | FY 2008 | FY 2009 | FY 2010 | | | | | |
| 2213 MISSION PLANNING | **29.753** | **18.588** | **18.782** | | | | | |
| | | | | | | | | |

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

Mission Planning: The Joint Mission Planning System (JMPS) is the CNO's designated automated mission planning system for the Navy. JMPS enables weapon system employment by providing the information, automated tools, and decision aids needed to rapidly plan aircraft, weapon, or sensor missions, load mission data into aircraft and weapons, and conduct post-mission analysis. JMPS is a mission critical system which is a co-development effort between the United States Navy (USN), United States Air Force (USAF), United States Army (USA), and United States Special Operations Command (USSOCOM). Common requirements are identified and capabilities are developed and prioritized in an evolutionary approach. An individual JMPS mission-planning environment (MPE) is a combination of the JMPS framework, common capabilities, and the necessary system hardware required to satisfy mission planning objectives. Most Tactical Naval Aviation platforms are dependent solely on JMPS to plan precision guided munitions, sensor systems, tactical data links, secure voice communications, and basic Safety of Flight functions. The following type/model/series naval aircraft are supported by JMPS: F/A-18 A-F, E-2C, EA-6B, S-3, MV-22 and AV-8B. Future JMPS platforms include: CH-46E, CH-53, MH-53E, H 60B/F/H, UH-1N, P-3, KC-130T/J, C-2, AH-1W/Z, EA-18G, H-60 R/S, VH-71, P-8, E-2D, UH-1Y, H-53K, VH-3, VH-60 and C-130. As directed via the CNO's Navy Enterprise Architecture and Data Strategy (NEADS) policy, the next JMPS architecture version (Framework V 1.4) will provide a Service Oriented Architecture (SOA) that delivers net centric capability.

**CLASSIFICATION:**

| EXHIBIT R-2a, RDT&E Project Justification | | DATE: **May 2009** |
|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY | PROGRAM ELEMENT NUMBER AND NAME | PROJECT NUMBER AND NAME |
| **RDT&E, N / BA5** | 0604231N - TACTICAL COMMAND SYSTEM | 2213 Mission Planning |

**B. Accomplishments/Planned Program**

| JMPS Version 1.2.3/1.2.4 | FY 08 | FY 09 | FY 10 |
|---|---|---|---|
| Accomplishments/Effort/Subtotal Cost | 2.910 | 0.001 | 0.001 |
| RDT&E Articles Quantity | | | |

JMPS Framework Version 1.2.3 efforts, DOD/CIO mandate for IPV6 with the migration to XP operating system . JMPS Framework 1.2.3 RDT&E tasks were completed in FY08.
JMPS Version 1.2.4 efforts: development of common helo tool sets and navigation functionality and common helo transfer device.

| JMPS Expeditionary (JMPS-E) | FY 08 | FY 09 | FY 10 |
|---|---|---|---|
| Accomplishments/Effort/Subtotal Cost | 2.329 | 1.688 | 0.477 |
| RDT&E Articles Quantity | | | |

JMPS Expeditionary (JMPS-E): The goal of the JMPS-E team is to produce a scaleable, tailorable, mission planning and execution monitoring tool for the staffs of the Expeditionary Strike Group (Marine Expeditionary Unit + Amphibious Squadron). The primary focus of this capability is the crisis action or deliberate planning and execution of ship-to-objective maneuver. The variety of forces involved in an expeditionary operation amplifies the need for web-based technologies to enable collaborative planning, improve overall situational awareness and enable the monitoring of mission execution from different locations. A staff level planner capability will provide the ability to collaborate and share information in a distributive environment to speed the planning process, provide concurrent planning, and track execution of plans. A tailored operational-level mission planner will provide the ability to plan and analyze expeditionary missions for aircraft, amphibious, naval, and other support craft under various mission configurations and operational threat environments. The primary outputs are tasking orders, course of actions (COAs), route plans, and mission briefs in digital and printed forms. Execution-monitoring tools are required to minimize exposure during ship-to-objective and other force movements. This capability will be initially fielded using Framework Version 1.2.4.

| Framework V1.4 | FY 08 | FY 09 | FY 10 |
|---|---|---|---|
| Accomplishments/Effort/Subtotal Cost | 12.425 | 4.651 | 0.001 |
| RDT&E Articles Quantity | | | |

Framework Version 1.4 contract was awarded in 2007. Previous funding constraints prohibited the current Navy MPEs from migrating to FW Version 1.3 with the AF MPEs. Funding for FW 1.4 will be used to support system engineering processes, management interface controls, software architectural analysis, requirements management and a centralized website for MPE developers. Migration to a .net environment in framework versions 1.3 & 1.4 will enable interoperability improvements through utilization of the SOA and supported by the Global Information Grid-Enterprise Services (GIG-ES).

**CLASSIFICATION:**

| EXHIBIT R-2a, RDT&E Project Justification | | DATE: **May 2009** |
|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY | PROGRAM ELEMENT NUMBER AND NAME | PROJECT NUMBER AND NAME |
| **RDT&E, N / BA5** | 0604231N - TACTICAL COMMAND SYSTEM | 2213 Mission Planning |

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

| MPE Integration and Test | FY 08 | FY 09 | FY 10 | |
|---|---|---|---|---|
| Accomplishments/Effort/Subtotal Cost | 12.088 | 12.247 | 18.302 | |
| RDT&E Articles Quantity | | | | |

Mission Planning Environment (MPE) Integration and Test efforts support the Navy's developmental testing/operational testing (DT/OT), integration and system of system testing for MPE fielding. Efforts consist of integration components provided by various developers into a platform-centric MPE and testing of the integrated MPE. MPE integration and testing results in a consistent and repeatable system configuration that enables stability and reliability. Current budget supports the integration and testing of 21 MPEs in FY09 and 21 MPEs in FY10.

| Common Capabilities | FY 08 | FY 09 | FY 10 | |
|---|---|---|---|---|
| Accomplishments/Effort/Subtotal Cost | 0.001 | 0.001 | 0.001 | |
| RDT&E Articles Quantity | | | | |

Common Capabilities (CC) software augments core mission planning capabilities with capabilities common across multiple aircraft. CC will be developed as common software tools to automate mission planning in the air warfare, expeditionary operations and maritime environments. Requirements for CC include: Mission Rehearsal, Collaboration, Query and Process Imagery, Intel, Communications Planning, Asset Management, Anti-Submarine Warfare (ASW), etc. Continue component development, full documentation, and component installation.

**CLASSIFICATION:**

| EXHIBIT R-2a, RDT&E Project Justification | | DATE: **September 2008** |
|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY | PROGRAM ELEMENT NUMBER AND NAME | PROJECT NUMBER AND NAME |
| **RDT&E, N / BA-5** | 0604231N - TACTICAL COMMAND SYSTEM | 2213 Mission Planning |

**C. OTHER PROGRAM FUNDING SUMMARY:**

| Line Item No. & Name | FY 2008 | FY 2009 | FY 2010 | FY 2011 | FY 2012 | FY 2013 | FY 2014 | FY 2015 | To Complete | Total Cost |
|---|---|---|---|---|---|---|---|---|---|---|
| BLI 287600 TAC A/C Mission Planning Systems (OPN) | 8.757 | 9.484 | 9.102 | | | | | | | Continuing |
| PE 0208006F Air Force Mission Planning Support System (total) | 104.575 | 97.560 | 98.574 | | | | | | | Continuing |

**D. ACQUISITION STRATEGY:**

Engineering Manufacturing Development (EMD) efforts. The strategy entails a two-phased evolutionary approach to acquire the initial JMPS development effort. Phase I was a combined USAF/USN effort that obtained various studies, extensive joint requirements analysis, design to cost estimates, an architecture concept, and development statement of work. The Program's Phase I was planned to identify reduced costs strategies through software reuse from both USN Tactical Automated Mission Planning Systems (TAMPS) and USAF Air Force Mission Support Systems (AFMSS) legacy mission planning programs. Additionally, this phase provided a risk reduction plan by identifying the most effective migration of existing mission planning systems. Phase I was awarded to two contractors, Post Phase I during the down select process, one contractor was selected to develop the JMPS architecture work and Version 1.0 basic flight planning components. Phase II focused on strike planning requirements ( i.e., support Precision Guided Missions and other tactical data load intensive missions) in order to migrate platforms from legacy mission planning systems to JMPS. The USAF continued development of JMPS Version 1.3 and has contractual control of the program which is facilitated via a Mission Planning Enterprise Contract (MPEC). The USN continued limited development in JMPS Version 1.2 which is focused on helicopter platform migrations. USN integration and fielding strategy changed to support a Mission Planning Environment (MPE) focus, where framework and common components are integrated as bundled packaged and fielded by airwings. The completion of Phase II is targeted for JMPS Version 1.4, which focuses on migration to a .net architecture and rejoins the multi-service enterprise to reduce costs through co-development. JMPS 1.4 will be divided into three builds, numbered 1.4.1 through 1.4.3. As platforms plan their migration to JMPS, the acquisition strategy, plan, and baseline will be updated in order to drive the retirement of legacy mission planning systems.

**CLASSIFICATION:**

Exhibit R-3 Cost Analysis (page 1)

DATE: **September 2008**

| APPROPRIATION/BUDGET ACTIVITY | PROGRAM ELEMENT | PROJECT NUMBER AND NAME |
|---|---|---|
| **RDT&E, N / BA-5** | 0604231N - TACTICAL COMMAND SYSTEM | 2213 Mission Planning |

| Cost Categories | Contract Method & Type | Performing Activity & Location | Total PY s Cost | FY 09 Cost | FY 09 Award Date | FY 10 Cost | FY 10 Award Date | FY 11 Cost | FY 11 Award Date | Cost to Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Primary Software Development/CC | MIPR | USAF, Hanscom AFB, MA | 0.001 | 0.001 | 12/08 | 0.001 | 03/10 | | | | | |
| Primary Software Development/FW | MIPR | USAF, Hanscom AFB, MA | 17.140 | 3.400 | 03/09 | 0.002 | 03/10 | | | | | |
| Primary Software Dev./JMPS-E | MIPR | USAF, Hanscom AFB, MA | 2.365 | 0.900 | 02/09 | 0.310 | 02/10 | | | | | |
| Primary Software Development | SS/CPIF | Northorp Grumman, VA | 68.091 | | | | | | | | | |
| Primary Software Development | VARIOUS | VARIOUS | 7.791 | 2.977 | 12/08 | 2.614 | 12/09 | | | | | |
| | | | | | | | | | | | | |
| | | FY99-06 | 15.791 | | | | | | | | | |
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| Subtotal Product Development | | | 111.179 | 7.278 | | 2.927 | | | | | | |

Remarks:

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Integrated Logistics Support | WX | SPAWAR, Phili, PA | 10.538 | 1.000 | 01/09 | 0.575 | 01/10 | | | | | |
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| Subtotal Support | | | 10.538 | 1.000 | | 0.575 | | | | | | |

Remarks:

Exhibit R-3, Project Cost Analysis

**CLASSIFICATION:**

| Exhibit R-3 Cost Analysis (page 2) | | | | | | | | | | DATE: **September 2008** | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY<br>**RDT&E, N / BA-5** | | PROGRAM ELEMENT<br>0604231N - TACTICAL COMMAND SYSTEM | | | | PROJECT NUMBER AND NAME<br>2213 Mission Planning | | | | | | |
| Cost Categories | Contract Method & Type | Performing Activity & Location | Total PY s Cost | FY 09 Cost | FY 09 Award Date | FY 10 Cost | FY 10 Award Date | | | Cost to Complete | Total Cost | Target Value of Contract |
| Syst Eng Integration & Test | WX | NAWCWD, Pt . Mugu, CA | 30.038 | 8.518 | 12/08 | 13.360 | 12/09 | | | | | |
| Test & Evaluation | WX | COTF, Norfolk, VA | 0.257 | 0.260 | 01/09 | 0.143 | 01/10 | | | | | |
| Test & Evaluation | WX | MCOTEA, Quantico, VA | | 0.175 | 01/09 | 0.021 | 01/10 | | | | | |
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| Subtotal T&E | | | 30.295 | 8.953 | | 13.524 | | | | | | |

Remarks:
COTF, Naval Command Operational Test and Evaluation Force
MCOTEA, Marine Corps Operational Test & Evaluation Activity

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Program Management Support | WX | NAWCAD, Pax River, MD | 25.295 | 1.357 | 12/08 | 1.756 | 12/09 | | | | | |
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| Subtotal Management | | | 25.295 | 1.357 | | 1.756 | | | | | | |

Remarks:

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|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Cost | | | 177.307 | 18.588 | | 18.782 | | | | | 214.677 | |

Remarks:

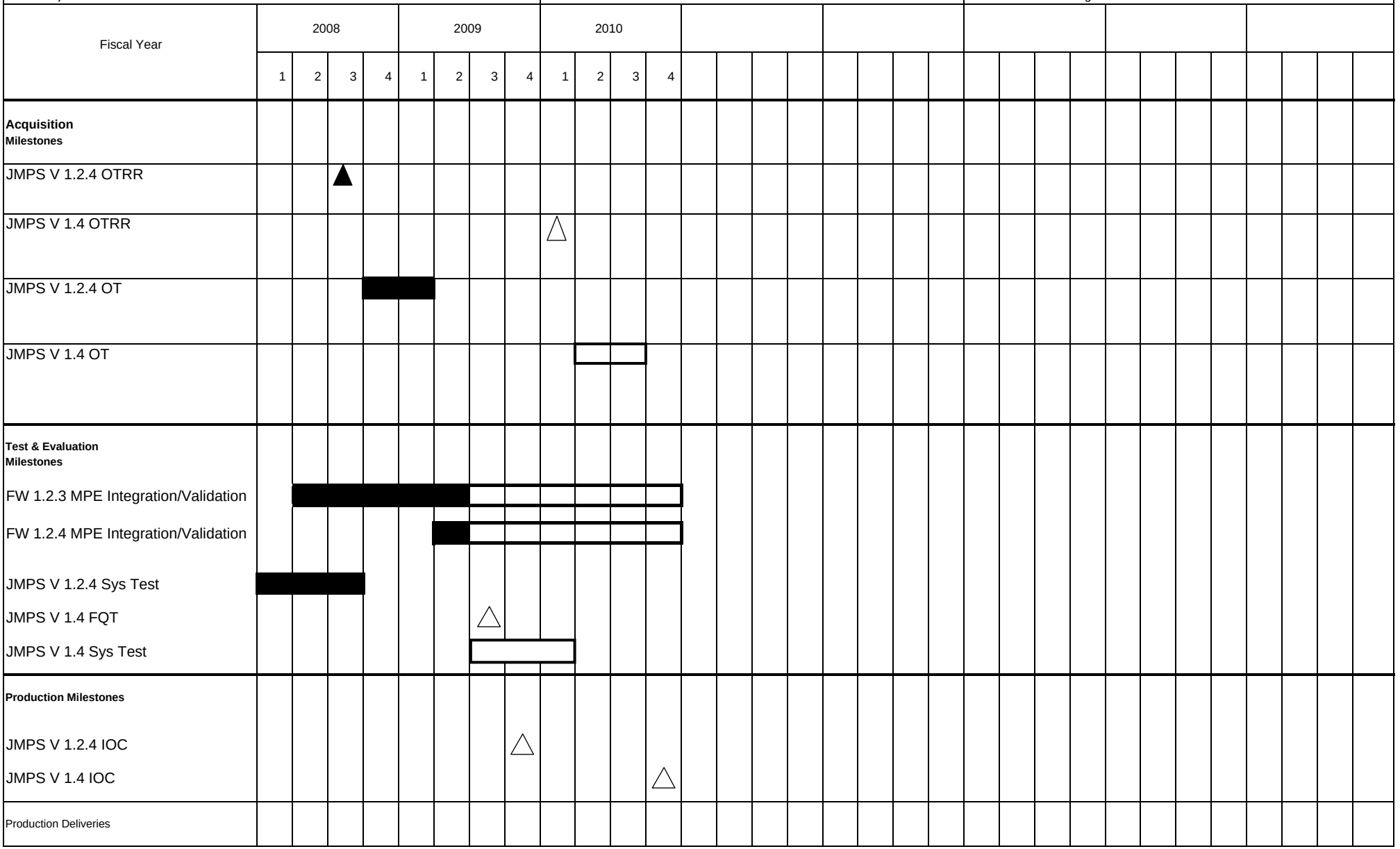
**CLASSIFICATION:**

EXHIBIT R4, Schedule Profile | DATE: **May 2009**

APPROPRIATION/BUDGET ACTIVITY: **RDT&E, N /** **BA-5**

PROGRAM ELEMENT NUMBER AND NAME: 0604231N - TACTICAL COMMAND SYSTEM

PROJECT NUMBER AND NAME: 2213 Mission Planning



**CLASSIFICATION:**

| Exhibit R-4a, Schedule Detail | | | | | DATE: **May 2009** | | | |
|---|---|---|---|---|---|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY<br>**RDT&E, N / BA-5** | PROGRAM ELEMENT<br>0604231N - TACTICAL COMMAND SYSTEM | | | | PROJECT NUMBER AND NAME<br>2213 Mission Planning | | | |
| Schedule Profile | FY 2008 | FY 2009 | FY 2010 | | | | | |
| **Acquisition Milestones** | | | | | | | | |
| **JMPS V1.1** | | | | | | | | |
| JMPS V1.2.4 OTRR | 4Q | | | | | | | |
| JMPS V1.4 OTRR | | | 1Q | | | | | |
| JMPS 1.2.4 OT | | 1Q/2Q | | | | | | |
| JMPS V1.4 OT | | | 2Q/3Q | | | | | |
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| **Test & Evaluation Milestones** | | | | | | | | |
| FW 1.2.3 MPE Integration/Validation | 2Q | 1Q/4Q | 1Q/4Q | | | | | |
| FW 1.2.4 MPE Integration/Validation | | 2Q/4Q | 1Q/4Q | | | | | |
| JMPS V1.2.4 Systems Test | 1Q/3Q | | | | | | | |
| JMPS V1.2.4 FQT | | 3Q | | | | | | |
| JMPS V1.4 Systems Test | | 2Q/4Q | 1Q | | | | | |
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| **Production Milestones** | | | | | | | | |
| JMPS V1.2.4 IOC | | 4Q | | | | | | |
| JMPS V1.4 IOC | | | 4Q | | | | | |
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**CLASSIFICATION:**

| EXHIBIT R-2a, RDT&E Project Justification | | | DATE: **May 2009** |
|---|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY<br>**RDT&E, N / BA-5** | PROGRAM ELEMENT NUMBER AND NAME<br>0604231N - Tactical Command System | PROJECT NUMBER AND NAME<br>0486 Tactical/Mobile (TacMobile) Systems | |

| COST ($ in Millions) | FY 2008 | FY 2009 | FY 2010 | FY 2011 | FY 2012 | FY 2013 | FY 2014 | FY 2015 |
|---|---|---|---|---|---|---|---|---|
| Project Cost | **2.402** | **8.919** | **10.897** | | | | | |
| RDT&E Articles Qty | | | | | | | | |

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

**Tactical/Mobile (TacMobile) Systems:** The Tactical/Mobile program provides evolutionary systems and equipment upgrades to support Maritime Component Commanders (Expeditionary Ashore) and Maritime Patrol and Reconnaissance Force Commanders with the capability to plan, direct, and control the tactical operations of Joint and Naval Expeditionary Forces and other assigned units within their respective area of responsibility. These operations include littoral, open ocean, and over land all-sensor surveillance, anti-surface warfare, over-the-horizon targeting, counter-drug operations, power projection, antisubmarine warfare, mining, search and rescue, and special operations.

The missions are supported by the Tactical Operations Centers (TOCs) (formerly Tactical Support Centers (TSCs)), the Mobile Tactical Operations Centers (MTOCs) (formerly Mobile Operations Control Centers (MOCCs)), and the Joint Mobile Ashore Support Terminal (JMAST). Services provided include analysis and correlation of diverse sensor information; data management support; command decision aids; rapid data communication; mission planning and evaluation and dissemination of surveillance data and threat alerts to operational users ashore and afloat. Tactical/Mobile Command and Control systems are based on the Global Command and Control System - Maritime (GCCS-M) architecture, which is Defense Information Infrastructure (DII) Common Operating Environment (COE) compliant.

TOCs and their equivalents provide Command, Control, Communications, Computers and Intelligence (C4I) capability, air-ground, satellite and point-to-point communications systems; sensor analysis capabilities; avionics and weapons system interfaces and facilities equipment. MTOCs and their equivalents are scalable and mobile versions of the TOC for operations from airfields that do not have TOC support. This program assures that existing ToCs and MTOCs are modernized to fulfill their operational requirements. TOC/MTOC will continue to provide the ground Command and Control capabilities and C4I interfaces for the Maritime Patrol and Reconnaissance Force (MPRF) Family of Systems (FOS) aircraft and systems evolution including P-3C aircraft updates to sensors and weapons systems, such as the Anti-Surface Warfare Maritime Improvement Program (AMIP), and the Command Control Communications Computers for Anti-Submarine Warfare (C4 for ASW) P-3C aircraft upgrades, as well as development of emergent, ground C4I support capabilities for the P-8A Multi-mission Maritime Aircraft (MMA) and Broad Area Maritime Surveillance Unmanned Aerial System (BAMS UAS).

The Joint Mobile Ashore Support Terminal (JMAST) supports the Fleet Commanders, Naval Component Commanders, and other military commanders from forward deployed bases or operational sites ashore that are not equipped with C4I facilities. It provides the Navy Component, and other military commanders with flexible, mobile, organic response, to command, control and communicate with assigned forces via voice, video, and data media forms, during all aspects of military operations, including joint, combined, and coalition operations.

The TacMobile program was designated as an Acquisition Category (ACAT) III weapons system program July 2004 by the Program Executive Officer (PEO) C4I and Space and is no longer directly associated with the GCCS-M program. The TacMobile program follows an Evolutionary Acquisition approach, which provides a mechanism for adding a series of future capabilities that maintain and enhance the operational relevance of the systems provided, as well as augments improvements in airborne networking. Transformation of the TOC/MTOC Force to a more mobile, scaleable, and network-centric configuration, convergence of TOC, MTOC, and JMAST architectures to a single configuration, and as an integral component of the Maritime Patrol and Reconnaissance Force (MPRF) Family of Systems (FOS), operational C4I integration support for new and upgraded Maritime Patrol and Reconnaissance Aircraft (MPRA) such as MMA (Multi-mission Maritime Aircraft), AIP, BAM UAS as well as other Command and Control (C2) and fighter aircraft are primary objectives.

FY09: Funding increase supports SEA Shield efforts in Anti Submarine Warfare (ASW) planning and Joint Mission Planning System (JMPS) integration efforts with P3, P8A and TacMobile. Funding increase also supports system engineering of networking capabilities and air platform integration.
FY10: Funding increase supports TacMobile systems development to achieve increased modularity, enhancing flexibility and mobility, to offset the size/weight/cube of additional required aircraft interfaces that are currently under development. Network-centric and airborne C4I integration efforts continue as improvements to airborne networking technology are matured. Will achieve interoperability with emerging MPRF Aircraft and Sensors while reducing TacMobile footprint enhancing Mobility capability.

**CLASSIFICATION:**

| EXHIBIT R-2a, RDT&E Project Justification | | DATE: **May 2009** |
|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY | PROGRAM ELEMENT NUMBER AND NAME | PROJECT NUMBER AND NAME |
| **RDT&E, N / BA5** | 0604231N - Tactical Command System | 0486 Tactical/Mobile (TacMobile) Systems |

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

| Net Ready | FY08 | FY09 | FY10 | |
|---|---|---|---|---|
| Accomplishments/Effort/Subtotal Cost | 0.263 | 0.864 | 0.978 | |
| RDT&E Articles Quantity | | | | |

FY08 - Communications: Began investigation and evaluation of integration of Wide Band Line Of Sight (LOS) and Beyond LOS (BLOS) Tactical Edge Networking Waveforms, to support Internet Protocol (IP) connected end-to-end Net Centric Undersea Warfare (USW) communications between TacMobile units and Maritime Patrol and Reconnaissance Aircraft (MPRA) to enable networked reach back, data sharing and real time collaborative analysis. Began investigation of requirements to enhance Homeland Defense and Disaster Relief communications capabilities compatibility to support interoperability and information sharing.

FY09 - Communications: Integrate Wide Band LOS and BLOS Tactical Edge Networking Waveforms to support IP connected end-to-end Net Centric USW communications between TacMobile units and MPRA enabling networked reach back, data sharing and real time collaborative analysis. Integrate communications capabilities compatible with Federal, State and Local government agencies and Non Government Organizations (NGO) activities to enhance Humanitarian Assistance/Disaster Relief (HADR) and Homeland Defense (HD) interagency interaction.

FY10 - Communications: Continue with Integration Wide Band LOS and BLOS Tactical Edge Networking Waveforms to meet migration of Defense Information Systems Agency (DISA) interoperability standards, incorporating Black Core Routing to support IP connected end-to-end Net Centric USW communications between TacMobile units, MPRA and supported commanders and other external agencies. Research and coordinate with appropriate Communities of Interest (COI's) to implement appropriate data strategies (open-source extensible markup language (XML) metadata or schemas) to enable data visibility, accessibility, understanding and trustworthiness.

| FTAS/TACMASS | FY08 | FY09 | FY10 | |
|---|---|---|---|---|
| Accomplishments/Effort/Subtotal Cost | 0.798 | 0.717 | 0.951 | |
| RDT&E Articles Quantity | | | | |

FY08 - Analysis: Developed Sea Shield USW, FORCEnet Intelligence, Surveillance & Reconnaissance (ISR) & Common Operational/Tactical Picture (COTP) transformation post flight acoustic analysis capabilities, enhancing the detect to engage sequence for P-3 Anti-surface warfare Improvement Program (AIP), Block Modification Update Program (BMUP), Anti-Submarine Warfare (ASW) Maritime Improvement Program (AMIP) and P-8A by utilizing Enhanced Signal Processing, Advanced Sonobuoy Processing and Networked Data to feed Collaborative Planning and expediting Target Confirmation. Began transformation of TacMobile non-acoustic Electro Optic and Infra Red analysis capabilities for P-3 AIP, BMUP, AMIP and P-8A, to incorporate FORCEnet ISR & Common Operational and Tactical Picture (COTP) tenets.

FY09 - Analysis: Integrate Acoustic Analysis capabilities to support post-flight Fast Time Acoustic Analysis and intelligence gathering for Operational Plans (OPLANs) execution to include advanced multi-static's and digital capabilities. Integrate advanced Non-Acoustic Electro Optical/Infrared (EO/IR) Analysis capabilities to support emerging and developing Maritime Patrol and Reconnaissance ISR sensor systems.

FY10 - Analysis: Develop/Integrate auto detection, tracking and screening capabilities to reduce acoustic analyst workload and increase ASW probability of detection. Develop concurrent processing enhancements to increase processing capacity and reduce processing time to support increased volume of recorded MPRA ASW acoustic data. Integrate advanced Joint and Common display formats to enhance system Operator Machine Interface (OMI).

**CLASSIFICATION:**

| EXHIBIT R-2a, RDT&E Project Justification | | DATE: May 2009 |
|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY | PROGRAM ELEMENT NUMBER AND NAME | PROJECT NUMBER AND NAME |
| **RDT&E, N / BA5** | 0604231N - Tactical Command System | 0486 Tactical/Mobile (TacMobile) Systems |

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

| Aircraft Interfaces | FY08 | FY09 | FY10 | |
|---|---|---|---|---|
| Accomplishments/Effort/Subtotal Cost | 0.144 | 0.538 | 0.864 | |
| RDT&E Articles Quantity | | | | |

FY08 - Media: Began transformation of TacMobile Command Control Computers Communications and Intelligence (C4I) ground support to include P-8A Multi-mission Maritime Aircraft (MMA) and Broad Area Maritime Surveillance Unmanned Aerial System (BAMS UAS) to ensure platform Warfighting wholeness. Assessed and analyzed MMA and began assessment of BAMS UAS data, services, Information Assurance (IA), and transport requirements to develop discovery-search and storage services capable of providing persistent and reliable searchable access and storage as a proxy for the P-8A MMA produced data that satisfies the data sharing and data visibility tenets of the Department of Defense (DoD) Net-Centric Data Strategy. Continued to research engineering and design alternatives to read/write shipwreck data, bottom contour data, and training scenarios on to one of the P-3C Anti-Submarine Warfare (ASW) Maritime Improvement Program (AMIP) Data Acquisition Storage Devices (DASDs) (dual load).

FY09 - Media: Continue to develop new ground support capabilities to support capabilities being developed for Maritime Patrol and Reconnaissance Aircraft (MPRA). Continue to transform TacMobile C4I ground support to include P-8A Multi-mission Maritime Aircraft (MMA) and Broad Area Maritime Surveillance Unmanned Aerial System (BAMS UAS), and other Command and Control (C2) and intelligence, Surveillance and Reconnaissance (ISR) platforms, to ensure platform Warfighting wholeness. Integrate and evaluate discovery-search and storage services capable of providing persistent and reliable searchable access and storage as a proxy for the P-8A MMA produced data that satisfies the data sharing and data visibility tenets of the DoD Net-Centric Data Strategy. Design and develop software application that stores shipwreck and bottom contour data for P-3C AMIP and allows the user to segment portions of this for a particular Area of Responsibility (AOR).

FY10 - Media: Integrate new ground support capabilities to support capabilities being developed for Maritime Patrol and Reconnaissance Aircraft (MPRA) incorporating P-8A Multi-mission Maritime Aircraft (MMA). Continue to evaluate and assess those interfaces required to support Broad Area Maritime Surveillance Unmanned Aerial System (BAMS UAS) and other aircraft to ensure platform Warfighting wholeness. Identify, evaluate, and assess interfaces required for network-centric operations with various air platforms involved in airborne networks. Continue development of discovery-search and storage services capable of providing persistent and reliable searchable access and storage as a proxy for the P-8A MMA produced data that satisfies the data sharing and data visibility tenets of the DoD Net-Centric Data Strategy.

| Tactical Data Links | FY08 | FY09 | FY10 | |
|---|---|---|---|---|
| Accomplishments/Effort/Subtotal Cost | 0.260 | 0.161 | 0.21 | |
| RDT&E Articles Quantity | | | | |

FY08 -Tactical Data Links: Began investigation and initiated development to enable TacMobile support for LINK-16 data and other emerging aircraft data transport devices. Investigated and initiated development to leverage multiple communication transport nodes to enable TacMobile to provide interoperable Internet Protocol (IP) addressable high bandwidth data transmission to support persistent Command and Control (C2), P-3 AMIP & P-8 MMA sensor, and interagency information capabilities.

FY09 -Tactical Data Links: Integrate and test software and communications capabilities to provide interoperable IP addressable high bandwidth data transmission to support persistent C2, sensor, and interagency information capabilities. Continue development and begin integration of a portable LINK-16 capability solution.

FY10 - Tactical Data Links: Integrate and test Link-16 portable capability, Begin investigation of future Tactical Data Link (TADIL) requirements that transition from legacy systems to support emerging and evolving MPRA interface requirements while maintaining support for NATO Standardization Agreement (STANAG) defined minimum capabilities.

| Enterprise Solutions | FY08 | FY09 | FY10 | FY11 |
|---|---|---|---|---|
| Accomplishments/Effort/Subtotal Cost | 0.570 | 0.979 | 1.301 | |
| RDT&E Articles Quantity | | | | |

FY08 - Enterprise Solutions/Computers: Assessed and Analyzed TacMobile system for compliance to the data, services, Information Assurance (IA), and transport requirements of FORCEnet Architecture and Standards including Net centric Enterprise Solutions for Interoperability (NESI), DoD Metadata Registry, Internet Protocol version 6 (IPV6), and Common Criteria. Analyzed and tested interfaces with other related systems for data schemas, data, Information Assurance (IA), and transport interoperability to ensure horizontal integration. Reviewed previous analysis and design toward defining development of a fully secure, adaptive, and networked end-to-end Service Oriented Architecture (SOA) with seamless access to timely assured, accurate, and complete decision-quality information in a dynamic collaborative, information-sharing environment. Develop and analyze a logical data reference model and support registering of MPRA unique data schemas into the DoD Metadata Registry to support data interoperability. Analyzed MPRA Information Assurance (IA) requirements and began development of adequate IA controls to be interoperable on the Global Information Grid (GiG) with other related systems. Began investigation and performed necessary analysis to identify potential alternatives to implement appropriate integrated Multi-level Security Networking options in TacMobile systems. Analyzed GiG Enterprise Services options and began development of migration plans for integration into the TacMobile architecture. Commenced development of the integration of Tactical Support Center (TSC) and Mobile Operations Control Center (MOCC) configurations. Began design for development of next generation software and hardware that is modular and scalable, surge able and sustainable, promoting responsiveness to mission requirements. Began development of replacement for obsolete, maintenance-intensive hardware, elimination of legacy systems to incorporate technologies that reduce logistics tail and ease training burden.

FY09 - Computers/Knowledge Management: Integrate TSC and MOCC configurations. Develop next generation software and hardware that is modular and scalable, surgeable and sustainable, promoting responsiveness to mission requirements. Develop replacement for obsolete, maintenance-intensive hardware, eliminate legacy systems and technologies to reduce logistics tail and ease training burden. Integrate Distributed Common ground System Navy (DCGS-N) Intelligence Surveillance Reconnaissance (ISR) and Undersea Warfare (USW) Decision Support System (DSS) (USW-DSS) USW Battle Space Characterization capabilities and Global information Grid (GiG) Enterprise Services into TacMobile systems architecture.

FY10 - Begin investigation into modern navy networking infrastructure appropriate for a tactical and mobile environment that comply with net ready, Defense Information Systems Agency (DISA) and Navy Net-Centric Operating standards that support evolutionary transition to a Services Oriented Architecture with Cross Domain accessibility . Design and develop network infrastructure to meet increased ISR data volume, provide redundant back-up and disaster recovery Quality of Service (QOS). Integrate architectural updates to maintain evolving information assurance standards.

**CLASSIFICATION:**

| EXHIBIT R-2a, RDT&E Project Justification | | DATE: May 2009 |
|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY | PROGRAM ELEMENT NUMBER AND NAME | PROJECT NUMBER AND NAME |
| **RDT&E, N / BA5** | 0604231N - Tactical Command System | 0486 Tactical/Mobile (TacMobile) Systems |

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

| C2 | FY08 | FY09 | FY10 | |
|---|---|---|---|---|
| Accomplishments/Effort/Subtotal Cost | 0.367 | 0.276 | 0.258 | |
| RDT&E Articles Quantity | | | | |

FY08 - Command and Control (C2): Developed guidelines and conducted preparatory planning to enable development of technical documentation, and made necessary preparations to support fielding and evaluation of Global Command and Control System-maritime (GCCS-M) 4.Xfollow on capability in TacMobile Systems . Investigated use of other applicable C2 components such as Under Sea Warfare Decision Support System (USW DSS), environmental and meteorological components, and Joint C2 applications.

FY09 - Command and Control (C2): Investigate, initiate, and implement plans to integrate Intelligence Preparation of the Battle Space capabilities to provide access to Signal Intelligence (SIGINT), Electronic Warfare (EW), and General Military Intelligence database products, into TacMobile systems architecture. Investigate, initiate, and implement transition plans to future release of GCCS or follow on Joint Command and Control capability.

FY10 - Command and Control (C2): Identify appropriate C2 GCCS-M 4.0.1 follow on for integration to provide Intelligence Preparation of the Battle Space capabilities to provide access to Signal Intelligence (SIGINT), Electronic Warfare (EW), and General Military Intelligence database products, into TacMobile systems architecture and provides Common Operational Picture (COP) management, display, and processing capabilities that meet information assurance and interoperability standards.

| Mission Planning | FY08 | FY09 | FY10 | |
|---|---|---|---|---|
| Accomplishments/Effort/Subtotal Cost | 0.000 | 5.384 | 1.878 | |
| RDT&E Articles Quantity | | | | |

FY-08 - For FY-08 and prior, Mission Planning development was conducted as a portion of Fast Time Analysis System (FTAS)/ Tactical Mobile Acoustic Support System (TaCMASS) development. In response to increased warfighter emphasis, and Naval Aviation migration to a common core Mission Planning Environment, development efforts have expanded and warrant increased visibility of separate budgeting, tracking and planning.

FY09 - Mission Planning: Analyze Fleet requirement to identify unique Maritime Patrol fixed wing mission planning capabilities for P-3C and its' Command Control Communications Computers Intelligence Surveillance Reconnaissance (C4ISR) Ground Support Systems (Tactical Support Centers (TSC) and Mobile Operations Control Centers (MOCC)). Develop overarching Maritime Patrol Anti Submarine Warfare (ASW) mission planning user environment to operate with Joint Collaborative distributed networks that interface to existing Multistatic, Acoustic and Non Acoustic ASW mission planning Tactical Decision Aids as well as ASW Decision Support Systems and Tactical Decision Aids (TDA) under development. Develop Maritime Patrol weapons planning environment for weapons such as Standoff Land Attack Missile-Extended Range (SLAM-ER). Integrate mission planning outputs to Maritime Patrol and Reconnaissance Aircraft (MPRA) flight, mission, and sensor systems for development of Aircraft Pre-flight Insertion Data (PID) and participation in coordinated ASW mission rehearsal.

FY10 - Mission Planning: Integrate overarching Maritime Patrol ASW mission planning user environment to operate with Joint Collaborative distributed networks that interface to existing Multistatic, Acoustic and Non Acoustic ASW mission planning Tactical Decision Aids as well as ASW Decision Support Systems and TDA's under development. Integrate Maritime Patrol weapons planning environment for weapons such as SLAM-ER. Integrate mission planning outputs to MPRA flight, mission, and sensor systems for development of Aircraft Pre-flight Insertion Data and participation in coordinated ASW mission rehearsal.

| MPRF Interoperability/TacMobile Footprint Reduction | FY08 | FY09 | FY10 | FY11 |
|---|---|---|---|---|
| Accomplishments/Effort/Subtotal Cost | 0.000 | 0.000 | 4.457 | |
| RDT&E Articles Quantity | | | | |

FY08/09 - For FY-08/09 and prior, Maritime Patrol and Reconnaissance Force (MPRF) Interoperability and TacMobile Footprint (key Mobility Capability driver) issues were considered as a portion of Analysis of Alternatives across all aspects of TacMobile development efforts. As the number of systems and aircraft interfaces required to support Maritime Patrol and Reconnaissance Aircraft (MPRA) continue to grow, combined with fleet requirements to operate from the littorals with increasing flexibility, architectural engineering focus toward Mobility capabilities has taken on increased importance and emphasis. In response to this increased emphasis, development efforts will expand and warrant increased visibility of separate budgeting, tracking and planning.

FY10 - Architecture Engineering: Assess and analyze TacMobile systems for opportunities to enhance flexibility and mobility offsetting additional aircraft interface device size/weight/cube by developing and incorporating increased modularity to transition from hardware independent solutions. Analyze convergence of TSC and MOCC architecture toward common baseline to reduce platform unique training requirements and duplicative life cycle logistics costs. Explore automation of system functionality to reduce operator to operator and operator to machine interactions, to offset increasing workload as additional MPRA platforms and capabilities are introduced that require TacMobile systems support. Explore Solutions to minimize/consolidate MPRA media interface devices and streamline data transfer rates.

**CLASSIFICATION:**

| EXHIBIT R-2a, RDT&E Project Justification | | DATE: **May 2009** |
|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY | PROGRAM ELEMENT NUMBER AND NAME | PROJECT NUMBER AND NAME |
| **RDT&E, N / BA-5** | 0604231N - TACTICAL COMMAND SYSTEM | 0486 Tactical/Mobile (TacMobile) Systems |

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

| Line Item No. & Name | FY 2008 | FY 2009 | FY 2010 |
|---|---|---|---|
| MPRF Mission Support Systems (OPN - BLI 2246) Note 1 | 9.850 | 25.114 | 22.464 |
| TacMobile (OPN - BLI 2906) | 4.751 | 5.194 | 11.820 |

Note 1: Maritime Patrol & Reconnaissance Force (MPRF) Mission Support Systems formerly Tactical/Mobile Systems (Aircraft Interface).

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

Evolutionary Acquisition - Increment 2.0 provides enhanced Beyond Line of Site Global Information Grid (GIG) reach back capability, and supports Maritime Situational Awareness connectivity enhancements for data exchange with Maritime Patrol and Reconnaissance Force (MPRF) aircraft and with Coalition data networks. It incorporates Anti Submarine Warfare (ASW) acoustical analysis improvements and new P-3 aircraft ASW interfaces. Increment 2.1 will support migration to a follow on GCCS-M version and introduction of the P-8A Multi-mission Maritime Aircraft (MMA). Future Increments will support introduction of the Broad Area Maritime Surveillance (BAMS) Unmanned Aerial System (UAS) and other Maritime Patrol and Reconnaissance Force (MPRF) Family of Systems (FOS) Aircraft and Systems.

**(U) E. MAJOR PERFORMERS:**

Tactical/Mobile currently leverages Space and Naval Warfare Systems Command (SPAWAR) Systems Center Atlantic (SSC-Atlantic), and SSC-Atlantic omnibus contracts for all design, development, and integration of new capabilities into the TacMobile systems.

**(U) G. METRICS:**

The competitive contract under development will specify reporting metrics for cost, schedule, and performance status assessment and risk management.

**CLASSIFICATION:**

| Exhibit R-3 Cost Analysis (page 1) | | | | | | | | DATE: **May 2009** | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY<br>**RDT&E, N / BA-5** | | | PROGRAM ELEMENT<br>0604231N - Tactical Command System | | | PROJECT NUMBER AND NAME<br>0486 Tactical/Mobile (TacMobile) Systems | | | | | | |
| Cost Categories | Contract Method & Type | Performing Activity & Location | Total PY s Cost | FY 09 Cost | FY 09 Award Date | FY 10 Cost | FY 10 Award Date | FY 11 Cost | FY 11 Award Date | Cost to Complete | Total Cost | Target Value of Contract |
| Primary Hardware Development | VARIOUS | VARIOUS | 1.226 | 0.656 | | 1.832 | VARIOUS | | | | | |
| Ancillary Hardware Development | | | | | | | | | | | | |
| Aircraft Integration | | | | | | | | | | | | |
| Ship Integration | | | | | | | | | | | | |
| Ship Suitability | | | | | | | | | | | | |
| Systems Engineering | VARIOUS | VARIOUS | 20.212 | 2.546 | VARIOUS | 3.030 | VARIOUS | | | | | |
| Training Development | VARIOUS | VARIOUS | 0.200 | 0.350 | | 0.427 | VARIOUS | | | | | |
| Licenses | | | | | | | | | | | | |
| Tooling | | | | | | | | | | | | |
| GFE | | | | | | | | | | | | |
| Award Fees | | | | | | | | | | | | |
| Subtotal Product Development | | | 21.637 | 3.552 | | 5.289 | | | | | | |
| Remarks: | | | | | | | | | | | | |
| Development Support | | | | | | | | | | | | |
| Software Development | VARIOUS | VARIOUS | 36.810 | 4.162 | VARIOUS | 2.919 | VARIOUS | | | | | |
| Integrated Logistics Support | | | | | | 0.125 | | | | | | |
| Configuration Management | | | | | | 0.100 | | | | | | |
| Technical Data | | | | | | 0.160 | | | | | | |
| Studies & Analyses | | | | | | 0.325 | | | | | | |
| GFE | | | | | | | | | | | | |
| Award Fees | | | | | | | | | | | | |
| Subtotal Support | | | 36.810 | 4.162 | | 3.629 | | | | | | |
| Remarks: | | | | | | | | | | | | |

Exhibit R-3, Project Cost Analysis

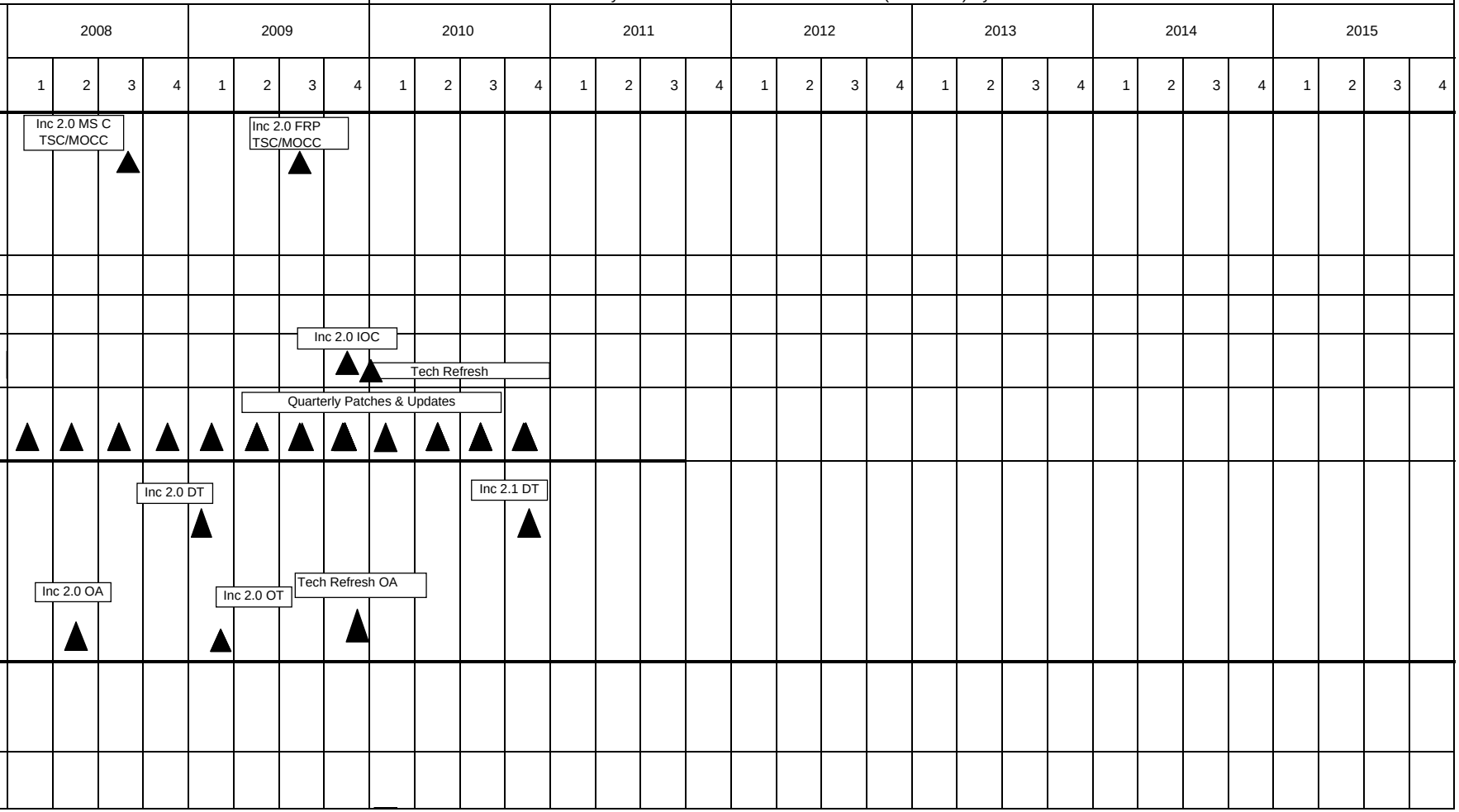
**CLASSIFICATION:**

| Exhibit R-3 Cost Analysis (page 2) | | | | | | | | DATE: **May 2009** | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY<br>**RDT&E, N / BA-5** | | | PROGRAM ELEMENT<br>0604231N - Tactical Command System | | | PROJECT NUMBER AND NAME<br>0486 Tactical/Mobile (TacMobile) Systems | | | | | | |
| Cost Categories | Contract Method & Type | Performing Activity & Location | Total PY s Cost | FY 09 Cost | FY 09 Award Date | FY 10 Cost | FY 10 Award Date | FY 11 Cost | FY 11 Award Date | Cost to Complete | Total Cost | Target Value of Contract |
| Developmental Test & Evaluation | | | | | | 0.600 | | | | | | |
| Operational Test & Evaluation | WX | OPTEVFOR | 3.585 | 0.175 | VARIOUS | 0.226 | VARIOUS | | | | | |
| Live Fire Test & Evaluation | | | | | | | | | | | | |
| Test Assets | | | | | | | | | | | | |
| Tooling | | | | | | | | | | | | |
| GFE | | | | | | | | | | | | |
| Award Fees | | | | | | | | | | | | |
| Subtotal T&E | | | 3.585 | 0.175 | | 0.826 | | | | | | |
| Remarks: | | | | | | | | | | | | |
| Contractor Engineering Support | VARIOUS | VARIOUS | 0.050 | 0.200 | | 0.210 | VARIOUS | | | | | |
| Government Engineering Support | WX | SSC CH | 0.200 | 0.350 | | 0.387 | VARIOUS | | | | | |
| Program Management Support | WX | SSC CH | 11.641 | 0.450 | VARIOUS | 0.519 | VARIOUS | | | | | |
| Travel | WX | SSC CH | 0.030 | 0.030 | | 0.037 | VARIOUS | | | | | |
| Transportation | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| Subtotal Management | | | 11.921 | 1.030 | | 1.153 | | | | | | |
| Remarks: | | | | | | | | | | | | |
| Total Cost | | | 73.953 | 8.919 | | 10.897 | | | | | | |
| Remarks: | | | | | | | | | | | | |

Exhibit R-3, Project Cost Analysis

**CLASSIFICATION:**

| EXHIBIT R4, Schedule Profile | | | DATE: **May 2009** |
|---|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY<br>**RDT&E, N / BA-5** | PROGRAM ELEMENT NUMBER AND NAME<br>0604231N - Tactical Command System | PROJECT NUMBER AND NAME<br>0486 Tactical/Mobile (TacMobile) Systems | |




Note: Acquisition strategy is being revised to reflect a tech refresh in lieu of increment 2B.

Exhibit R-4, Schedule Profile

**CLASSIFICATION:**

| Exhibit R-4a, Schedule Detail | | | | | | DATE: **May 2009** | | |
|---|---|---|---|---|---|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY<br>**RDT&E, N /BA-5** | PROGRAM ELEMENT<br>0604231N - Tactical Command System | | | PROJECT NUMBER AND NAME<br>0486 Tactical/Mobile (TacMobile) Systems | | | | |
| Schedule Profile | FY 2008 | FY 2009 | FY 2010 | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| Software Delivery (Quarterly) | Q1-Q4 | Q1-Q4 | Q1-Q4 | | | | | |
| | | | | | | | | |
| Initial Operational Capability (Increment 1) (TSC/MOCC) | | | | | | | | |
| Developmental Test (Increment 1) (JMAST) | | | | | | | | |
| Operational Test (Increment 1) (JMAST) | | | | | | | | |
| Initial Operational Capability (Increment 1) (JMAST) | | | | | | | | |
| | | | | | | | | |
| Developmental Test (Increment 2.0) | | | | | | | | |
| Operational Assessment (Increment 2.0) | Q2 | | | | | | | |
| Milestone C (Increment 2.0) | Q3 | | | | | | | |
| Developmental Test (Increment 2.0 Tech Eval) | | Q1 | | | | | | |
| Operational Test (Increment 2.0) | | Q1 | | | | | | |
| Full Rate Production (Increment 2.0) | | Q3 | | | | | | |
| Initial Operational Capability (Increment 2.0) (TSC/MOCC) | | Q4 | | | | | | |
| | | | | | | | | |
| Tech Refresh Operational Assessment | | Q4 | | | | | | |
| Tech Refresh Delivery | | | Q1-Q4 | | | | | |
| | | | | | | | | |
| Developmental Test (Increment 2.1) | | | Q3 | | | | | |
| Operational Assessment (Increment 2.1) | | | | | | | | |
| Milestone C (Increment 2.1) | | | | | | | | |
| Developmental Test (Increment 2.1 Tech Eval) | | | | | | | | |
| Operational Test (Increment 2.1) | | | | | | | | |
| Full Rate Production (Increment 2.1) | | | | | | | | |
| Initial Operational Capability (Increment 2.1) (TSC/MOCC) | | | | | | | | |
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**CLASSIFICATION:**

| EXHIBIT R-2a, RDT&E Project Justification | | | | | | | DATE: **May 2009** | |
|---|---|---|---|---|---|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY<br>**RDT&E, N / BA-5** | PROGRAM ELEMENT NUMBER AND NAME<br>0604231N - Tactical Command System | | | PROJECT NUMBER AND NAME<br>0521 Shipboard Tactical Intel/GCCS-M Intelligence Applications | | | | |
| COST ($ in Millions) | FY 2008 | FY 2009 | FY 2010 | | | | | |
| Project Cost | **3.717** | **3.803** | **0.000** | | | | | |
| RDT&E Articles Qty | | | | | | | | |

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

The Navy's Integrated Imagery and Intelligence Applications (I3 Apps) are an integrated set of applications designed to support tactical intelligence processing and provide a useful integration framework to ensure joint intelligence interoperability across the Global Command and Control System (GCCS) and Distributed Common Ground System (DCGS) enterprise. Development of I3 applications includes end to end intelligence analysis applications that leverage the Modernized Integrated Database (MIDB) and military integration with NGA-provided digital map and imagery systems. I3 imagery applications provide for archiving, viewing and measurement of still and video images. This effort is also continuing the transition to Commercial Off The Shelf (COTS) hardware and software. The Navy's I3 effort is part of the Military Intelligence Program (MIP) program, managed by the Secretary of Defense through the Assistant Secretary of Defense for Command, Control, Communications, Computers and Intel (C4I).

Beginning in FY10, I3 Applications funding will be realigned to the Distributed Common Ground System - Navy Program Element 0305208N Project 2174.

**CLASSIFICATION:**

| EXHIBIT R-2a, RDT&E Project Justification | | DATE: **May 2009** |
|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY | PROGRAM ELEMENT NUMBER AND NAME | PROJECT NUMBER AND NAME |
| **RDT&E, N / BA5** | 0604231N - Tactical Command System | 0521 Shipboard Tactical Intel/GCCS-M Intelligence Applications |

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

| C2 Fires Integration | FY08 | FY09 | FY10 | |
|---|---|---|---|---|
| Accomplishments/Effort/Subtotal Cost | 1.096 | 1.017 | 0 | |
| RDT&E Articles Quantity | | | | |

FY08: Conducted operational testing and continued to provide for the technical migration of standardized, linked intelligence and imagery software tools and services from a platform-centric model to a services oriented architecture.

FY09: Continue to conduct operational testing, and provide for the technical migration of standardized, linked intelligence and imagery software tools and services from a platform-centric model to a services oriented architecture, ensuring accessibility and analysis / targeting support based on current / next generation sensors and data streams including Moving Target Indicator (MTI), Unmanned Aerial Sensors (UASs), and the Distributed Common Ground Station (DCGS) joint enterprise.

FY10: Integrated Imagery and Intelligence (I3) funding transitions into the DCGS-N PE 0305208N beginning in FY10.

| Imagery/Video Processing | FY08 | FY09 | FY10 | |
|---|---|---|---|---|
| Accomplishments/Effort/Subtotal Cost | 0.712 | 0.852 | 0 | |
| RDT&E Articles Quantity | | | | |

FY08: Imagery Exploitation - Conducted operational testing and conducted new software development to provide the capability for Commanders, their battle staffs, and supporting intelligence analysts to exploit Intelligence, Surveillance and Reconnaissance (ISR) from current/next generation unmanned aerial vehicle (UAV) platforms and national sensors.

FY09: Imagery Exploitation - Continue to conduct operational testing and new software development to provide the capability for Commanders, their battle staffs, and supporting intelligence analysts to exploit ISR from current/next generation sensors and data streams including Moving Target Indicator (MTI), Unmanned Aerial Sensors (UASs), and the DCGS joint enterprise.

FY10: Integrated Imagery and Intelligence (I3) funding transitions into the DCGS-N PE 0305208N beginning in FY10.

**CLASSIFICATION:**

| EXHIBIT R-2a, RDT&E Project Justification | | DATE: **May 2009** |
|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY | PROGRAM ELEMENT NUMBER AND NAME | PROJECT NUMBER AND NAME |
| **RDT&E, N / BA5** | 0604231N - Tactical Command System | 0521 Shipboard Tactical Intel/GCCS-M Intelligence Applications |

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

| Threat Order of Battle (OOB) | FY08 | FY09 | FY10 | |
|---|---|---|---|---|
| Accomplishments/Effort/Subtotal Cost | 1.909 | 1.934 | 0 | |
| RDT&E Articles Quantity | | | | |

FY08: Conducted operational testing and began new development to provide intelligence data and tools in a service-oriented architecture including support for maritime interdiction operations

FY09: Continue to conduct operational testing and begin new development to provide intelligence data and tools in a service-oriented architecture including support for maritime interdiction operations, Maritime Domain Awareness (MDA), and end to end intelligence analysis tools that leverage Modernized Integrated Database (MIDB), National Geospatial-Intelligence Agency (NGA) related digital mapping and imagery products, and other intelligence support streams, while continuing to ensure joint intelligence interoperability across the Global Command and Control System (GCCS) and Distributed Common Ground Station (DCGS) enterprise.

FY10: Integrated Imagery and Intelligence (I3) funding transitions into the DCGS-N PE 0305208N beginning in FY10.

**CLASSIFICATION:**

| Exhibit R-3 Cost Analysis (page 1) | | | | | | | DATE: **May 2009** | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-5** | | | PROGRAM ELEMENT 0604231N - Tactical Command System | | | | PROJECT NUMBER AND NAME 0521 Shipboard Tactical Intel/GCCS-M Intelligence Applications | | | | | |
| Cost Categories | Contract Method & Type | Performing Activity & Location | Total PY s Cost | FY 09 Cost | FY 09 Award Date | FY 10 Cost | FY 10 Award Date | FY 11 Cost | FY 11 Award Date | Cost to Complete | Total Cost | Target Value of Contract |
| Primary Hardware Development | | | | | | | | | | | | |
| Ancillary Hardware Development | | | | | | | | | | | | |
| Aircraft Integration | | | | | | | | | | | | |
| Ship Integration | | | | | | | | | | | | |
| Ship Suitability | | | | | | | | | | | | |
| Systems Engineering | VARIOUS | VARIOUS | 20.846 | 0.858 | VARIOUS | 0.000 | | | | | | |
| Training Development | | | | | | | | | | | | |
| Licenses | | | | | | | | | | | | |
| Tooling | | | | | | | | | | | | |
| GFE | | | | | | | | | | | | |
| Award Fees | | | | | | | | | | | | |
| Subtotal Product Development | | | 20.846 | 0.858 | | 0.000 | | | | | | |
| Remarks: | | | | | | | | | | | | |
| Development Support | | | | | | | | | | | | |
| Software Development | VARIOUS | VARIOUS | 35.421 | 2.815 | VARIOUS | 0.000 | | | | | | |
| Integrated Logistics Support | | | | . | | | | | | | | |
| Configuration Management | | | | | | | | | | | | |
| Technical Data | | | | | | | | | | | | |
| Studies & Analyses | | | | | | | | | | | | |
| GFE | | | | | | | | | | | | |
| Award Fees | | | | | | | | | | | | |
| Subtotal Support | | | 35.421 | 2.815 | | 0.000 | | | | | | |
| Remarks: | | | | | | | | | | | | |

**CLASSIFICATION:**

| Exhibit R-3 Cost Analysis (page 2) | | | | | DATE: **May 2009** | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY<br>**RDT&E, N / BA-5** | | | PROGRAM ELEMENT<br>0604231N - Tactical Command System | | | | PROJECT NUMBER AND NAME<br>0521 Shipboard Tactical Intel/GCCS-M Intelligence Applications | | | | | |
| Cost Categories | Contract Method & Type | Performing Activity & Location | Total PY s Cost | FY 09 Cost | FY 09 Award Date | FY 10 Cost | FY 10 Award Date | FY 11 Cost | FY 11 Award Date | Cost to Complete | Total Cost | Target Value of Contract |
| Developmental Test & Evaluation | | | | | | | | | | | | |
| Operational Test & Evaluation | WX | OPTEVFOR | 2.056 | 0.000 | | 0.000 | | | | | | |
| Live Fire Test & Evaluation | | | | | | | | | | | | |
| Test Assets | | | | | | | | | | | | |
| Tooling | | | | | | | | | | | | |
| GFE | | | | | | | | | | | | |
| Award Fees | | | | | | | | | | | | |
| Subtotal T&E | | | 2.056 | 0.000 | | 0.000 | | | | | | |
| Remarks: | | | | | | | | | | | | |
| Contractor Engineering Support | | | | | | | | | | | | |
| Government Engineering Support | | | | | | | | | | | | |
| Program Management Support | VARIOUS | VARIOUS | 2.361 | 0.130 | VARIOUS | 0.000 | | | | | | |
| Travel | | | | | | | | | | | | |
| Transportation | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| Subtotal Management | | | 2.361 | 0.130 | | 0.000 | | | | | | |
| Remarks: | | | | | | | | | | | | |
| Total Cost | | | 60.684 | 3.803 | | 0.000 | | | | | | |
| Remarks: | | | | | | | | | | | | |

**CLASSIFICATION:**

| EXHIBIT R4, Schedule Profile | | | DATE: **May 2009** |
|---|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY<br>**RDT&E, N / BA-5** | PROGRAM ELEMENT NUMBER AND NAME<br>0604231N - Tactical Command System | PROJECT NUMBER AND NAME<br>0521 Shipboard Tactical Intel/GCCS-M Intelligence Applications | |

| Fiscal Year | 2008 | | | | 2009 | | | | 2010 | | | | 2011 | | | | 2012 | | | | 2013 | | | | 2014 | | | | 2015 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 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 |
| **Acquisition Milestones** | | 4.2 MS B | | 4.1 FRP | | | 4.2 MS C | | | | | | | | | | | | | | | | | | | | | | | | | |
| Software Deliveries | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | | | | | | | | | | | | | | | | | | | | | | | | |
| **Test & Evaluation Milestones**<br>Development Test<br>Operational Test | | | 4.1 OT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Production Milestones** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Deliveries | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

EXHIBIT R-4, Schedule Profile

**CLASSIFICATION:**

| Exhibit R-4a, Schedule Detail | | | | | | DATE: **May 2009** | | |
|---|---|---|---|---|---|---|---|---|
| APPROPRIATION/BUDGET ACTIV<br>**RDT&E, N /BA-5** | PROGRAM ELEMENT<br>0604231N - Tactical Command System | | | PROJECT NUMBER AND NAME<br>0521 Shipboard Tactical Intel/GCCS-M Intelligence Applications | | | | |
| Schedule Profile | FY 2008 | FY 2009 | FY 2010 | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| Software Delivery (quarterly) | Q1-Q4 | Q1-Q4 | | | | | | |
| | | | | | | | | |
| Milestone B 4.2 | Q2 | | | | | | | |
| Operational Test 4.1 | Q3 | | | | | | | |
| Full Rate Production 4.1 | Q4 | | | | | | | |
| | | | | | | | | |
| Milestone C 4.2 | | Q3 | | | | | | |
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Exhibit R-4a, Schedule Detail

**CLASSIFICATION:**

| EXHIBIT R-2a, RDT&E Project Justification | | | | | | DATE: **May 2009** | | |
|---|---|---|---|---|---|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY<br>**RDT&E, N / BA-5** | PROGRAM ELEMENT NUMBER AND NAME<br>0604231N - Tactical Command System | | | PROJECT NUMBER AND NAME<br>0709 GCCS-M Maritime Applications | | | | |
| COST ($ in Millions) | FY 2008 | FY 2009 | FY 2010 | | | | | |
| Project Cost | **13.104** | **20.726** | **19.389** | | | | | |
| RDT&E Articles Qty | | | | | | | | |

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

The Global Command and Control System Maritime (GCCS-M) system is the component of GCCS used in the afloat, ashore, and tactical/mobile maritime environments. GCCS-M meets the requirements of the tactical commander for a near real-time, fused common tactical picture with integrated intelligence services and databases. GCCS-M supports the Command, Control, Communication, Computers and Intelligence (C4I) mission requirements of the Chief of Naval Operations (CNO), Fleet Commanders (FLTCDRs), Numbered Fleet Commanders (NFC), Officer in Tactical Command/Composite Warfare Commander (OTC/CWC), Type Commanders (TYCOM), Commander Submarine Operations Authority (COMSUBOPAUTH), Commander Task Force (CTF), Commander Amphibious Task Force (CATF), Commander Landing Force (CLF), Ship's Commanding Officer/Tactical Action Officer (CO/TAO), and Joint Task Force (JTF) Commanders, as well as other functional Maritime commanders. It also integrates both joint and service-unique Command and Control systems in order to support Joint task force and Navy afloat requirements. Efforts include design, integration, and test of Tactical Decision Aids (TDAs), Navy Status of Forces (NSOF), mission planning and status update tools, and integration of GCCS-M baselines with weapons systems and Combat Direction Systems. These efforts will provide the strike group/force commanders with the information needed to enhance their warfighting capabilities. System scalability is addressed by developing modular capability and application sets that can be deployed based on the mission profile of a particular ship. Continuation of these efforts, especially in the area of undersea superiority, will significantly enhance tactical units' ability to perform precision engagements by consolidating the common operational and undersea tactical pictures into a single comprehensive Command and Control (C2) picture, addressing the requirement of Warfighters and significantly improving interoperability. GCCS-M is also continuing a hardware transition to Common Computing Environments (CCEs) such as Consolidated Afloat Networks and Enterprise Services (CANES) along with a transition of capabilities into a Service Oriented Architecture (SOA). GCCS-M is a key system currently being used to support real world operations afloat, ashore, and with tactical/mobile commanders. Efforts in FY10 will entail preparation for and conduction of Operational Evaluation (OPEVAL), plus software updates to support integration with additional emerging systems such as Net-Enabled Command Capability (NECC).

**CLASSIFICATION:**

| EXHIBIT R-2a, RDT&E Project Justification | | DATE: **May 2009** |
|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY | PROGRAM ELEMENT NUMBER AND NAME | PROJECT NUMBER AND NAME |
| **RDT&E, N / BA5** | 0604231N - Tactical Command System | 0709 GCCS-M Maritime Applications |

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

| Combat Systems Interface | FY 08 | FY 09 | FY 10 | |
|---|---|---|---|---|
| Accomplishments/Effort/Subtotal Cost | 0.000 | 0.200 | 0.938 | |
| RDT&E Articles Quantity | | | | |

FY 08: Funded with Other Customer Funding (OCF) from Naval Sea System Command (NAVSEA).

FY09: Migrate and integrate evolving organic shipboard systems interfaces. GCCS-M RDT&E efforts in FY-09 will focus on ensuring Global COP users have ability to access and share information from organic data sources.

FY10: Migrate and integrate shipboard Combat Systems Interfaces from the current point-to-point model (e.g. Tactical Tomahawk Weapons Control System (TTWCS)) to the Consolidated Afloat Network Enterprise System (CANES) Services based approach for each platform class. Investigate and adopt open standards based design and data management methodolgies where appropriate. Coordinate with PEO IWS the development of C2/C4I system interfaces and conduct prototype testing. Investigate interfaces to new combat systems such as Ship Sel Defense Systems (SSDS) and support developmental testing of these interfaces.

| Situational Awareness (formerly JPN) | FY 08 | FY 09 | FY 10 | |
|---|---|---|---|---|
| Accomplishments/Effort/Subtotal Cost | 0.000 | 1.678 | 0.000 | |
| RDT&E Articles Quantity | | | | |

FY08: Funded in project 2305.

FY09: Situational Awareness, formerly Joint Planning Network (JPN)/Tactical Data Information Links (TADILS)/Broadcasts, provides bi-directional shared situational awareness by integrating and exchanging information with disparate systems, sensors and real time event reporting networks (e.g. weapons/fire control, navigation, cryptologic, tactical data links and broadcasts). This is required to prevent fratricide and mutual interference of current (e.g. Tomahawk, Aegis, Standard Missile and Patriot) and future weapon systems/platforms (Joint Strike Fighter (JSF), Multi-Mission Aircraft (MMA), Predator/DD-21 ship class) during multi-platform strike operations. Leveraged investment in new and upgraded sensors to further develop Situational Awareness and Command and Control throughout the extended Battlespace. Efforts in FY09 also address emergent Fleet requirements, which improve the user's ability to maintain Situational Awareness and reduced system complexity.

FY10: N/A

**CLASSIFICATION:**

| EXHIBIT R-2a, RDT&E Project Justification | | | DATE: **May 2009** |
|---|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY | PROGRAM ELEMENT NUMBER AND NAME | PROJECT NUMBER AND NAME | |
| **RDT&E, N / BA5** | 0604231N - Tactical Command System | 0709 GCCS-M Maritime Applications | |

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

| Force Readiness | FY 08 | FY 09 | FY 10 | |
|---|---|---|---|---|
| Accomplishments/Effort/Subtotal Cost | 2.062 | 1.000 | 1.000 | |
| RDT&E Articles Quantity | | | | |

FY08: Conducted operational testing, and began new development to address emerging Fleet requirements to provide the capability to plan and manage the prepositioning and repositioning of units and stores and the allocation and reallocation of units for next-generation Force Structure planning and execution management per Office of the Secretary of Defense (OSD) and Chief of Naval Operations (CNO) mandates. This capability includes the means for the assignment, deconfliction and monitoring of multiple undersea assets.

FY09: Investigate Fleet requirements to provide the capability to plan and manage the prepositioning and repositioning of units and stores and the allocation and reallocation of units for next-generation Force Structure planning and execution management per Office of the Secretary of Defense (OSD) and Chief of Naval Operations (CNO) mandates. This capability includes the means for the assignment, deconfliction and monitoring of multiple undersea assets.

FY10: Design and develop an Integrated C2 collaboration methodology based on the Navy Enterprise Data strategy. This will support rapid database/data-source interoperability for seamless data sharing that enables Commanders to expose, manage, and manipulate disparate Force Readiness data. Force Readiness will support operations planning, collaboration, direction and evaluation requirements. Support Navy integration with other Services, Agencies, and traditional and non-traditional partners.

| Spectral and Environmental Analysis | FY 08 | FY 09 | FY 10 | |
|---|---|---|---|---|
| Accomplishments/Effort/Subtotal Cost | 0.985 | 0.482 | 0.000 | |
| RDT&E Articles Quantity | | | | |

FY08: Continued to enhance Emission Control Plan capabilities in order to prevent exploitation of next-generation emitters by emergent/future hostile collection capabilities is successfully integrated and operationally tested for timely Fleet introduction.

FY09: Continue to enhance Emission Control Plan capabilities in order to prevent exploitation of next-generation emitters by emergent/future hostile collection capabilities is successfully integrate and operationally tested for timely Fleet Introduction.

FY10: N/A

**CLASSIFICATION:**

| EXHIBIT R-2a, RDT&E Project Justification | | | DATE: **May 2009** |
|---|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY | PROGRAM ELEMENT NUMBER AND NAME | PROJECT NUMBER AND NAME | |
| **RDT&E, N / BA5** | 0604231N - Tactical Command System | 0709 GCCS-M Maritime Applications | |

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

| Warfighter Enhancements | FY 08 | FY 09 | FY 10 | |
|---|---|---|---|---|
| Accomplishments/Effort/Subtotal Cost | 1.868 | 0.000 | 0.000 | |
| RDT&E Articles Quantity | | | | |

FY08 - Effort provided warfighters with automated tools to inject Automated Identification System (AIS) into GCCS-M, including any software changes required on the DISA-provided baseline software to ensure AIS data is correctly parsed, correlated, and distributed in a net-centric Global COP environment.

FY09-10: N/A

| Testing | FY 08 | FY 09 | FY 10 | |
|---|---|---|---|---|
| Accomplishments/Effort/Subtotal Cost | 1.327 | 3.000 | 4.211 | |
| RDT&E Articles Quantity | | | | |

FY08: Continued to provide for the continued efforts of holistic, end-to-end systems engineering and testing of Maritime C4I capabilities. This included developmental, operational, and interoperability test events for GCCS-M Inc 2 as well as proof-of-concept testing of emergent capabilities and technologies. Testing included an Operational Test of GCCS-M Inc 2 at multiple OT sites to ensure system meets all requirements for Fleet use.

FY09: Continue to provide for the continued efforts of holistic, end-to-end systems engineering and testing of Maritime C4I capabilities. This includes developmental, operational, and interoperability test events as well as proof-of-concept testing of emergent capabilities and technologies. Testing will ensure capabilities transitioned into a Service Oriented Architecture (SOA) environment are effective and suitable for Fleet use.

FY10: Continue to provide holistic, end-to-end systems engineering and testing of Maritime C4I capabilities. This includes two Developmental Tests, Operational Assessment, PEO C4I certification, Navy Interoperability, and Joint Interoperability test events as well as proof-of-concept testing of emergent capabilities and technologies. Testing will ensure capabilities transitioned into a Service Oriented Architecture (SOA) environment are effective and suitable for Fleet use and to satisfy Navy specific pre-production Information Assurance requirements as directed by the Operational Designated Approval Authority (ODAA). This includes preparing System Software Authorization Agreement (SSAA), Security Features Users Guide (SFUG), Certification Test and Evaluation (CT&E), risk mitigation plans and Interim Authority to Operate (IATO).

**CLASSIFICATION:**

| EXHIBIT R-2a, RDT&E Project Justification | | | DATE: **May 2009** |
|---|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY | PROGRAM ELEMENT NUMBER AND NAME | PROJECT NUMBER AND NAME | |
| **RDT&E, N / BA5** | 0604231N - Tactical Command System | 0709 GCCS-M Maritime Applications | |

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

| Undersea Superiority/Undersea Forcenet | FY 08 | FY 09 | FY 10 | |
|---|---|---|---|---|
| Accomplishments/Effort/Subtotal Cost | 6.862 | 14.366 | 11.240 | |
| RDT&E Articles Quantity | | | | |

FY08: Effort funded development of Undersea FORCEnet capabilities to support a real-time command and control capability of all USW assets (Maritime Patrol Aircraft (MPA) & Submersible Ship, Nuclear (SSN). The ASW Commander has a requirement for robust track management capabilities to support contact fusion, correlation and synchronization to improve operators ability to manage contacts on system displays in light of the high density of contacts, latency of reports, lack of filtering and numerous track input option. This effort funded development and integration of USW track correlation and data fusion capabilities into GCCS-M. Efforts will also identified and implemented Human Systems Integration (HSI ) and display management improvements within the system. This effort also supported development of low confidence level track types to allow ASW community to share information on possible enemy submarine before elevating to a track in the Common Operational Picture. This effort also supported continued transition of ASW demonstrated capabilities into GCCS-M Program of Record.

FY09: Continue the development of effort to fund development of Undersea FORCEnet capabilities to support a real-time command and control capability of all USW assets (Maritime Patrol Aircraft (MPA) & Submersible Ship, Nuclear (SSN)). The ASW (Anti Submarine Warfare) Commander has a requirement for robust track management capabilities to support contact fusion, correlation and synchronization to improve operators ability to manage contacts on system displays in light of the high density of contacts, latency of reports, lack of filtering and numerous track input option. This effort will fund development and integration of USW track correlation and data fusion capabilities into GCCS-M. Efforts will also identify and implement Human Systems Integration (HSI ) and display management improvements within the system. This effort will also support development of low confidence level track types to allow ASW community to share information on possible enemy submarine before elevating to a track in the Common Operational Picture. This effort also supports continued transition of ASW demonstrated capabilities into GCCS-M Program of Record.

FY10: Finalize and complete Composeable FORCEnet (Cfn) migration to the Consolidated Afloat Network Enterprise System (CANES). Complete the integration of FY08 and FY09 capabilities into the Increment 2 baseline. Minimally, these capabilities will be integrated into the Force Level and Ashore baseline implementations but will be extended to the Group and Unit baselines as dictated b operational requirements.

**CLASSIFICATION:**

| EXHIBIT R-2a, RDT&E Project Justification | | | DATE: **May 2009** |
|---|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY<br>**RDT&E, N / BA5** | PROGRAM ELEMENT NUMBER AND NAME<br>0604231N - Tactical Command System | PROJECT NUMBER AND NAME<br>0709 GCCS-M Maritime Applications | |

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

| GCCS-M Increment 2 Integration | FY 08 | FY 09 | FY 10 | |
|---|---|---|---|---|
| Accomplishments/Effort/Subtotal Cost | 0.000 | 0.000 | 2.000 | |
| RDT&E Articles Quantity | | | | |

FY08-09: Previously funded by Situational Awareness.

FY10: Scale integrated, tested, certified, accredited GCCS-J to Navy platform requirements. Incorporate maritime-unique C2 capabilities into GCCS-J and remove capabilities not required by naval forces for operation within the limited footprint available on Naval vessels. Modify GCCS-J installation media and documentation for operation by fleet users.

**CLASSIFICATION:**

| EXHIBIT R-2a, RDT&E Project Justification | | DATE: **May 2009** |
|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY | PROGRAM ELEMENT NUMBER AND NAME | PROJECT NUMBER AND NAME |
| **RDT&E, N / BA-5** | 0604231N - Tactical Command System | 0709 GCCS-M Maritime Applications |

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

| Line Item No. & Name | FY 2008 | FY 2009 | FY 2010 |
|---|---|---|---|
| GCCS-M Totals (OPN - BLI 2608) | 56.196 | 23.373 | 10.952 |

Note: BLI 2608 controls do not include TIS and GCCS- Joint Funding from FY08-FY10.

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

N/A

**(U) F. METRICS:**

Earned Value Management is used for metrics reporting and risk management.

**CLASSIFICATION:**

| Exhibit R-3 Cost Analysis (page 1) | | | | | | | | | DATE: **May 2009** | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-5** | | PROGRAM ELEMENT 0604231N - Tactical Command System | | | | PROJECT NUMBER AND NAME 0709 GCCS-M Maritime Applications | | | | | | |
| Cost Categories | Contract Method & Type | Performing Activity & Location | Total PY s Cost | FY 09 Cost | FY 09 Award Date | FY 10 Cost | FY 10 Award Date | FY 11 Cost | FY 11 Award Date | Cost to Complete | Total Cost | Target Value of Contract |
| Primary Hardware Development | | | | | | | | | | | | |
| Ancillary Hardware Development | | | | | | | | | | | | |
| Aircraft Integration | | | | | | | | | | | | |
| Ship Integration | | | | | | | | | | | | |
| Ship Suitability | | | | | | | | | | | | |
| Systems Engineering | VARIOUS | VARIOUS | 21.974 | 7.446 | VARIOUS | 6.553 | VARIOUS | | | | | |
| Training Development | | | | | | | | | | | | |
| Licenses | | | | | | | | | | | | |
| Tooling | | | | | | | | | | | | |
| GFE | | | | | | | | | | | | |
| Award Fees | | | | | | | | | | | | |
| Subtotal Product Development | | | 21.974 | 7.446 | | 6.553 | | | | | | |
| Remarks: | | | | | | | | | | | | |
| Development Support | | | | | | | | | | | | |
| Software Development | VARIOUS | VARIOUS | 67.590 | 9.191 | VARIOUS | 6.648 | VARIOUS | | | | | |
| Integrated Logistics Support | | | | | | | | | | | | |
| Configuration Management | | | | | | | | | | | | |
| Technical Data | | | | | | | | | | | | |
| Studies & Analyses | | | | | | | | | | | | |
| GFE | | | | | | | | | | | | |
| Award Fees | | | | | | | | | | | | |
| Subtotal Support | | | 67.590 | 9.191 | | 6.648 | | | | | | |
| Remarks: | | | | | | | | | | | | |

**CLASSIFICATION:**

| Exhibit R-3 Cost Analysis (page 2) | | | | | | | | | | DATE: **May 2009** | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-5** | | | PROGRAM ELEMENT 0604231N - Tactical Command System | | | PROJECT NUMBER AND NAME 0709 GCCS-M Maritime Applications | | | | | | |
| Cost Categories | Contract Method & Type | Performing Activity & Location | Total PY s Cost | FY 09 Cost | FY 09 Award Date | FY 10 Cost | FY 10 Award Date | FY 11 Cost | FY 11 Award Date | Cost to Complete | Total Cost | Target Value of Contract |
| Developmental Test & Evaluation | VARIOUS | VARIOUS | 0.000 | 0.500 | | 0.500 | | | | | | |
| Operational Test & Evaluation | VARIOUS | VARIOUS | 3.030 | | | 1.000 | | | | | | |
| Live Fire Test & Evaluation | | | | | | | | | | | | |
| Test Assets | | | | | | | | | | | | |
| Tooling | | | | | | | | | | | | |
| GFE | | | | | | | | | | | | |
| Award Fees | | | | | | | | | | | | |
| Subtotal T&E | | | 3.030 | 0.500 | | 1.500 | | | | | | |
| Remarks: | | | | | | | | | | | | |
| Contractor Engineering Support | VARIOUS | VARIOUS | 1.029 | 0.947 | VARIOUS | 1.947 | VARIOUS | | | | | |
| Government Engineering Support | | | | | | | | | | | | |
| Program Management Support | VARIOUS | VARIOUS | 13.598 | 2.642 | VARIOUS | 2.742 | VARIOUS | | | | | |
| Travel | | | | | | | | | | | | |
| Transportation | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| Subtotal Management | | | 14.627 | 3.589 | | 4.689 | | | | | | |
| Remarks: | | | | | | | | | | | | |
| Total Cost | | | 107.221 | 20.726 | | 19.389 | | | | | Continuing | Continuing |
| Remarks: | | | | | | | | | | | | |

**CLASSIFICATION:**

| EXHIBIT R4, Schedule Profile | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | DATE: **May 2009** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-5** | | | | | | | | | PROGRAM ELEMENT NUMBER AND NAME 0604231N - Tactical Command System | | | | | | | | | | | | | | | | | | | | PROJECT NUMBER AND NAME 0709 GCCS-M Maritime Applications | | | |
| Fiscal Year | 2008 | | | | 2009 | | | | 2010 | | | | 2011 | | | | 2012 | | | | 2013 | | | | 2014 | | | | 2015 | | | |
| | 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 |
| **Acquisition Milestones** | | Inc 2 Gate 6 ▲ | | | | | | | | | Inc 2 MS C ▲ | | | | | | | | | | | | | | | | | | | | | | | |
| Software Deliveries | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Increment 1 | ▲ | ▲ | ▲ | ▲ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Increment 2 | | | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | ▲ | | | | | | | | | | | | | | | | | | | | | | |
| **Test & Evaluation Milestones** | | | | | | | | Inc 2 DT | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Development Test | | | | | | | | ▲ | Inc 2 DT | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | ▲ | | | | | | | | | | | | | | | | | | | | | | | | | |
| Operational Test | | | | | | | | | | | Inc 2 OT | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | ▲ | | | | | | | | | | | | | | | | | | | | | | | |
| **Production Milestones** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Deliveries | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

EXHIBIT R-4, Schedule Profile

**CLASSIFICATION:**

| Exhibit R-4a, Schedule Detail | | | | | | | DATE: **May 2009** | |
|---|---|---|---|---|---|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY<br>**RDT&E, N /BA-5** | PROGRAM ELEMENT<br>0604231N - Tactical Command System | | | | PROJECT NUMBER AND NAME<br>0709 GCCS-M Maritime Applications | | | |
| Schedule Profile | FY 2008 | FY 2009 | FY 2010 | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| Software Delivery (quarterly) | | | | | | | | |
| Increment 1 | Q1-Q4 | | | | | | | |
| Increment 2 | Q3-Q4 | Q1-Q4 | Q1-Q4 | | | | | |
| | | | | | | | | |
| Increment 2 Gate 6 | Q2 | | | | | | | |
| | | | | | | | | |
| Inc 2 DT | | Q4 | Q1 | | | | | |
| Inc 2 MSB | | | | | | | | |
| Inc 2 MS C | | | Q3 | | | | | |
| Inc 2 OT | | | Q4 | | | | | |
| Inc 2.1 MSB | | | | | | | | |
| Inc 2 FRP | | | | | | | | |
| Inc 2.1 MS C | | | | | | | | |
| Inc 2.1 DT | | | | | | | | |
| Inc 2.1 OT | | | | | | | | |
| | | | | | | | | |
| Inc 2.1 FRP | | | | | | | | |
| Inc 2.2 DT | | | | | | | | |
| Inc 2.2 MSB | | | | | | | | |
| Inc 2.2 MS C | | | | | | | | |
| Inc 2.2 OT | | | | | | | | |
| Inc 2.3 MSB | | | | | | | | |
| Inc 2.2 FRP | | | | | | | | |
| Inc 2.3 MS C | | | | | | | | |
| Inc 2.3 DT | | | | | | | | |
| Inc 2.3 OT | | | | | | | | |
| | | | | | | | | |
| Inc 2.3 FRP | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

Exhibit R-4a, Schedule Detail

**Classification:**

| Exhibit R-5, Termination Liability Funding for Major Defense Acquisition Programs, RDT&E Funding ($000) | | | | | | DATE: **May 2009** | | |
|---|---|---|---|---|---|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY<br>**RDT&E, N / BA-5** | | PROGRAM ELEMENT<br>0604231N - Tactical Command System | | | | PROJECT NUMBER AND NAME<br>0709 GCCS-M Maritime Applications | | |
| **Program Title** | **FY 2008** | **FY 2009** | **FY 2010** | **FY 2011** | **FY 2012** | **FY 2013** | **FY 2014** | **FY 2015** |
| GCCS-M Maritime Applications | | | | | | | | |

GCCS-M software is developed under an engineering services based contract. Maximum Government liability is limited to the total obligated value of annually awarded task orders.

**CLASSIFICATION:**

| EXHIBIT R-2a, RDT&E Project Justification | | | DATE: **May 2009** | | | | | |
|---|---|---|---|---|---|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY<br>**RDT&E, N / BA-5** | PROGRAM ELEMENT NUMBER AND NAME<br>0604231N - TACTICAL COMMAND SYSTEM | | | PROJECT NUMBER AND NAME<br>2009 TRUSTED INFORMATION SYSTEMS | | | | |
| COST ($ in Millions) | FY 2008 | FY 2009 | FY 2010 | | | | | |
| Project Cost | **0.510** | **1.084** | **1.311** | | | | | |
| RDT&E Articles Qty | | | | | | | | |

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

Radiant Mercury (RM): Trusted Information System(TIS) Radiant Mercury (RM) is a Multi-Level Security (MLS) system that successfully provides accredited Cross Domain Solutions (CDS) to the Navy, DoD, and intelligence Community. TIS RM is a critical component of network-centric warfare, supporting joint operations and coalition forces. The ability to pass sensitive, yet critical, data across security domains and to our Coalition partners in a timely fashion can only be met by accredited Cross Domain Solution (CDS) systems such as Radiant Mercury. Joint Cross Domain & eXchange (JCDX) has been disinvested.

TIS RM provides automated, bi-directional sanitization, transliteration and guarding capability for formatted and unformatted data between security enclaves. Radiant Mercury helps ensure critical intelligence is provided quickly to operational decision-makers. Trusted Information Systems Radiant Mercury provides the capability to disseminate information for operating forces worldwide, including the operating forces of key allies. This capability to move all-source intelligence-derived track information into the realm of the operational community significantly improves the situational awareness of tactical operators and planners. Additionally, it assists in providing critical operational information to intelligence and cryptologic analysts. Unformatted data is handled by the Information Review Process (IRP). The system provides cross domain services to a wide variety of customers including Combatant Commanders, Air Force (Shared Early Warning program), Army (Blue Force Tracking program), Navy (Global Command and Control System - Maritime (GCCS-M) and Automatic Identification System (AIS)) and numerous other DoD and Intelligence agencies.

TIS RM provides a mechanism for adding future capabilities and functionality improvement required for the success of Consolidated Afloat Network and Enterprise Services (CANES), Net-Centric Enterprise Services (NCES), Multi-National Information Sharing (MNIS), and Global Information Grid (GIG). These transformational capabilities and functionalities include, but not limited to, web services, eXtensible Markup Language (XML) functionality, Services Oriented Architecture (SOA) environment, operating systems (OS) migration, remote monitoring and maintenance capability in support of Consolidated Afloat Network and Enterprise Services (CANES), Net-Centric Enterprise Services (NCES), Multi-National Information Sharing (MNIS), and Global Information Grid (GIG) architectures.

FY10: Identify and define emerging requirements for RM version 5.X to meet Consolidated Afloat Network and Enterprise Services (CANES) and other Navy and non-Navy CDS requirements. Begin developing capabilities needed in RM version 5.x.

**CLASSIFICATION:**

| EXHIBIT R-2a, RDT&E Project Justification | | DATE: **May 2009** |
|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY | PROGRAM ELEMENT NUMBER AND NAME | PROJECT NUMBER AND NAME |
| **RDT&E, N / BA-5** | 0604231N - TACTICAL COMMAND SYSTEM | 2009 TRUSTED INFORMATION SYSTEMS |

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

| Radiant Mercury | FY08 | FY09 | FY10 | |
|---|---|---|---|---|
| Accomplishments/Effort/Subtotal Cost | 0.510 | 1.084 | 1.311 | |
| RDT&E Articles Quantity | | | | |

FY08: Continued the development, integration and testing of emerging unformatted file types. Commenced investigating technologies related to collaboration (chat, whiteboarding, language translations, etc.). Developed criteria and procedures for system verification and validation in anticipation of updated information assurance and cross-domain policies. Released version 4.5.2 for Secret and Below Interoperability (SABI) customers. Version 4.5 for Top Secret and Below Interoperability (TSABI) customers was released Q2 FY07. Commenced investigating technologies related to collaboration (chat, whiteboarding, language translations, etc.).

FY09: Release version 5.0 on follow-on trusted operating system. Investigate and develop support for emerging communication mechanisms. Continue the development, integration and testing of emerging unformatted file types. Continue to investigate technologies related to collaboration. Continue investigating technologies related to collaboration (chat, whiteboarding, language translations, etc.). Develop criteria and procedures for system verification and validation in anticipation of updated information assurance and cross-domain policies. Conduct version 5.0. Certification, Test and Evaluation (CT&E) . Conduct version 5.0 System Test and Evaluation (ST&E) with Joint Interoperability Test Command (JITC) assessment.

FY10: Investigate a follow-on update to version 5.0 to address emerging Cross Domain Solution requirements. Investigate and develop support for emerging communication mechanisms. Continue the development, integration and testing of emerging unformatted file types. Continue to investigate technologies related to collaboration. Identify new requirements capabilities needed by the Navy programs and non-Navy customers post Radiant Mercury Version 5.0

**CLASSIFICATION:**

| EXHIBIT R-2a, RDT&E Project Justification | | DATE: **May 2009** |
|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY | PROGRAM ELEMENT NUMBER AND NAME | PROJECT NUMBER AND NAME |
| **RDT&E, N / BA-5** | 0604231N - TACTICAL COMMAND SYSTEM | 2009 TRUSTED INFORMATION SYSTEMS |

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

| Line Item No. & Name | FY 2008 | FY 2009 | FY 2010 |
|---|---|---|---|
| GCCS-M (TIS) (OPN - BLI 2608) | 0.000 | 0.479 | 0.626 |

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

N/A

Exhibit R-2a, RDTEN Project Justification

**CLASSIFICATION:**

| Exhibit R-3 Cost Analysis (page 1) | | | | | | | | DATE: **May 2009** | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY<br>**RDT&E, N / BA-5** | | | PROGRAM ELEMENT<br>0604231N - TACTICAL COMMAND SYSTEM | | | PROJECT NUMBER AND NAME<br>2009 TRUSTED INFORMATION SYSTEMS | | | | | | |
| Cost Categories | Contract Method & Type | Performing Activity & Location | Total PY s Cost | FY 09 Cost | FY 09 Award Date | FY 10 Cost | FY 10 Award Date | FY 11 Cost | FY 11 Award Date | Cost to Complete | Total Cost | Target Value of Contract |
| Primary Hardware Development | | | | | | | | | | | | |
| Ancillary Hardware Development | | | | | | | | | | | | |
| Aircraft Integration | | | | | | | | | | | | |
| Ship Integration | | | | | | | | | | | | |
| Ship Suitability | | | | | | | | | | | | |
| Systems Engineering | VARIOUS | VARIOUS | 11.357 | 0.736 | VARIOUS | 0.892 | VARIOUS | | | | | |
| Training Development | | | | | | | | | | | | |
| Licenses | | | | | | | | | | | | |
| Tooling | | | | | | | | | | | | |
| GFE | | | | | | | | | | | | |
| Award Fees | | | | | | | | | | | | |
| Subtotal Product Development | | | 11.357 | 0.736 | | 0.892 | | | | | | |
| Remarks: | | | | | | | | | | | | |
| Development Support | | | | | | | | | | | | |
| Software Development | VARIOUS | VARIOUS | 53.371 | 0.316 | VARIOUS | 0.381 | VARIOUS | | | | | |
| Integrated Logistics Support | | | | | | | | | | | | |
| Configuration Management | | | | | | | | | | | | |
| Technical Data | | | | | | | | | | | | |
| Studies & Analyses | | | | | | | | | | | | |
| GFE | | | | | | | | | | | | |
| Award Fees | | | | | | | | | | | | |
| Subtotal Support | | | 53.371 | 0.316 | | 0.381 | | | | | | |
| Remarks: | | | | | | | | | | | | |

Exhibit R-3, Project Cost Analysis

**CLASSIFICATION:**

| Exhibit R-3 Cost Analysis (page 2) | | | | | | | | DATE: **May 2009** | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY<br>**RDT&E, N / BA-5** | | | PROGRAM ELEMENT<br>0604231N - TACTICAL COMMAND SYSTEM | | | PROJECT NUMBER AND NAME<br>2009 TRUSTED INFORMATION SYSTEMS | | | | | | |
| Cost Categories | Contract Method & Type | Performing Activity & Location | Total PY s Cost | FY 09 Cost | FY 09 Award Date | FY 10 Cost | FY 10 Award Date | FY 11 Cost | FY 11 Award Date | Cost to Complete | Total Cost | Target Value of Contract |
| Developmental Test & Evaluation | | | | | | | | | | | | |
| Operational Test & Evaluation | WX | OPTEVFOR | 0.680 | 0.000 | | 0.000 | | | | | | |
| Live Fire Test & Evaluation | | | | | | | | | | | | |
| Test Assets | | | | | | | | | | | | |
| Tooling | | | | | | | | | | | | |
| GFE | | | | | | | | | | | | |
| Award Fees | | | | | | | | | | | | |
| Subtotal T&E | | | 0.680 | 0.000 | | 0.000 | | | | | | |
| Remarks: | | | | | | | | | | | | |
| Contractor Engineering Support | | | | | | | | | | | | |
| Government Engineering Support | | | | | | | | | | | | |
| Program Management Support | VARIOUS | VARIOUS | 2.360 | 0.032 | VARIOUS | 0.038 | VARIOUS | | | | | |
| Travel | | | 0.010 | | | | | | | | | |
| Transportation | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| Subtotal Management | | | 2.370 | 0.032 | | 0.038 | | | | | | |
| Remarks: | | | | | | | | | | | | |
| Total Cost | | | 67.778 | 1.084 | | 1.311 | | | | | | |
| Remarks: | | | | | | | | | | | | |

Exhibit R-3, Project Cost Analysis

**CLASSIFICATION:**

| EXHIBIT R4, Schedule Profile | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | DATE: **May 2009** | |
| APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-5** | | | | | PROGRAM ELEMENT NUMBER AND NAME 0604231N - TACTICAL COMMAND SYSTEM | | | | | | | | PROJECT NUMBER AND NAME 2009 TRUSTED INFORMATION SYSTEMS | | | | | | | | | | | | | | | | | | | |
| Fiscal Year | 2008 | | | | 2009 | | | | 2010 | | | | 2011 | | | | 2012 | | | | 2013 | | | | 2014 | | | | 2015 | | | |
| | 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 |
| **Acquisition Milestones** (Note 1) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Software** RM 4.5.2 / 5.X / 6.X / 7.X SW Delivery | | | | △ DELIVERY RM Version 4.5.2 | | | | △ DELIVERY RM Version 5.0 | | | △ Test and integrate capabilities needed by CANES in Version 5.x | | | | | | | | | | | | | | | | | | | | | |
| **Test & Evaluation Milestones** Certification Test | | | | CT&E - RM Version 5.0 △ | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| System Test | | | | JITC ST&E - RM Version 5.0 △ | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

NOTES:

1) RM Abbreviated Acquisition Program Approval (AAP) - 5 January 2007

2) FY08 Q4 delivery of 4.5.2 is for Secret and Below Interoperability (SABI) customers only

3) Slip of RM Version 5.0 from 3QFY09 to 4QFY09 caused by delay in award of follow-on developer contract

Exhibit R-4, Schedule Profile

**CLASSIFICATION:**

| Exhibit R-4a, Schedule Detail | | | | DATE: **May 2009** | | | | |
|---|---|---|---|---|---|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY<br>**RDT&E, N / BA-5** | PROGRAM ELEMENT<br>0604231N - TACTICAL COMMAND SYSTEM | | | PROJECT NUMBER AND NAME<br>2009 TRUSTED INFORMATION SYSTEMS | | | | |
| Schedule Profile | FY 2008 | FY 2009 | FY 2010 | | | | | |
| | | | | | | | | |
| Software Delivery RM Version 4.5.2 | 4Q | | | | | | | |
| Test and Integrate capabilities needed by CANES in Version 5.0 | | | 3Q | | | | | |
| Software Delivery RM Version 5.0 | | 4Q | | | | | | |
| Software Delivery RM Version 5.X | | | | | | | | |
| Software Delivery RM Version 6.0 | | | | | | | | |
| Software Delivery RM Version 6.X | | | | | | | | |
| Software Delivery RM Version 7.0 | | | | | | | | |
| Certification Test RM Version 5.0 | | 1Q | | | | | | |
| Certification Test RM Version 5.X | | | | | | | | |
| Certification Test RM Version 6.0 | | | | | | | | |
| Certification Test RM Version 6.X | | | | | | | | |
| Certification Test RM Version 7.0 | | | | | | | | |
| System Test RM Version 5.0 | | 1Q | | | | | | |
| System Test RM Version 5.X | | | | | | | | |
| System Test RM Version 6.0 | | | | | | | | |
| System Test RM Version 6.X | | | | | | | | |
| System Test RM Version 7.0 | | | | | | | | |
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Exhibit R-4a, Schedule Detail

**CLASSIFICATION:**

| EXHIBIT R-2a, RDT&E Project Justification | | | | | DATE: **May 2009** | | | |
|---|---|---|---|---|---|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY<br>**RDT&E, N / BA-5** | PROGRAM ELEMENT NUMBER AND NAME<br>0604231N - Tactical Command System | | | | PROJECT NUMBER AND NAME<br>2305 GCCS-M Common Applications | | | |
| COST ($ in Millions) | FY 2008 | FY 2009 | FY 2010 | | | | | |
| Project Cost | **4.039** | **0.000** | **0.000** | | | | | |
| RDT&E Articles Qty | | | | | | | | |

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

The Global Command and Control System Maritime (GCCS-M) Common Applications program contains the fundamental building blocks and common applications for all fielded GCCS-M C4I systems in the Navy, Marine Corps, and Coast Guard. It is the Navy's tactical implementation of the Global Command and Control System (GCCS) which provides the warfighter: (1) timely access to battlefield information, and (2) state-of-the-art information processing capability to support the Command and Control of maritime forces through a combination of communications, intelligence and combat system interfaces.

GCCS-M Common Applications includes all C4I applications required to fully support Navy joint interoperability in the littoral environment, and includes all common functions such as track database management, message processing, display implementation, correlation and system architecture migration in order to ensure a coherent and consistent implementation of C4I architectures in the Fleet. The Navy Common Operating Environment (COE) program is a core function of the GCCS-M Common Applications in that it serves as the system integration point for Command and Control systems in the Naval services. The program has the responsibility of working with developers throughout the Navy to incorporate the requirements of their users so that they might quickly and efficiently integrate and transform present stovepipe capabilities into an interoperable C4I architecture. As the number of legacy systems migrating to the Common Operating Environment (COE) continues to grow, resources for rapidly folding them into the service extensions must keep pace with the growing complexity and size of the COE. As a product of evolutionary acquisition, the Navy COE will continue to evolve with the COE, new technology, and Commercial-off-the-shelf (COTS) products. Efforts in FY08 will entail preparation for Operational Evaluation (OPEVAL), and software development to address emerging Fleet requirements in areas such as Maritime Interdiction Operations (MIO). Beginning in FY09, funding will be consolidated into GCCS-M Maritime Applications (x0709), to aid in the migration towards Maritime specific Command and Control (C2) capabilities that reside within the Service Oriented Architecture (SOA) environment.

**CLASSIFICATION:**

| EXHIBIT R-2a, RDT&E Project Justification | | DATE: **May 2009** |
|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY | PROGRAM ELEMENT NUMBER AND NAME | PROJECT NUMBER AND NAME |
| **RDT&E, N / BA5** | 0604231N - Tactical Command System | 2305 GCCS-M Common Applications |

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

| Documentation Training | FY 08 | FY 09 | FY 10 | |
|---|---|---|---|---|
| Accomplishments/Effort/Subtotal Cost | 0.737 | 0.000 | 0.000 | |
| RDT&E Articles Quantity | | | | |

FY08: Ensured the integration and operational testing of web-enabled, task-oriented documentation and help capability emphasizing execution of missions.

FY09-10: Funding will be consolidated into GCCS-M Maritime Applications (x0709), to aid in the migration towards Maritime specific Command and Control (C2) capabilities that reside within the Service Oriented Architecture (SOA) environment.

| Testing/Usability | FY 08 | FY 09 | FY 10 | |
|---|---|---|---|---|
| Accomplishments/Effort/Subtotal Cost | 1.237 | 0.000 | 0.000 | |
| RDT&E Articles Quantity | | | | |

FY08: Continued to provide for the continued efforts of holistic, end-to-end systems engineering and testing of Maritime C4I capabilities. This included developmental, operational, and interoperability test events for GCCS-M 4.1 as well as proof-of-concept testing of emergent capabilities and technologies.

FY09-10: Funding in FY09-10 will be consolidated into GCCS-M Maritime Applications (x0709), to aid in the migration towards Maritime specific Command and Control (C2) capabilities that reside within the Service Oriented Architecture (SOA) environment.

**CLASSIFICATION:**

| EXHIBIT R-2a, RDT&E Project Justification | | DATE: **May 2009** |
|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY | PROGRAM ELEMENT NUMBER AND NAME | PROJECT NUMBER AND NAME |
| **RDT&E, N / BA5** | 0604231N - Tactical Command System | 2305 GCCS-M Common Applications |

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

| Combat Systems Interface | FY 08 | FY 09 | FY 10 | |
|---|---|---|---|---|
| Accomplishments/Effort/Subtotal Cost | 0.637 | 0.000 | 0.000 | |
| RDT&E Articles Quantity | | | | |

FY08: Ensured integration and certification of required organic shipboard systems interfaces.

FY09-10: Funding in FY09-10 will be consolidated into GCCS-M Maritime Applications (x0709), to aid in the migration towards Maritime specific Command and Control (C2) capabilities that reside within the Service Oriented Architecture (SOA) environment.

| Situational Awareness (formerly JPN) | FY 08 | FY 09 | FY 10 | |
|---|---|---|---|---|
| Accomplishments/Effort/Subtotal Cost | 1.298 | 0.000 | 0.000 | |
| RDT&E Articles Quantity | | | | |

FY08: Provided bi-directional shared situational awareness by integrating and exchanging information with disparate systems, sensors and real time event reporting networks (e.g. AIS weapons/fire control, navigation, cryptologic, tactical data links and broadcasts). This was required to prevent fratricide and mutual interference of current (e.g. Tomahawk, Aegis, Standard Missile and Patriot) and future weapon systems/platforms (Joint Strike Fighter (JSF), Multi-Mission Aircraft (MMA), Predator/DD-21 ship class) during multi-platform strike operations. Leveraged investment in new and upgraded sensors to further develop Situational Awareness and Command and Control throughout the extended Battlespace.

FY09-10: Funding in FY09-10 will be consolidated into GCCS-M Maritime Applications (x0709), to aid in the migration towards Maritime specific Command and Control (C2) capabilities that reside within the Service Oriented Architecture (SOA) environment.

| Emergent Capabilities | FY 08 | FY 09 | FY 10 | |
|---|---|---|---|---|
| Accomplishments/Effort/Subtotal Cost | 0.130 | 0.000 | 0.000 | |
| RDT&E Articles Quantity | | | | |

FY08: Continued to ensure emergent and transformational command and control capabilities are successfully integrated and developmentally tested for timely introduction to the Fleet.

FY09-10: Funding will be consolidated into GCCS-M Maritime Applications (x0709), to aid in the migration towards Maritime specific Command and Control (C2) capabilities that reside within the Service Oriented Architecture (SOA) environment.

**CLASSIFICATION:**

| EXHIBIT R-2a, RDT&E Project Justification | | DATE: **May 2009** |
|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY | PROGRAM ELEMENT NUMBER AND NAME | PROJECT NUMBER AND NAME |
| **RDT&E, N / BA-5** | 0604231N - Tactical Command System | 2305 GCCS-M Common Applications |

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

| Line Item No. & Name | FY 2008 | FY 2009 | FY 2010 |
|---|---|---|---|
| GCCS-M Totals (OPN - BLI 2608) | 56.196 | 23.373 | 10.952 |

Note: BLI 2608 controls do not include TIS and GCCS-Joint funding from FY08-FY10.

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

N/A

**(U) F. METRICS:**

Earned Value Management is used for metrics reporting and risk management.

**CLASSIFICATION:**

| Exhibit R-3 Cost Analysis (page 1) | | | | | | | | DATE: **May 2009** | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-5** | | | PROGRAM ELEMENT 0604231N - Tactical Command System | | | PROJECT NUMBER AND NAME 2305 GCCS-M Common Applications | | | | | | |
| Cost Categories | Contract Method & Type | Performing Activity & Location | Total PY s Cost | FY 09 Cost | FY 09 Award Date | FY 10 Cost | FY 10 Award Date | FY 11 Cost | FY 11 Award Date | Cost to Complete | Total Cost | Target Value of Contract |
| Primary Hardware Development | | | | | | | | | | | | |
| Ancillary Hardware Development | | | | | | | | | | | | |
| Aircraft Integration | | | | | | | | | | | | |
| Ship Integration | | | | | | | | | | | | |
| Ship Suitability | | | | | | | | | | | | |
| Systems Engineering | VARIOUS | VARIOUS | 13.792 | | | | | | | | | |
| Training Development | | | | | | | | | | | | |
| Licenses | | | | | | | | | | | | |
| Tooling | | | | | | | | | | | | |
| GFE | | | | | | | | | | | | |
| Award Fees | | | | | | | | | | | | |
| Subtotal Product Development | | | 13.792 | | | | | | | | | |
| Remarks: | | | | | | | | | | | | |
| Development Support | | | | | | | | | | | | |
| Software Development | VARIOUS | VARIOUS | 70.836 | | | | | | | | | |
| Integrated Logistics Support | | | | | | | | | | | | |
| Configuration Management | | | | | | | | | | | | |
| Technical Data | | | | | | | | | | | | |
| Studies & Analyses | | | | | | | | | | | | |
| GFE | | | | | | | | | | | | |
| Award Fees | | | | | | | | | | | | |
| Subtotal Support | | | 70.836 | | | | | | | | | |
| Remarks: | | | | | | | | | | | | |

**CLASSIFICATION:**

| Exhibit R-3 Cost Analysis (page 2) | | | | | | | | DATE: **May 2009** | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-5** | | | PROGRAM ELEMENT 0604231N - Tactical Command System | | | PROJECT NUMBER AND NAME 2305 GCCS-M Common Applications | | | | | | |
| Cost Categories | Contract Method & Type | Performing Activity & Location | Total PY s Cost | FY 09 Cost | FY 09 Award Date | FY 10 Cost | FY 10 Award Date | FY 11 Cost | FY 11 Award Date | Cost to Complete | Total Cost | Target Value of Contract |
| Developmental Test & Evaluation | VARIOUS | VARIOUS | 8.711 | | | | | | | | | |
| Operational Test & Evaluation | VARIOUS | VARIOUS | 1.686 | | | | | | | | | |
| Live Fire Test & Evaluation | | | | | | | | | | | | |
| Test Assets | | | | | | | | | | | | |
| Tooling | | | | | | | | | | | | |
| GFE | | | | | | | | | | | | |
| Award Fees | | | | | | | | | | | | |
| Subtotal T&E | | | 10.397 | | | | | | | | | |
| Remarks: | | | | | | | | | | | | |
| Contractor Engineering Support | | | | | | | | | | | | |
| Government Engineering Support | | | | | | | | | | | | |
| Program Management Support | VARIOUS | VARIOUS | 5.531 | | | | | | | | | |
| Travel | | | | | | | | | | | | |
| Transportation | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| Subtotal Management | | | 5.531 | | | | | | | | | |
| Remarks: | | | | | | | | | | | | |
| Total Cost | | | 100.556 | | | | | | | | | |
| Remarks: | | | | | | | | | | | | |

Exhibit R-3, RDTEN Project Cost Analysis

**CLASSIFICATION:**

| EXHIBIT R4, Schedule Profile | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | DATE: **May 2009** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-5** | | | | | | | | | PROGRAM ELEMENT NUMBER AND NAME 0604231N - Tactical Command System | | | | | | | | | | | | | | PROJECT NUMBER AND NAME 2305 GCCS-M Common Applications | | | | | | | | | | | |
| Fiscal Year | 2008 | | | | 2009 | | | | 2010 | | | | 2011 | | | | 2012 | | | | 2013 | | | | 2014 | | | | 2015 | | | |
| | 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 |
| **Acquisition Milestones** | | Inc 2 Gate 6 ▲ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Software Deliveries | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Increment 1 | ▲ | ▲ | ▲ | ▲ | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Increment 2 | | | ▲ | ▲ | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Test & Evaluation Milestones** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Development Test | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Operational Test | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Production Milestones** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Deliveries | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

EXHIBIT R-4, Schedule Profile

Note: Beginning in FY09 funding will be consolidated into GCCS-M Maritime Applications (x0709), to aid in the migration towards Maritime specific Command and Control (C2) capabilities that reside within the Service Oriented Architecture (SOA) environment.

**CLASSIFICATION:**

| Exhibit R-4a, Schedule Detail | | | | | | | DATE: **May 2009** | |
|---|---|---|---|---|---|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY<br>**RDT&E, N /BA-5** | PROGRAM ELEMENT<br>0604231N - Tactical Command System | | | | PROJECT NUMBER AND NAME<br>2305 GCCS-M Common Applications | | | |
| Schedule Profile | FY 2008 | FY 2009 | FY 2010 | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| Software Delivery (quarterly) | | | | | | | | |
| Increment 1 | Q1-Q4 | | | | | | | |
| Increment 2 | Q3-Q4 | | | | | | | |
| | | | | | | | | |
| Increment 2 Gate 6 | Q2 | | | | | | | |

Exhibit R-4a, Schedule Detail

**Classification:**

| Exhibit R-5, Termination Liability Funding for Major Defense Acquisition Programs, RDT&E Funding ($000) | | | | | | DATE: **May 2009** | | |
|---|---|---|---|---|---|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY<br>**RDT&E, N / BA-5 BA-5** | | PROGRAM ELEMENT<br>0604231N - Tactical Command System | | | | PROJECT NUMBER AND NAME<br>2305 GCCS-M Common Applications | | |
| **Program Title** | **FY 2008** | **FY 2009** | **FY 2010** | **FY 2011** | **FY 2012** | **FY 2013** | **FY 2014** | **FY 2015** |
| GCCS-M Common Applications | | | | | | | | |

GCCS-M software is developed under an engineering services based contract. Maximum Government liability is limited to the total obligated value of annually awarded task orders.

**CLASSIFICATION:**

| EXHIBIT R-2a, RDT&E Project Justification | | | | | | | DATE: **May 2009** | |
|---|---|---|---|---|---|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY<br>**RDT&E, N / BA-5** | PROGRAM ELEMENT NUMBER AND NAME<br>0604231N - Tactical Command System | | | PROJECT NUMBER AND NAME<br>2307 - Shipboard LAN / WAN Integrated Shipboard Network System | | | | |
| COST ($ in Millions) | FY 2008 | FY 2009 | FY 2010 | | | | | |
| Project Cost | **12.271** | **11.284** | **1.768** | | | | | |
| RDT&E Articles Qty | | | | | | | | |

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

The Shipboard LAN / WAN / Integrated Shipboard Network System (ISNS) provides Navy ships, including submarines, and Ashore sites with reliable, high-speed SECRET and UNCLASSIFIED Local Area Networks (LAN)s and wireless network technologies. The LAN provides Basic Network Information Distribution Services (BNIDS) and access to the Defense Information Systems Network (DISN) Wide Area Network (WAN) (Secure and Nonsecure Internet Protocol Router Network -SIPRNet and NIPRNet). It provides the network infrastructure and services to enable real-time information exchange within the ship and between afloat units, Component Commanders, and Fleet Commanders. It is a key factor in the implementation of the Navy's portion of Joint Vision 2020 and the migration of existing legacy systems into the IT-21 strategy. Program funding supports the design, development and testing of the ISNS LAN for surface ships, shore sites, and SubLAN for submarines.

The ISNS program maximizes the use of both Commercial off the Shelf (COTS) software and hardware. Engineering and technical support is provided so that existing systems will keep pace with hardware and software that continues to be commercially supported. ISNS uses a combination of high speed wired and wireless switches, routers, access points, servers, workstations and operating system software technologies to provide network access to classified and unclassified applications for use by ship's force, embarked units, embarked commanders and their staffs. Under the Navy's information modernization strategy, full synchronization of shipboard networks, mission and information applications, radio/satellite communications, and shore data dissemination infrastructure are necessary to ensure end-to-end mission capability. The Integrated Shipboard Networking System program is closely synchronized on a ship by ship basis with over 460 different systems of application configurations including the following: Global Command and Control System Maritime (GCCS-M), Navy Tactical Command Support System (NTCSS), Navy Standard Integrated Personnel System (NSIPS), Theatre Medical Information Program – Maritime (TMIP-M), Defense Messaging System (DMS), Automated Digital Network System (ADNS), Global Broadcasting System (GBS), Tactical Tomahawk Weapons Control System (TTWCS) and Information Security (INFOSEC) programs. The ISNS program provides the infrastructure to support implementation/fielding of these programs. The LAN modernization rate must keep pace with hardware and software that is supported commercially in order to provide a supportable and secure FORCEnet infrastructure. ISNS includes Service Oriented Architecture (SOA) which is the mechanism to deliver the FORCEnet interface to the warfighter. SOA provides a composeable warfighting environment enabling dynamic configuration of capabilities tailored to meet specific warfighting missions. As the warfighting mission changes, the capabilities or services can be re-configured on the fly to meet the new warfighting requirement. This dynamic reconfiguration of services also known as "plug and fight" meets the composeable services vision of FORCEnet. SOA also provides the common core enterprise services and technical framework to allow organizations ubiquitous access to reliable, decision-quality information through a net-based services infrastructure and applications to bridge real-time and near-real-time communities of interest (COI). SOA will empower the end user to pull information from any available source, with minimal latency, to support the mission. Its capabilities will allow Department of the Navy as well as Global Information Grid (GIG) users to task, post, process, use, store, manage and protect information resources on demand for warfighters, policy makers and support personnel. SOA will utilize a spiral process for delivering capability to the warfighter.

The ISNS Inc 1, Sensitive Compartmented Information (SCI) Networks and Combined Enterprise Regional Information Exchange System (CENTRIXS) programs began migration to ISNS Inc 2/Consolidated Afloat Networks and Enterprise Services (CANES) in FY09. ISNS Inc 2/CANES will serve to transition numerous Fleet networks to a single, adaptive, available, secure computing network infrastructure while delivering enhanced technologies in: Integrated Voice, Video and Data; Common Computing Environment (CCE); Service Oriented Architecture (SOA); and Multi-Level Security (MLS)/Cross Domain Solutions (CDS). Full transition to CANES Inc 1 occurs in FY 2010.

**CLASSIFICATION:**

| EXHIBIT R-2a, RDT&E Project Justification | | DATE: **May 2009** |
|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY | PROGRAM ELEMENT NUMBER AND NAME | PROJECT NUMBER AND NAME |
| **RDT&E, N / BA-5** | 0604231N - Tactical Command System | 2307 - Shipboard LAN / WAN / Integrated Shipboard Network System |

The Combined Enterprise Regional Information Exchange System (CENTRIXS) program provides US Navy ships and submarines with secure, reliable, high-speed Local Area Network (LAN) with access to the Coalition Wide Area Network (WAN) to include CENTRIXS Four-Eyes (CFE), Global Counter Terrorism Task Force (GCTF), NATO Information Data Transfer System (NIDTS), Multinational Coalition Force - Iraq (MCFI), bilateral networks such as CENTRIXS-U.S. Japan (J) and CENTRIXS-U.S. Korea (K), and Communities Of Interest (COI) virtual networks such as Coalition Naval Forces - CENTCOM (CNFC), and Cooperative Maritime Forces - Pacific (CMFP). The CENTRIXS system provides real-time tactical and operational information sharing at the SECRET and SECRET REL (Releasable) level between naval afloat units, Component Commanders, Fleet Commanders, Numbered Fleet Commanders and Coalition Forces/Allies. When the CENTRIXS network is combined with other subsystems (Radio/Satellite Comms), it delivers an end-to-end network centric warfighting capability. CENTRIXS is the primary means for sharing classified, but releasable, data with coalition partners to enable the Navy to mean the National Strategy for Maritime Domain Awareness. The CENTRIXS program is comprised of Block 0, I, and II systems fielded across the Fleet, and Increment 1 which provides a network infrastructure that allows simultaneous access to multiple Coalition Wide Area Networks (WAN) and incorporates the Common PC Operating System Environment (COMPOSE) which provides a server and client operating system environment for other applications and collaborative tools such as Same time Chat, Domino and Command and Control PC (C2PC) as means to share a Common Operational Picture (COP) and exchange information using Collaboration At Sea (CAS). The CENTRIXS program uses both Commercial Off The Shelf (COTS) hardware and software and Open Standards to maximize commercial technology and support. Engineering and technical support ensures existing systems are upgraded and modified to keep pace with current technology and industry.

Funding supports the design, development and testing of the CENTRIXS LAN for surface and submarine platforms and the CENTRIXS Network Operations Center (NOC). The goal of the CENTRIXS program is to provide a cost-efficient, operationally effective network that dramatically reduces current infrastructure requirements while maximizing operational flexibility and warfighter utility in a coalition environment. Multi-Level Thin Client (MLTC) architecture supports shipboard Space, Weight and Power (SWAP) reductions and includes initiatives for server virtualization (ability to run multiple servers on a single server), drop scalability leveraging existing SIPRNET drops, remote authentication and remote system management. Additionally, funding will provide design, development and testing for a Unit Level MLTC system (provides a compressed shipboard rack/client footprint) and initiatives to include Language Translation, COI and Network Enclave Agility (ability to dynamically shift between all coalition networks and COIs) and Multi-Level Chat (a Cross Domain Solution (CDS) chat capability). The (CENTRIXS) program began migration to ISNS Inc 2/Consolidated Afloat Networks and Enterprise Services (CANES) in FY09. ISNS Inc 2/CANES will serve to transition numerous Fleet networks to a single, adaptive, available, secure computing network infrastructure while delivering enhanced technologies in: Integrated Voice, Video and Data; Common Computing Environment (CCE); Service Oriented Architecture (SOA); and Multi-Level Security (MLS)/Cross Domain Solutions (CDS).

Submarine Local Area Network (SubLAN): The SubLAN program provides Navy submarines, with reliable, high-speed SECRET and UNCLASSIFIED Local Area Networks (LANs). When the SubLAN network is combined with other subsystems, it delivers an end-to-end network-centric warfare capability. SubLAN I provides network infrastructure including an Unclassified Wireless Local Area Network (UWLAN), servers, and the Common PC Operating System Environment (COMPOSE), which provides the server and operating system environment in which other applications such as Non-Tactical Data Processing System (NTDPS) application suite can run.

**CLASSIFICATION:**

| EXHIBIT R-2a, RDT&E Project Justification | | DATE: **May 2009** |
|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY | PROGRAM ELEMENT NUMBER AND NAME | PROJECT NUMBER AND NAME |
| **RDT&E, N / BA-5** | 0604231N - Tactical Command System | 2307 - Shipboard LAN / WAN / Integrated Shipboard Network System |

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

| ISNS | FY08 | FY09 | FY10 |
|---|---|---|---|
| Accomplishments/Effort/Subtotal Cost | 8.166 | 7.308 | 0.855 |
| RDT&E Articles Quantity | | | |

**FY08**: Completed development of COMPOSE 3.5. Continued to develop and integrate ISNS Increment 2/CANES capabilities. Investigated software management including distribution, license management, and inventory management. Performed network consolidation and network capacity studies. Developed and integrated Expanded Maritime Intercept Operation (EMIO) and increased security. Continued development of the Cost Analysis Requirements Document (CARD). Continued development of the Life Cycle Cost Estimate (LCCE). Began development of the Clinger Cohen Act (CCA) and Acquisition Strategy documentation for ISNS Incr 2/CANES.
Performed developmental testing and at sea demonstrations on the following ISNS Increment 2 technologies:

1. Identity Management/Service Security, including Authentication, Authorization, and Auditing.
2. Collaboration, including Text Collaboration.
3. Messaging, including Java Messaging Service
4. Service Oriented Architecture (SOA)
5. Multi-Level Security (MLS) / Cross Domain Solutions (CDS)

**FY09:** Continue to develop ISNS Increment 2/CANES capabilities which will begin to consolidate the afloat networks and enterprise services aboard ships. These capabilities include increased availability to mission critical level ships, multiple security enclaves, application hosting, and collaboration services. Support studies for an Ashore ISNS variant in support of the Maritime Operations Center (MOC) requirement.
Continue with at sea demonstrations for the following technologies:

1. Identity Management/Service Security, including Entity Management & Credential Management.
2. Collaboration, including Session Management and Presence & Awareness.
3. Discovery, including Content/Device/People Discovery.
4. Cross Domain Solutions (CDS)
5. Afloat Core Services (ACS)

Complete acquisition documentation required for ISNS Inc 1 and 2/CANES. Award the prototype development contract for ISNS Incr 1 . Set up lab for applicable Early Adopter testing. Perform Developmental and Operational Testing (DT/OT) on Increment 1 Wireless (MOD2), COMPOSE 3.5 (MOD3), Common Computing Environment (CCE) (MOD4), and Afloat Core Services (ACS) 1.0 as needed.

**FY10:** Complete development of the ISNS Increment 1and 2/CANES capabilities consolidating Afloat LANs and Enterprise Services aboard ships and Ashore sites. These capabilities include increased availability to mission critical level systems, multiple security enclaves, and application hosting, ACS, and collaboration services. Develop replacement solutions for End of Life (EOL) equipment as EOL occurs.
Continue support of sea demonstrations for the following technologies:

1. Identity Management/Service Security, including Entity Management & Credential Management.
2. Collaboration, including Session Management and Presence & Awareness.
3. Discovery, including Content/Device/People Discovery.
4. Cross Domain Solutions (CDS)
5. Secure classified wireless
6. ACS

Continue working with ISNS labs on Early Adopter and ACS testing and integration. Investigate new technology associated with classified wireless LANs. Support Trident warrior exercises. Support Compose 4.0 DT & OT events. Program transitions from ISNS Inc 2/CANES to CANES Inc 1. Continue support for wireless initiatives towards a more interoperable and secure wireless network infrastructure. Support Certification and Accreditation activities for efforts under development.

**CLASSIFICATION:**

| EXHIBIT R-2a, RDT&E Project Justification | | DATE: **May 2009** |
|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY | PROGRAM ELEMENT NUMBER AND NAME | PROJECT NUMBER AND NAME |
| **RDT&E, N / BA-5** | 0604231N - Tactical Command System | 2307 - Shipboard LAN / WAN / Integrated Shipboard Network System |

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

| SubLAN | FY08 | FY09 | FY10 |
|---|---|---|---|
| Accomplishments/Effort/Subtotal Cost | 2.105 | 1.252 | 0.615 |
| RDT&E Articles Quantity | | | |

**FY08** - Investigated, developed, and tested cross domain solution architecture enabling capability for other submarine programs such as Sensitive Compartmented Information (SCI), Joint Worldwide Intelligence Communications System (JWICS), and Combined Enterprise Regional Information Exchange System (CENTRIXS). Investigated, developed, tested server architecture in support of Commercial off the Shelf (COTS) End-of-Life (EOL) and enablement of Consolidated Afloat Networks and Enterprise Services (CANES) functionality.

**FY09** - Test and integrate follow-on COMPOSE software package in support of Consolidated Afloat Networks and Enterprise Services (CANES) migration strategy. Perform Operational Test Readiness Review (OTRR) and Follow-On Operational Test & Evaluation (FOT&E) of Inc 1. Demonstration of Cross Domain Solution architecture with compose software packages enabling capability for SCI, JWICS, and CENTRIXS in support of CANES migration strategy rescheduled for Trident Warrior (TW).

**FY10** - Perform OTRR and Operational Test & Evaluation of Cross Domain Solution.

| CENTRIXS | FY08 | FY09 | FY10 |
|---|---|---|---|
| Accomplishments/Effort/Subtotal Cost | 2.000 | 2.724 | 0.298 |
| RDT&E Articles Quantity | | | |

**FY08** - Continued to design the INC 1 Unit Level (UL) and evaluate dynamic COI capability, patch management capability, and client-loadable software capability in coordination with the CDS. Performed Environmental Testing for FL Blk 2 w/ Engineering Change Order (ECO).

**FY09** - Obtain MS C Decision and Low Rate Initial Production (LRIP) for Inc 1. MS C for INC 1 slip to 3QFY09 due to approval delays of the Capabilities Production Document (CPD). Utilize existing Q-70 contract for LRIP. Perform Operational Assessment (OA) on Force Level (FL) Block II. Begin migration to ISNS Inc 2/CANES. Develop CENTRIXS capability on submarines.

**FY10** - Perform environmental testing for UL Inc 1. Conduct a combined Development Test / Operational Test (DT/OT) for Inc 1 with COMPOSE 3.0. Support Inc I unit level DT/OT transition to Canes Inc I. Program transitions from ISNS Inc 2/CANES to CANES Inc 1.

**CLASSIFICATION:**

| EXHIBIT R-2a, RDT&E Project Justification | | DATE: **May 2009** |
|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY | PROGRAM ELEMENT NUMBER AND NAME | PROJECT NUMBER AND NAME |
| **RDT&E, N / BA-5** | 0604231N - Tactical Command System | 2307 - Shipboard LAN / WAN / Integrated Shipboard Network System |

(U) C. OTHER PROGRAM FUNDING SUMMARY:

| Line Item No. & Name | FY 2008 | FY 2009 | FY 2010 |
|---|---|---|---|
| OPN 3050 | | | |
| ISNS | 151.971 | 135.745 | 158.124 |
| CENTRIXS | 18.261 | 29.399 | 14.757 |
| SubLAN | 20.611 | 32.861 | 30.006 |
| Total: | 190.843 | 198.005 | 202.887 |

| Line Item No. & Name | FY 2008 | FY 2009 | FY 2010 |
|---|---|---|---|
| OPN 3051 | | | |
| CENTRIXS-M MDA | | | 4.913 |

(U) D. ACQUISITION STRATEGY:

Procurement and integration efforts for ISNS, CENTRIXS, and SubLAN are accomplished through various contracts.
Procurement and integration efforts for CANES will be accomplished through various contracts.

(U) F. METRICS:

**CLASSIFICATION:**

| Exhibit R-3, RDT&E Cost Analysis (page 1) | | | | | | | DATE: **May 2009** | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY<br>**RDT&E, N / BA-5** | | PROGRAM ELEMENT<br>0604231N - Tactical Command System | | | PROJECT NUMBER AND NAME<br>2307 - Shipboard LAN / WAN / Integrated Shipboard Network System | | | | | | |
| Cost Categories | Contract Method & Type | Performing Activity & Location | Total PY s Cost | FY 09 Cost | FY 09 Award Date | FY 10 Cost | FY 10 Award Date | | | Cost to Complete | Total Cost | Target Value of Contract |
| Primary Hardware Development | CPAF | Titan | 0.336 | 0.858 | VARIOUS | 0.000 | | | | | | |
| Integration & Test | WX | SSC SD | 0.964 | 0.985 | 12/08 | 0.075 | 12/09 | | | | | |
| Systems Engineering | VARIOUS | VARIOUS | 3.459 | 0.684 | VARIOUS | 0.000 | | | | | | |
| Systems Engineering | WX | SSC SD | 1.364 | 0.892 | 12/08 | 0.344 | 12/09 | | | | | |
| Systems Engineering | CPAF | SAIC | 0.334 | 0.049 | 12/08 | 0.000 | | | | | | |
| Systems Engineering | WX | SSC CH | 1.618 | 1.012 | 01/09 | 0.201 | 01/10 | | | | | |
| Systems Engineering | CPIF | TBD | | | | 0.000 | | | | | | |
| Subtotal Product Development | | | 8.075 | 4.480 | | 0.620 | | | | | | |
| Remarks: | | | | | | | | | | | | |
| Software Development | TBD | TBD | 0.400 | 0.325 | TBD | 0.173 | 12/09 | | | | | |
| Software Development | CPAF | Titan | 0.043 | 0.026 | 01/09 | 0.000 | | | | | | |
| Subtotal Support | | | 0.443 | 0.351 | | 0.173 | | | | | | |
| Remarks: | | | | | | | | | | | | |

Exhibit R-3, RDT&E Cost Analysis

**CLASSIFICATION:**

| Exhibit R-3, RDT&E Cost Analysis (page 2) | | | | | | | | | | | | DATE: **May 2009** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY<br>**RDT&E, N / BA-5** | | | PROGRAM ELEMENT<br>0604231N - Tactical Command System | | | PROJECT NUMBER AND NAME<br>2307 - Shipboard LAN / WAN / Integrated Shipboard Network System | | | | | | |
| Cost Categories | Contract Method & Type | Performing Activity & Location | Total PY s Cost | FY 09 Cost | FY 09 Award Date | FY 10 Cost | FY 10 Award Date | | | Cost to Complete | Total Cost | Target Value of Contract |
| Developmental Test & Evaluation | WX | SSC | 5.994 | 1.610 | 12/08 | 0.240 | 12/09 | | | | | |
| Developmental Test & Evaluation | WX | NIOC | 0.035 | 0.018 | 01/09 | 0.000 | | | | | | |
| Developmental Test & Evaluation | MP | JITC | 0.143 | 0.166 | 12/08 | 0.000 | | | | | | |
| Developmental Test & Evaluation | VARIOUS | NSMA | 0.389 | 0.418 | VARIOUS | 0.125 | VARIOUS | | | | | |
| Developmental Test & Evaluation | CPAF | NAVSEA/LM | 0.350 | 0.000 | | 0.000 | | | | | | |
| Developmental Test & Evaluation | VARIOUS | VARIOUS | 0.357 | 0.226 | VARIOUS | 0.113 | VARIOUS | | | | | |
| Operational Test & Evaluation | WX | COMOPTEVFOR | 0.802 | 0.360 | 12/08 | 0.075 | 12/09 | | | | | |
| Operational Test & Evaluation | WX | SSC | 0.612 | 0.569 | TBD | 0.000 | | | | | | |
| Subtotal T&E | | | 8.682 | 3.367 | | 0.553 | | | | | | |
| Remarks: | | | | | | | | | | | | |
| Program Management Support | WX | SSC SD | 1.446 | 0.193 | 12/08 | 0.252 | 12/09 | | | | | |
| Program Management Support | VARIOUS | VARIOUS | 1.607 | 2.394 | VARIOUS | 0.170 | 12/09 | | | | | |
| Program Management Support | CPAF | Booz Allen Hamilton | 1.432 | 0.499 | 01/09 | 0.000 | | | | | | |
| Subtotal Management | | | 4.485 | 3.086 | | 0.422 | | | | | | |
| Remarks: | | | | | | | | | | | | |
| Total Cost | | | 21.685 | 11.284 | | 1.768 | | | | | | |
| Remarks: | | | | | | | | | | | | |

Exhibit R-3, RDT&E Cost Analysis

**CLASSIFICATION:**

| EXHIBIT R4, RDT&E Schedule Profile | | | DATE: **May 2009** |
|---|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY<br>**RDT&E, N / BA-5** | PROGRAM ELEMENT NUMBER AND NAME<br>0604231N - Tactical Command System | PROJECT NUMBER AND NAME<br>2307 - Shipboard LAN / WAN / Integrated Shipboard Network System | |

| Fiscal Year | 2008 | | | | 2009 | | | | 2010 | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Quarter | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | | | | | | | | | | | | | | | | | | | | |
| **Acquisition Milestones**<br>FD D(V) X (Note 3)<br>Inc 1 Wireless<br>ISNS Inc2/CANES MDD<br>ISNS Inc 2/CANES to CANES Inc 1 (Note 4) | | FD C(V)X △ | | | ISNS Inc 2/CANES MDD (Note 5) △ | FD D(V)X △ | Inc 1 Wireless △ | | ISNS Inc 2/CANES to CANES Inc 1 △ | | | | | | | | | | | | | | | | | | | | | | |
| Prototype Phase Demonstrations (Trident Warrior) | | | TW △ | | | | TW △ | | | | TW △ | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Software Deliveries (Note 2) | | COMPOSE 3.0.1 △ | | | COMPOSE 3.5 △ | ACS 1.0 △ | | | COMPOSE 4.0 △ | | | | | | | | | | | | | | | | | | | | | | | |
| **Test & Evaluation Milestones**<br>Development Test<br>Operational Test | | | | | Inc 1 Wireless/ COMPOSE 3.5 | SOA 1.0 | | | COMPOSE 4.0 | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | DT | DT | | DT | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | OT | OT | | OT | | | | | | | | | | | | | | | | | | | | | | | |
| **Production Milestones**<br>LRIP<br>FRP | | | | | Inc 1 Wireless/ COMPOSE 3.5 FRP △ | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Deliveries | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

NOTES:

EXHIBIT R4, RDT&E Schedule Profile

1. Events added for follow on increments reflecting migration to ISNS Inc 2/CANES.
2. Software release versions and delivery dates updated to reflect current software fielding schedule.
3. Acquisition Milestone - FD D(V)X added on 2nd quarter of FY09
4. FY10 Program transitions from ISNS Inc 2/CANES to CANES Inc 1.
5. Material Development Decision (MDD) per DoD 5000.2.

**CLASSIFICATION:**

| Exhibit R-4a, RDT&E Schedule Detail | | | | | | | DATE: **May 2009** | |
|---|---|---|---|---|---|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY **RDT&E, N /BA-5** | PROGRAM ELEMENT 0604231N - Tactical Command System | | | PROJECT NUMBER AND NAME 2307 - Shipboard LAN / WAN / Integrated Shipboard Network System | | | | |
| Schedule Profile | FY 2008 | FY 2009 | FY 2010 | | | | | |
| Acquisition Milestone - FD C(V)X | 2Q | | | | | | | |
| Acquisition Milestone - FD D(V)X (Note 3) | | 2Q | | | | | | |
| Acquisition Milestone - Inc 1 Wireless | | 3Q | | | | | | |
| Acquisition Milestone - MDD ISNS Inc 2/CANES (Note 5) | | 1Q | | | | | | |
| Acquisition Milestone - ISNS Inc 2/CANES to CANES Inc 1(Note 4) | | | 1Q | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| Prototype Phase - TW Demonstration | 3Q | | | | | | | |
| Prototype Phase - TW Demonstration | | 3Q | | | | | | |
| Prototype Phase - TW Demonstration | | | 3Q | | | | | |
| Prototype Phase - TW Demonstration | | | | | | | | |
| Prototype Phase - TW Demonstration | | | | | | | | |
| Prototype Phase - TW Demonstration | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| Software Delivery - 3.0.1 | 2Q | | | | | | | |
| Software Delivery - 3.5 | | 1Q | | | | | | |
| Software Delivery - CS 1.0 | | 4Q | | | | | | |
| Software Delivery - 4.0 | | | 1Q | | | | | |
| (Note 2) | | | | | | | | |
| Development Test - Inc 1 Wireless/3.5 | | 2Q | | | | | | |
| Development Test - ACS 1.0 | | 3Q | | | | | | |
| Development Test - 4.0 | | | 1Q | | | | | |
| | | | | | | | | |
| Operational Test - Inc 1 Wireless/3.5 | | 2Q | | | | | | |
| Operational Test - ACS 1.0 | | 2Q | | | | | | |
| Operational Test - 4.0 | | | 1Q | | | | | |
| | | | | | | | | |
| Production Milestone - Inc 1 Wireless/3.5 FRP | | 3Q | | | | | | |

Exhibit R-4a, RDT&E Schedule Detail

NOTES:
1. Events added for follow on increments reflecting migration to ISNS Inc 2/CANES.
2. Software release versions and delivery dates updated to reflect current software fielding schedule.
3. Acquisition Milestone - FD D(V)X added on 2nd quarter of FY09.
4. FY10 Program transitions from ISNS Inc 2/CANES to CANES Inc 1.
5. Material Development Decision (MDD) per DoD 5000.2.

CLASSIFICATION:

| EXHIBIT R4, RDT&E Schedule Profile | | | DATE: May 2009 |
|---|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY<br>RDT&E, N / **BA-5** | PROGRAM ELEMENT NUMBER AND NAME<br>0604231N Tactical Command System | PROJECT NUMBER AND NAME<br>2307 - Shipboard LAN / WAN / Integrated Shipboard Network System (CENTRIXS) | |

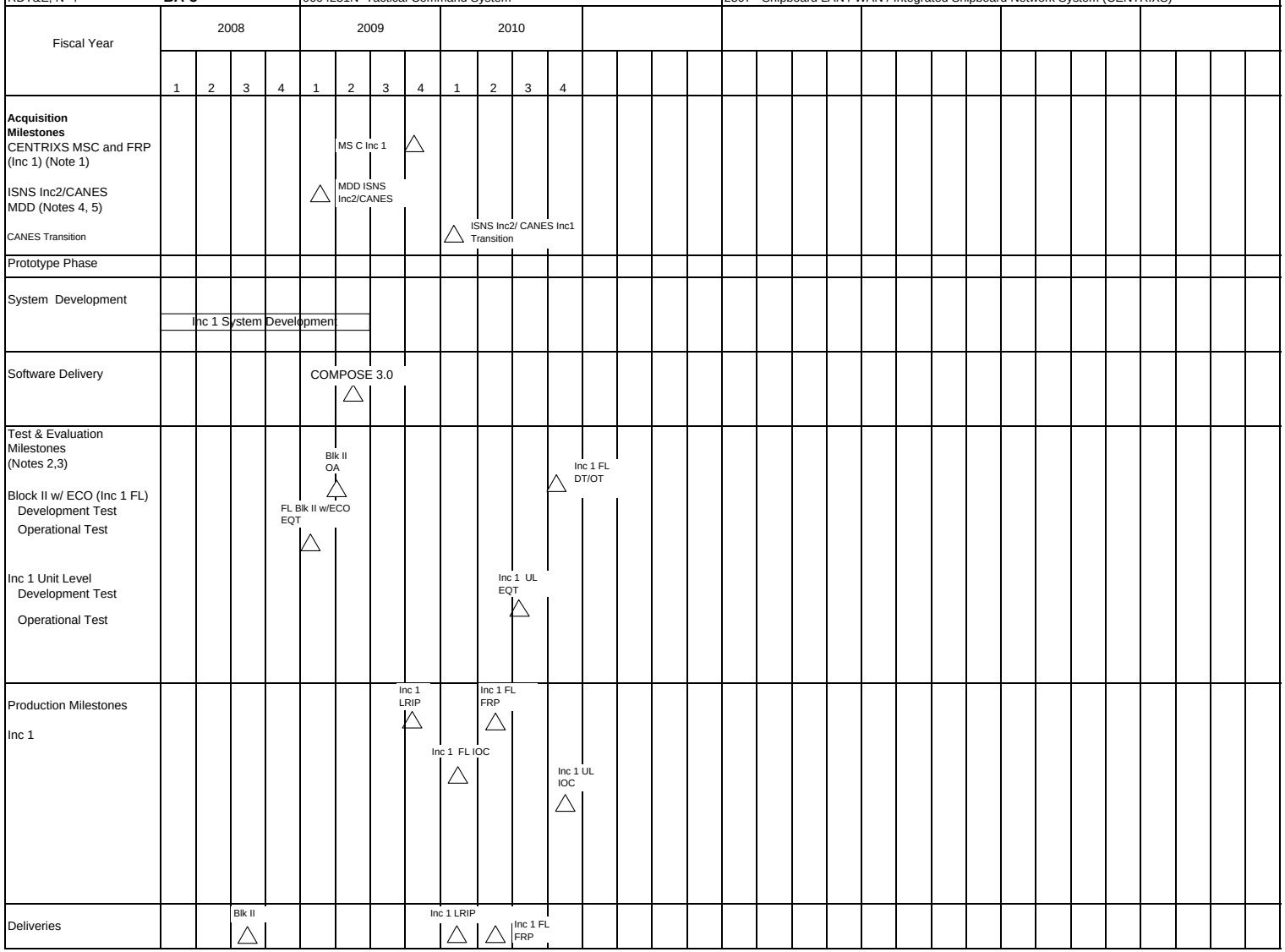


EXHIBIT R4, RDT&E Schedule Profile

NOTES:
1. CENTRIXS MS C and FRP (Inc 1) slip due to Capabilities Production Document (CPD) approval delays.
2. DT/OT slip due to the MS C slip, addition of EQT, and delays in the accreditation process. IOC and FRP shifted as a result.
3. Block II with the Engineering Change Order (ECO) is equivalent to the Increment 1 Force Level (FL).
4. FY10 Program transitions from ISNS Inc2/CANES to CANES Inc1.
5. Material Development Decision (MDD) per DoD 5000.2.

**CLASSIFICATION:**

| Exhibit R-4a, RDT&E Schedule Detail | | | | | | DATE: **May 2009** | | |
|---|---|---|---|---|---|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY **RDT&E, BA-5** | PROGRAM ELEMENT 0604231N Tactical Command System | | | PROJECT NUMBER AND NAME 2307 - Shipboard LAN / WAN / Integrated Shipboard Network System (CENTRIXS) | | | | |
| Schedule Profile | FY 2008 | FY 2009 | FY 2010 | | | | | |
| Acquisition Milestone - CENTRIXS Inc 1 MS C (Note 1) | | 4Q | | | | | | |
| Acquisition Milestone - ISNS Inc 2/ CANES MDD (Note 5) | | 1Q | | | | | | |
| Acquisition Milestone - ISNS Inc2/CANES to CANES Inc1 (Note 4) | | | 1Q | | | | | |
| | | | | | | | | |
| System Development - Inc 1 | 1Q-4Q | 1Q-2Q | | | | | | |
| | | | | | | | | |
| Software Delivery - COMPOSE 3.0 | | 2Q | | | | | | |
| Software Delivery - COMPOSE 4.0 | | | | | | | | |
| | | | | | | | | |
| Operational Test - Blk II EQT (Note 2,3) | | 1Q | | | | | | |
| Operational Test - Blk II OA | | 2Q | | | | | | |
| Operational/Developmental Test - Inc 1 FL | | | 4Q | | | | | |
| Operational Test - Inc 1 UL EQT | | | 3Q | | | | | |
| | | | | | | | | |
| Production Milestone - Inc 1 LRIP | | 3Q-4Q | | | | | | |
| Production Milestone - Inc 1 FL IOC | | | 1Q | | | | | |
| Production Milestone - Inc 1 FL FRP | | | 2Q | | | | | |
| Production Milestone - Inc 1 UL IOC | | | 4Q | | | | | |
| Production Milestone - Inc 1 UL FRP | | | | | | | | |
| | | | | | | | | |
| Deliveries - Block II | 3Q | | | | | | | |
| Deliveries - Inc 1 LRIP | | | 1Q | | | | | |
| Deliveries - Inc 1 FL FRP | | | 2Q | | | | | |
| Deliveries - Inc 1 UL FRP | | | | | | | | |
| | | | | | | | | |

Exhibit R-4a, RDT&E Schedule Detail

NOTES:
1. CENTRIXS MS C and FRP (Inc 1) slip due to Capabilities Production Document (CPD) approval delays.
2. DT/OT slip due to the MS C slip, addition of EQT, and delays in the accreditation process. IOC and FRP shifted as a result.
3. Block II with Engineering Change Order (ECO) is equivalent to the Increment 1 Force Level (FL).
4. FY10 Program transitions from ISNS Inc2/CANES to CANES Inc1.
5. Material Development Decision (MDD) per DoD 5000.2.

**CLASSIFICATION:**

| EXHIBIT R4, Schedule Profile | | | | | | | | | | | | | | | | | DATE: **May 2009** | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-5** | | | | | PROGRAM ELEMENT NUMBER AND NAME 0604231N - Tactical Command System | | | | | | | | PROJECT NUMBER AND NAME 2307 - Shipboard LAN / WAN / Integrated Shipboard Network System (SubLAN) | | | | | | | | | | | | | | | | | | | | | | | | |
| Fiscal Year | 2008 | | | | 2009 | | | | 2010 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | | | | | | | | | | | | | | | | | | | | | | | | |
| **Acquisition Milestones**<br>SubLAN Incr 1 (Note 1) | | | | CDR △ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| System Development (e.g., Radar System dev.) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Software Deliveries<br>COMPOSE | | | | 3.0.1 △ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Test & Evaluation Milestones**<br>Development Test | | | | | | | OTRR △ | Inc 1 | | | OTRR △ | CDS | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Operational Test | | | | OTRR △ | | | | | | | | OT&E CDS | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Production Milestones** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Deliveries | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

EXHIBIT R4, Schedule Profile

NOTES:
(1) Rebaseline to single increment shifts FOC to FY17.

**CLASSIFICATION:**

| Exhibit R-4a, Schedule Detail | | | DATE: **May 2009** | | | | | |
|---|---|---|---|---|---|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY **RDT&E, N /BA-5** | | | PROJECT NUMBER AND NAME 2307 - Shipboard LAN / WAN / Integrated Shipboard Network System (SubLAN) | | | | | |
| Schedule Profile | FY 2008 | FY 2009 | FY 2010 | | | | | |
| Inc 1 Critical Design Review | 4Q | | | | | | | |
| Inc 1 Operational Test Readiness Review (OTRR) | 4Q | | | | | | | |
| Software Delivery - 3.0.1 | 4Q | | | | | | | |
| OTRR Inc 1 | | 3Q | | | | | | |
| OTRR CDS | | | 3Q | | | | | |
| OT&E CDS | | | 4Q | | | | | |
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Exhibit R-4a, RDT&E Schedule Detail

NOTES:

**CLASSIFICATION:**

| EXHIBIT R-2a, RDT&E Project Justification | | | DATE: **May 2009** |
|---|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY<br>**RDT&E, N / BA-5** | PROGRAM ELEMENT NUMBER AND NAME<br>0604231N Tactical Command System | PROJECT NUMBER AND NAME<br>2351 - Maritime Domain Awareness (MDA) | |

| COST ($ in Millions) | FY 2008 | FY 2009 | FY 2010 | | | | | |
|---|---|---|---|---|---|---|---|---|
| Project Cost | **0.000** | **0.000** | **21.199** | | | | | |
| RDT&E Articles Qty | | | | | | | | |

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

**Maritime Domain Awareness (MDA)**: Maritime Domain Awareness is the effective understanding of anything associated with the global maritime domain that could impact the security, safety, economy or environment. MDA objectives include the persistent monitoring of and ability to access and maintain data on vessels, cargo, people, and infrastructure; and the ability to collect, fuse, analyze, and disseminate information to decision makers to facilitate effective understanding. This initiative will identify, develop and transition data fusion and mining, replication, sharing and assessment tools to achieve MDA across the non-classified, unclassified and classified enclaves. This warfighting enhancement is designed to achieve an all-source MDA capability, leveraging existing MDA initiatives in the developmental phase and ensuring the best products transition to strategic, operational and tactical users as well as further development of MDA prototypes. The products will support all-source data fusion, replication of MDA related data gathered in various operations such as expanded-maritime interdiction operations (E-MIO), sharing information with allies, and developing subject matter expertise and assessment tools to achieve MDA and enhance operational decision making.

This MDA focused Deep Lightning Bolt (DLB) warfighting enhancements are designed to achieve an all-source distributed MDA capability, leveraging existing MDA Navy and Non-Navy initiatives in the developmental phase and ensuring the best products transition to strategic, operational and tactical users as well as further development of MDA prototypes. The products will support all-source data fusion and mining, replication of MDA related data gathered in various operations such as Expanded-Maritime Interdiction Operations (E-MIO), sharing information with allies, and developing subject matter expertise and assessment tools to achieve MDA and enhance operational decision making.

FY08 and FY09 funding is located in Project Unit 9123. Funds realigned from Project Unit 9123 beginning in FY2010.

**CLASSIFICATION:**

| EXHIBIT R-2a, RDT&E Project Justification | | DATE: **May 2009** |
|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY | PROGRAM ELEMENT NUMBER AND NAME | PROJECT NUMBER AND NAME |
| **RDT&E, N / BA-5** | 0604231N Tactical Command System | 2351 -MDA |

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

| FORCEnet | FY08 | FY09 | FY10 | |
|---|---|---|---|---|
| Accomplishments/Effort/Subtotal Cost | 0.000 | 0.000 | 21.199 | |
| RDT&E,N Articles Quantity | | | | |

FY08-09: Funds previously located in PE 0604231N (Project Unit - 9123)

**FY10:**

**Maritime Domain Awareness (MDA):** $14.287M

Spiral 1 Prototype (SP1P): Provides program management support and continued prototype integration for SP1P. Supports corrective and adaptive system engineering activities as the Joint Capability Technology Demonstration (JCTD) prototype transitions to operational capability in FY10. Ensures that issues identified during the Joint and Navy Operational Assessments are resolved, and that SP1P maintains interoperability with Joint and Naval Systems as Joint and Navy SOA frameworks are established. Supports verification and validation (V&V), and developmental regression and acceptance testing for baseline changes required for systems engineering activities. Provides hardware, software and other technical support for components deployed at Command 2nd Fleet - C2F, C3F, C4F, C5F and C7F as well as PACFLT, U.S. Fleet Forces Command (USFF), National Maritime Intelligence Center (NMIC), Maritime Intelligence Fusion Center (MIFC) MIFCLANT, MIFCPAC, NAVCENT, NAVEUR and the MDA Enterprise Node. Supports the NMIC and MIFC LANT/PAC to facilitate data integration with the Intelligence Community systems, DHS (Department of Homeland Security) and DOJ (Department of Justice). Continued support of the Maritime Information Exchange Model (MIEM) to promote interagency and coalition data sharing. Ensures capabilities are projected through non-classified, unclassified and classified networks.

Fusion and Analysis Services (FAS) Increment and Information Sharing End to End (IS E2E) Increment : The Navy's Resources, Requirements, Review Board (R3B) approved the MDA Capabilities Based Assessment (CBA) as briefed in Januar 2009. The MDA CBA identified capability gaps that will be resolved through non-materiel and materiel solutions. Pre-acquisition activities such as the development of an IS E2E Initial Capabilities Document (ICD) and the completion of FAS and I E2E Analysis of Alternatives (AoA), will identify potential materiel solutions and form the requirements basis for the development of the FAS and IS E2E increments.

**Deep Lightning Bolt / Rapid Capability Development (DLB/RCD):** $6.912M

A transformational initiative for the Navy with two key objectives focused on the introduction of technologies that can immediately enhance the Navy's Sea Power 21 objectives: (1) the introduction of technology (that will transition into programs o record) that will push the evolution of doctrine, tactics, training and procedures to support network centric warfare and operations; and (2) to support the acceleration of acquisition of key capabilities to support the global war on terrorism and sustained military operations.

**CLASSIFICATION:**

Exhibit R-3 Cost Analysis (page 1)

DATE: **May 2009**

| APPROPRIATION/BUDGET ACTIVITY | PROGRAM ELEMENT | PROJECT NUMBER AND NAME |
|---|---|---|
| **RDT&E, N / BA- 5** | 0604231N Tactical Command System | 2351 - MDA |

| Cost Categories | Contract Method & Type | Performing Activity & Location | Total PY s Cost | FY 09 Cost | FY 09 Award Date | FY 10 Cost | FY 10 Award Date | FY 11 Cost | FY 11 Award Date | Cost to Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Primary Hardware Dev - MDA | Various | Various | | | | | | | | | | |
| Primary Hardware Dev - DLB/RCD | | | | | | 1.670 | Various | | | | | |
| Ancillary Hardware Development | | | | | | | | | | | | |
| Aircraft Integration | | | | | | | | | | | | |
| Ship Integration | Various | Various | | | | | | | | | | |
| Shore Integration | | | | | | | | | | | | |
| Systems Engineering -MDA | | | | | | 2.291 | Various | | | | | |
| Systems Engineering - DLB/RCD | Various | TBD | | | | 0.721 | Various | | | | | |
| Systems Engineering | Various | Various | | | | | | | | | | |
| Award Fees | | | | | | | | | | | | |
| Subtotal Product Development | | | 0.000 | 0.000 | | 4.682 | | | | | | |

Remarks:

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Development Support -MDA | Various | Various | | | | 1.013 | Various | | | | | |
| Software Development-MDA | Various | Various | | | | | | | | | | |
| Integrated Logistics Support - MDA | | | | | | | | | | | | |
| Integrated Logistics Support - DLB/RCD | TBD | TBD | | | | 0.297 | Various | | | | | |
| Configuration Management - MDA | | | | | | 0.145 | Various | | | | | |
| Configuration Management - DLB/RCD | TBD | TBD | | | | 0.196 | Various | | | | | |
| Development Support - DLB/RCD | TBD | TBD | | | | 0.297 | Various | | | | | |
| Sys Req Analysis/Sys Eng-MDA | Various | Various | | | | 1.323 | Various | | | | | |
| Software Development - DLB/RCD | TBD | TBD | | | | 2.639 | Various | | | | | |
| Software Develop, Integrate, Demonstrate, Field - MDA Prototypes | TBD | TBD | | | | | | | | | | |
| Subtotal Support | | | 0.000 | 0.000 | | 5.910 | | | | | | |

Remarks:

Exhibit R-3, Project Cost Analysis

**CLASSIFICATION:**

Exhibit R-3 Cost Analysis (page 2)

DATE: **May 2009**

| APPROPRIATION/BUDGET ACTIVITY | PROGRAM ELEMENT | PROJECT NUMBER AND NAME |
|---|---|---|
| **RDT&E, N / BA-5** | 0604231N Tactical Command System | 2351 - MDA |

| Cost Categories | Contract Method & Type | Performing Activity & Location | Total PY s Cost | FY 09 Cost | FY 09 Award Date | FY 10 Cost | FY 10 Award Date | FY 11 Cost | FY 11 Award Date | Cost to Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| System Test & Evaluation-MDA | Various | Various | | | 10/08 | 3.401 | Various | | | | | |
| Accelerating Joint Warfighting Capability | Various | Various | | | | | | | | | | |
| Imp FORCEnet Req (Fn Comp) | | | | | | | | | | | | |
| DoN Transformation (Strategic Planning) | | | | | | | | | | | | |
| Developmental Test & Evaluation - DLB/RCD | TBD | TBD | 0.000 | 0.000 | Various | 0.593 | Various | | | | | |
| GFE | | | | | | | | | | | | |
| Subtotal T&E | | | 0.000 | 0.000 | | 3.994 | | | | | | |
| Remarks: | | | | | | | | | | | | |
| Acquisition Managment | | | | | | 3.377 | Various | | | | | |
| Government Engineering Support | | | | | | | | | | | | |
| Program Management Support - DLB/RCD | | | | | | 0.297 | Various | | | | | |
| Travel - DLB/RCD | | | | | | 0.172 | Various | | | | | |
| Program Management Support-MDA | | | | | | 2.717 | Various | | | | | |
| Travel-MDA | | | | | | 0.050 | | | | | | |
| Subtotal Management | | | 0.000 | 0.000 | | 6.613 | | | | | | |
| Remarks: | | | | | | | | | | | | |
| Total Cost | | | 0.000 | 0.000 | | 21.199 | | | | | | |
| Remarks: | | | | | | | | | | | | |

Exhibit R-3, Project Cost Analysis

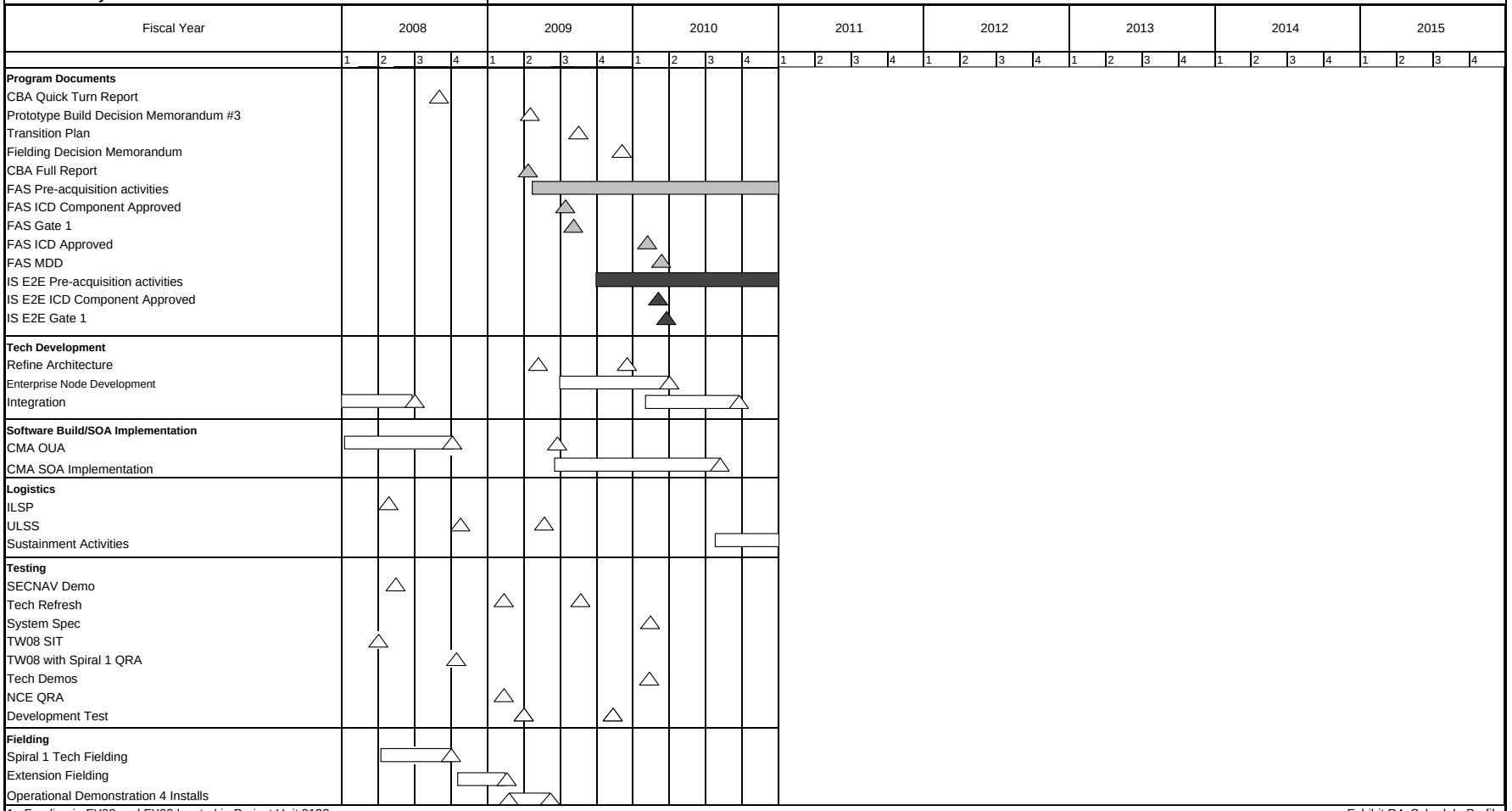
**CLASSIFICATION:**

EXHIBIT R4, Schedule Profile

DATE: **May 2009**

APPROPRIATION/BUDGET ACTIVITY
**RDT&E / Navy BA-5**

PROJECT NUMBER AND NAME
2351 - MDA




1. Funding in FY08 and FY09 located in Project Unit 9123.

Exhibit R4, Schedule Profile

CBA - Capabilities Based Assessment
CMA - Comprehensive Maritime Awareness
FAS - Fusion and Analysis Services
ICD - Initial Capabilities Document
ILSP - Integrated Logisitics Support Plan
IS E2E - Information Sharing End-to-End
MDA - Maritime Domain Awareness
OUA - Operational Utility Assessment
NCE - Non-classified Environment
QRA - Quick Reaction Assessment
SOA - Service Oriented Architecture
SIT - Systems integration Testing
TW - Trident Warrior
ULSS - User's Logistics Support Summary

△ **MDA Spiral 1 Prototype**
△ **FAS Increment**
▲ **IS E2E Increment**

**CLASSIFICATION:**

| Exhibit R-4a, Schedule Detail | | | | | | | DATE: **May 2009** | |
|---|---|---|---|---|---|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY | PROJECT NUMBER AND NAME | | | | | | | |
| **RDT&E / Navy BA-5** | 2351 - MDA | | | | | | | |
| Schedule Profile | FY 2008 | FY 2009 | FY 2010 | | | | | |
| **Program Documents** | | | | | | | | |
| CBA Quick Turn Report | 3Q | | | | | | | |
| Prototype Build Decision Memorandum #3 | | 2Q | | | | | | |
| Transition Plan | | 3Q | | | | | | |
| Fielding Decision Memorandum | | 4Q | | | | | | |
| CBA Full Report | | 2Q | | | | | | |
| FAS Pre-acquisition activities | | 2Q-4Q | 1Q-4Q | | | | | |
| FAS ICD Component Approved | | 3Q | | | | | | |
| FAS Gate 1 | | 3Q | | | | | | |
| FAS ICD JROC Approved | | | 1Q | | | | | |
| FAS MDD | | | 1Q | | | | | |
| IS E2E Pre-acquisition activities | | 4Q | 1Q-4Q | | | | | |
| IS E2E ICD Component Approved | | | 1Q | | | | | |
| IS E2E Gate 1 | | | 1Q | | | | | |
| **Tech Development** | | | | | | | | |
| Refine Architecture | | 2Q & 4Q | | | | | | |
| Enterprise Node Development | | 3Q-4Q | 1Q | | | | | |
| Integration | 1Q-2Q | | 1Q-3Q | | | | | |
| **Software Build/SOA Implementation** | | | | | | | | |
| CMA OUA | 1Q-3Q | 2Q | | | | | | |
| CMA SOA Implementation | | 2Q-4Q | 1Q-3Q | | | | | |
| **Logistics** | | | | | | | | |
| ILSP | 2Q | | | | | | | |
| ULSS | 4Q | 2Q | | | | | | |
| Sustainment Activities | | | 3Q-4Q | | | | | |
| **Testing** | | | | | | | | |
| SECNAV Demo | 2Q | | | | | | | |
| Tech Refresh | | 1Q & 3Q | | | | | | |
| System Spec | | | 1Q | | | | | |
| TW08 SIT | 2Q | | | | | | | |
| TW08 with Spiral 1 QRA | 4Q | | | | | | | |
| Tech Demos | | | 1Q | | | | | |
| NCE QRA | | 1Q | | | | | | |
| Development Test | | 1Q & 4Q | | | | | | |
| **Fielding** | | | | | | | | |
| Spiral 1 Tech Fielding | 2Q-3Q | | | | | | | |
| Extension Fielding | 4Q | 1Q | | | | | | |
| Operational Demonstration 4 Installs | | 1Q-2Q | | | | | | |

**CLASSIFICATION:**

| EXHIBIT R-2a, RDT&E Project Justification | | | | | | DATE: **May 2009** | | |
|---|---|---|---|---|---|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY | PROGRAM ELEMENT NUMBER AND NAME | | | PROJECT NUMBER AND NAME | | | | |
| **RDT&E, N / BA-5** | 0604231N - Tactical Command System | | | 3032 NTCSS Enterprise Database and MLDN | | | | |
| COST ($ in Millions) | FY 2008 | FY 2009 | FY 2010 | | | | | |
| Project Cost | 0.049 | 0.050 | 6.358 | | | | | |
| RDT&E Articles Qty | | | | | | | | |

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

The development of an enterprise database for the Naval Tactical Command Support System (NTCSS) application suite will place all NTCSS databases into a similar structure and single location, allowing for greater asset visibility and management. Maritime Logistics Data Network (MLDN) will facilitate the movement of administrative workload from ships to shore. Funding supports design, development, and testing of enterprise database and MLDN technologies for two components of NTCSS mission requirements: maintenance management and supply chain management. FY2008 and FY2009 funding supports program management and system engineering efforts for the transition of prior fiscal years' developments in NTCSS enterprise database and MLDN technologies. Those technologies include a single database for organizational maintenance activities in Navy/Marine Corps aviation and single direction replication of shipboard data to an ashore activity. FY2010 funding supports the design, development, and testing of One NALCOMIS (Naval Aviation Logistics Command/Management Information System), which will consolidate organizational and depot level aviation maintenance into a single system and aviation enterprise database. This will provide for streamlined maintenance management for the Navy and Marine Corps aviation. FY2010 funding also supports the development of acquisition documents for the Multi-UIC (Unit Identification Code) Milestone B decision. Multi-UIC will provide a consolidated database by combining logistics data from multiple fleet operational platforms into a single database ashore with bi-directional, transactional MLDN capabilities.

**CLASSIFICATION:**

| EXHIBIT R-2a, RDT&E Project Justification | | DATE: **May 2009** |
|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY | PROGRAM ELEMENT NUMBER AND NAME | PROJECT NUMBER AND NAME |
| **RDT&E, N / BA-5** | 0604231N - Tactical Command System | 3032 NTCSS Enterprise Database and MLDN |

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

| Maintenance Management Capability | FY 08 | FY 09 | FY 10 | |
|---|---|---|---|---|
| Accomplishments/Effort/Subtotal Cost | 0.024 | 0.025 | 4.900 | |
| RDT&E Articles Quantity | | | | |

FY08 Accomplishments: Conducted program management and system engineering efforts for the transition of prior fiscal years' developments in NTCSS (Naval Tactical Command Support System) enterprise database and MLDN (Maritime Logistics Data Network) technologies to One NALCOMIS (Naval Aviation Logistics Command/Management Information System).

FY09: Continue program management and system engineering efforts for the transition of prior fiscal years' developments in NTCSS enterprise database and MLDN technologies to One NALCOMIS.

FY10: Design and development efforts for NTCSS One NALCOMIS to consolidate unit and depot level aviation maintenance into a single system that will provide for streamlined maintenance management for the Navy and Marine Corps aviation. The current system and database structure for the NALCOMIS unit level application is different from the depot level one. The One NALCOMIS design and development efforts will leverage the best from each system into a single aviation maintenance system.

**CLASSIFICATION:**

| EXHIBIT R-2a, RDT&E Project Justification | | DATE: **May 2009** |
|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY | PROGRAM ELEMENT NUMBER AND NAME | PROJECT NUMBER AND NAME |
| **RDT&E, N / BA-5** | 0604231N - Tactical Command System | 3032 NTCSS Enterprise Database and MLDN |

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

| Supply Chain Management Capability | FY 08 | FY 09 | FY 10 | |
|---|---|---|---|---|
| Accomplishments/Effort/Subtotal Cost | 0.025 | 0.025 | 1.458 | |
| RDT&E Articles Quantity | | | | |

FY08 Accomplishments: Conducted program management and system engineering efforts for the transition of prior fiscal years' developments in NTCSS (Naval Tactical Command Support System) enterprise database and MLDN (Maritime Logistics Data Network) technologies.

FY09: Continue program management and system engineering efforts for the transition of prior fiscal years' developments in NTCSS enterprise database and MLDN technologies.

FY10: Develop acquisition documents in accordance with revised DoD 5000 for Multi-UIC Milestone B decision. Acquisition documents include Analysis of Alternatives (AoA), Program Life Cycle Cost Estimate (PLCCE), Concept of Operations (CONOPS), Capability Development Document (CDD), and Information Support Plan (ISP).

**CLASSIFICATION:**

| EXHIBIT R-2a, RDT&E Project Justification | | DATE: **May 2009** |
|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY | PROGRAM ELEMENT NUMBER AND NAME | PROJECT NUMBER AND NAME |
| **RDT&E, N / BA-5** | 0604231N - Tactical Command System | 3032 NTCSS Enterprise Database and MLDN |

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

| Line Item No. & Name | FY 2008 | FY 2009 | FY 2010 | To Complete | Total Cost |
|---|---|---|---|---|---|
| OPN 2611 Naval Tactical Command Support System | 32.806 | 29.564 | 35.933 | | Cont. |

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

The NTCSS Acquisition Strategy is defined in its Single Acquisition Management Plan (SAMP) dated 7 May 99.

**(U) E. MAJOR PERFORMERS:**

The government will compete and award contracts for Engineering Development Models (EDMs) system development and demonstration. For next phase, there will be a down select to complete development, integration and test solutions that can be configured to satisfy a broad-range of platforms. SPAWAR Systems Centers will provide support as Government testing facilities.

**CLASSIFICATION:**

| Exhibit R-3 Cost Analysis (page 1) | | | | | | | | | | | | DATE: **May 2009** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY<br>**RDT&E, N / BA-5** | | | PROGRAM ELEMENT<br>0604231N - Tactical Command System | | | PROJECT NUMBER AND NAME<br>3032 NTCSS Enterprise Database and MLDN | | | | | | |
| Cost Categories | Contract Method & Type | Performing Activity & Location | Total PY s Cost | FY 09 Cost | FY 09 Award Date | FY 10 Cost | FY 10 Award Date | | | Cost to Complete | Total Cost | Target Value of Contract |
| Primary Hardware Development | VARIOUS | VARIOUS | 0.668 | | | | | | | | | |
| Ancillary Hardware Development | | | | | | | | | | | | |
| Systems Engineering | VARIOUS | VARIOUS | 1.000 | 0.050 | VARIOUS | 0.150 | VARIOUS | | | | | |
| Licenses | VARIOUS | VARIOUS | 0.700 | | | | | | | | | |
| Tooling | | | | | | | | | | | | |
| GFE | | | | | | | | | | | | |
| Award Fees | | | | | | | | | | | | |
| Subtotal Product Development | | | 2.368 | 0.050 | | 0.150 | | | | | | |
| Remarks: | | | | | | | | | | | | |
| Development Support | | | | | | | | | | | | |
| Software Development | VARIOUS | VARIOUS | 10.716 | | | 6.008 | VARIOUS | | | | | |
| Training Development | | | | | | | | | | | | |
| Integrated Logistics Support | VARIOUS | VARIOUS | 0.000 | | | 0.100 | VARIOUS | | | | | |
| Configuration Management | VARIOUS | VARIOUS | 0.460 | | | | | | | | | |
| Technical Data | VARIOUS | VARIOUS | 0.200 | | | | | | | | | |
| GFE | | | | | | | | | | | | |
| Subtotal Support | | | 11.376 | 0.000 | | 6.108 | | | | | | |
| Remarks: | | | | | | | | | | | | |

Exhibit R-3, RDTEN Cost Analysis

**CLASSIFICATION:**

| Exhibit R-3 Cost Analysis (page 2) | | | | | | | | | | DATE: **May 2009** | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY<br>**RDT&E, N / BA-5** | | | PROGRAM ELEMENT<br>0604231N - Tactical Command System | | | | | PROJECT NUMBER AND NAME<br>3032 NTCSS Enterprise Database and MLDN | | | | |
| Cost Categories | Contract Method & Type | Performing Activity & Location | Total PY s Cost | FY 09 Cost | FY 09 Award Date | FY 10 Cost | FY 10 Award Date | | | Cost to Complete | Total Cost | Target Value of Contract |
| Developmental Test & Evaluation | VARIOUS | VARIOUS | 0.000 | | | | | | | | | |
| Operational Test & Evaluation | WX | NAWC-AD | 0.585 | | | | | | | | | |
| Live Fire Test & Evaluation | | | | | | | | | | | | |
| Test Assets | | | | | | | | | | | | |
| Tooling | | | | | | | | | | | | |
| GFE | | | | | | | | | | | | |
| Subtotal T&E | | | 0.585 | 0.000 | | 0.000 | | | | | | |
| Remarks: | | | | | | | | | | | | |
| Contractor Engineering Support | VARIOUS | VARIOUS | 0.896 | | | | | | | | | |
| Government Engineering Support | VARIOUS | VARIOUS | 0.279 | | | | | | | | | |
| Program Management Support | VARIOUS | VARIOUS | 0.000 | | | 0.100 | VARIOUS | | | | | |
| Travel | | | | | | | | | | | | |
| Subtotal Management | | | 1.175 | 0.000 | | 0.100 | | | | | | |
| Remarks: | | | | | | | | | | | | |
| Total Cost | | | 15.504 | 0.050 | | 6.358 | | | | | | |
| Remarks | | | | | | | | | | | | |

Exhibit R-3, RDTEN Cost Analysis

| EXHIBIT R4, Schedule Profile | | | | | | | | | | | | | | | | | | | | | | | | | DATE: May 2009 | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY<br>RDT&E,N/BA-5 | PROGRAM ELEMENT NUMBER AND NAME<br>0604231N - Tactical Command System | | | | | | | | | | | | | | | | | | | | | | | | PROJECT NUMBER AND NAME<br>3032 NTCSS Enterprise Database and MLDN | | | | | | | |
| Fiscal Year | 2008 | | | | 2009 | | | | 2010 | | | | | | | | | | | | | | | | | | | | | | | |
| | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | | | | | | | | | | | | | | | | | | | | |
| **Milestones**<br>One-NALCOMIS | | | | | | | | | | | | **INC 1 MS B** ▲ | | | | | | | | | | | | | | | | | | | | |
| Multi-UIC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Engineering Milestones**<br>One-NALCOMIS | | | | | | | | | **INC 1 SCR** ▲ | | | | | | | | | | | | | | | | | | | | | | | |
| Multi-UIC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Test & Evaluation Milestones**<br>One-NALCOMIS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Multi-UIC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Product Deliveries**<br>One-NALCOMIS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Multi-UIC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

**Exhibit R-4, Schedule Profile**

| Exhibit R-4a, Schedule Detail | | | | | | DATE: May 2009 | | |
|---|---|---|---|---|---|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY<br>RDT&E,N/BA-5 | PROGRAM ELEMENT NUMBER AND NAME<br>0604231N - Tactical Command System | | | | | PROJECT NUMBER AND NAME<br>3032 NTCSS Enterprise Database and MLDN | | |
| Schedule Profile | FY 2008 | FY 2009 | FY 2010 | | | | | |
| | | | | | | | | |
| **One NALCOMIS** | | | | | | | | |
| **Increment 1** | | | | | | | | |
| Milestone B | | | Q4 | | | | | |
| Milestone C | | | | | | | | |
| SCR | | | Q1 | | | | | |
| TRR | | | | | | | | |
| RRR | | | | | | | | |
| DT | | | | | | | | |
| OT | | | | | | | | |
| Delivery | | | | | | | | |
| **Increment 2** | | | | | | | | |
| Milestone B | | | | | | | | |
| Milestone C | | | | | | | | |
| SCR | | | | | | | | |
| TRR | | | | | | | | |
| RRR | | | | | | | | |
| DT | | | | | | | | |
| OT | | | | | | | | |
| Delivery | | | | | | | | |
| | | | | | | | | |
| **Multi-UIC** | | | | | | | | |
| **Increment 1** | | | | | | | | |
| Milestone B | | | | | | | | |
| Milestone C | | | | | | | | |
| SCR | | | | | | | | |
| TRR | | | | | | | | |
| RRR | | | | | | | | |
| DT | | | | | | | | |
| OT | | | | | | | | |
| Delivery | | | | | | | | |
| **Increment 2** | | | | | | | | |
| Milestone B | | | | | | | | |
| Milestone C | | | | | | | | |
| SCR | | | | | | | | |
| TRR | | | | | | | | |
| RRR | | | | | | | | |
| DT | | | | | | | | |
| OT | | | | | | | | |
| Delivery | | | | | | | | |

**CLASSIFICATION:**

| EXHIBIT R-2a, RDT&E Project Justification | | | DATE: **May 2009** |
|---|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY<br>**RDT&E, N / BA-5** | PROGRAM ELEMENT NUMBER AND NAME<br>0604231N Tactical Command System | PROJECT NUMBER AND NAME<br>9123 FORCEnet | |

| COST ($ in Millions) | FY 2008 | FY 2009 | FY 2010 | | | | | |
|---|---|---|---|---|---|---|---|---|
| Project Cost | **19.108** | **33.721** | **6.758** | | | | | |
| RDT&E Articles Qty | | | | | | | | |

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

FORCEnet is the Navy and Marine Corps initiative to achieve Department of Navy (DoN)/Department of Defense (DoD) Transformation, Joint/Allied/Coalition Interoperability, implementing Maritime Domain Awareness (MDA), and Net-Centric Operations/Warfare (NCO/W). FORCEnet is the driver of Sea Power 21, Naval Power 21, the Naval Operating Concept for Joint Operations, and the Department of the Navy's Naval Transformation Roadmap.

The FORCEnet project line funds the following efforts:

(1) Department of Navy (DoN) C4ISR Transformation/Strategic Planning within DoN/Joint/Department of Defense (DoD) Framework: Assesses existing and emerging capabilities, develops and evaluates Navy-wide policies, plans, requirements, and compliance; develops integration and investment strategies; and accelerates innovation, testing, assessment and fielding of material and non-material solutions for enhanced operational capability, Joint/Allied/Coalition interoperability and application/enforcement of enterprise requirements/architectures/standards toward greater NCO/W capability. Supports Navy implementation of Maritime Domain Awareness (MDA) capability, Maritime Operations Centers (MOC), and enterprise network efforts.

(2) Accelerating Joint Warfighting Capability (Trident Warrior): Enables early delivery of NCO/W capabilities to the warfighter via Fleet-directed Trident Warrior operational events with a strong emphasis on delivering Maritime Domain Awareness (MDA) and Maritime Headquarters (MHQ) with Maritime Operations Center (MOC) capability. Integrates stand-alone systems and efforts to achieve substantially enhanced capability, demonstrates/tests these capabilities in both laboratory and operational environments, and evaluates their effectiveness. Develops supporting concepts/Concept of Operations (CONOPS) to improve warfighting effectiveness. Coordinates FORCEnet efforts with other Service/Joint/DoD/National efforts to ensure Joint/Interagency/Allied/Coalition applicability and interoperability.

(3) Implementing Sea Power-21 /FORCEnet Requirements: Implements and assesses FORCEnet requirements in DoN acquisition programs. Develops supporting architectures/standards and data strategies. Develops FORCEnet Implementation Tool Suite (FITS). Develops FORCEnet compliance services. Develops FORCEnet compliance test procedures and test methodologies. Refines FORCEnet compliance and defines levels of compliance. Conducts compliance testing reviews and reports on compliance adherence to Office of the Chief of Naval Operations (OPNAV), Naval Network Warfare Command (NETWARCOM), Assistant Secretary of the Navy Research, Development and Acquisition (ASN RDA) and the FORCEnet Coordination Council. Execute Systems Engineering Technical Authority and process implementation including execution of Systems Engineering Technical Reviews throughout all Navy POR lifecycles in the FORCEnet domain.

(4) Systems Requirements Analysis / Systems Engineering (formerly Osprey Hawksbill): Supports requirements analysis and systems engineering of systems under development by DoN/DoD. Funding supports the technical and systems engineering expertise required for C4ISR systems technical requirements generation, requirements tracking, architecture development, and detailed analyses on various warfare systems under development to determine if the required C4 infrastructure, resources, and other capabilities are aligned and synchronized. The funding also supports the systems engineering for the synthesis of current network-centric, C4ISR programs of record with existing/emerging capabilities.

(5) Maritime Domain Awareness (MDA): Maritime Domain Awareness is the effective understanding of anything associated with the global maritime domain that could impact the security, safety, economy or environment. MDA objectives include the persistent monitoring of and ability to access and maintain data on vessels, cargo, people, and infrastructure; and the ability to collect, fuse, analyze, and disseminate information to decision makers to facilitate effective understanding. This initiative will identify, develop and transition data fusion, replication, sharing and assessment tools to achieve MDA. The initiative extends the reach of MDA tools and capabilities to include the Atlantic approaches to the United States and the European Area of Responsibility (AOR).

This MDA focused Deep Lightning Bolt (DLB) warfighting enhancements are designed to achieve an all-source distributed MDA capability, leveraging existing MDA Navy and Non-Navy initiatives in the developmental phase and ensuring the best products transition to strategic, operational and tactical users as well as further development of MDA prototypes. The products will support all-source data fusion and mining, replication of MDA related data gathered in various operations such as expanded-maritime interdiction operations (E-MIO), sharing information with allies, and developing subject matter expertise and assessment tools to achieve MDA and enhance operational decision making.

**CLASSIFICATION:**

| EXHIBIT R-2a, RDT&E Project Justification | | DATE: **May 2009** |
|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY | PROGRAM ELEMENT NUMBER AND NAME | PROJECT NUMBER AND NAME |
| **RDT&E, N / BA-5** | 0604231N Tactical Command System | 9123 FORCEnet |

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

| FORCEnet | FY08 | FY09 | FY10 | |
|---|---|---|---|---|
| Accomplishments/Effort/Subtotal Cost | 12.084 | 14.399 | 6.758 | |
| RDT&E,N Articles Quantity | | | | |

FY08 Accomplishments:

1) DoN Transformation within Joint/DoD Framework (Strategic Planning): Refined expanded Joint/Interagency/Allied/Coalition coordination/policy/planning. Convened the fourth annual FORCEnet Requirements/Capabilities and Compliance (FRCC) Review Board and FRCC Flag Board. Validated FORCEnet Requirements/Architectures/Standards Spiral/Iteration. Updated integrated FORCEnet Consolidated Compliance Checklist (FCCC) and continued to refine/expand DoN-wide implementation of FORCEnet/FCCC compliance under SECNAVINST 5000.2D.

2) Accelerating Joint Warfighting Capability (Trident Warrior): Explored Trident Warrior 08 (TW08) in Commander Third Fleet (C3F)/Commander Seventh Fleet (C7F) Area of Responsibility (AOR) using Carrier Strike Group/Expeditionary Strike Group (CSG/ESG) units with continued Coalition presence. Investigated operational level implementation of Maritime Domain Awareness (MDA), Maritime Headquarters (MHQ) Maritime Operations Center (MOC), Coalition, Global Information Grid (GIG) and Network Centric Enterprise Services (NCES) technologies and associated Tactics, Techniques, and Procedures (TTPs) and Concept of Operations (CONOPS). Provided support for the spiral development of programs of record. Planned and executed TW08 operational events to accelerate transition of FORCEnet capability to the Fleet. Provided leave-behind capability for one deployment cycle of successful technologies for extended operational assessment. Completed analysis of TW08 experiment results and deliver Military Utility Assessment to Naval Network Warfare Command (NETWARCOM), Commander Fleet Forces Command (CFFC) and the Sea Trial ESG. Began planning for Trident Warrior 09. Developed FY 09-10 FORCEnet Sea Trial Plan.

3) Implementing FORCEnet Requirements: Performed Program of Records compliance reviews using validated assessment tools, compliance test procedures/methodologies. Reported Program of Record level of FORCEnet compliance to OPNAV, NETWARCOM, ASN(RD&A) and the FORCEnet Coordination Council. Delivered two FORCEnet Implementation Tool Suite Spirals. Continued to refine/expand the FORCEnet Capabilities Development Process, integrated FORCEnet Compliance into the DoN Planning/Programming/Budgeting/Execution (PPBE) and Joint Capabilities Integration and Development System processes. Implemented Netcentric Data Strategy across all Navy led Communities of Interest.

4) Osprey Hawksbill - This is a classified program.

**CLASSIFICATION:**

| EXHIBIT R-2a, RDT&E Project Justification | | DATE: **May 2009** |
|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY | PROGRAM ELEMENT NUMBER AND NAME | PROJECT NUMBER AND NAME |
| **RDT&E, N / BA-5** | 0604231N Tactical Command System | 9123 FORCEnet |

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

FY09 Plans:

1) DoN Transformation within Joint/DoD Framework (Strategic Planning): Refine expanded Joint/Interagency/Allied/Coalition coordination/policy/planning. Convene the fifth annual FRCC Review Board and FRCC Flag Board. Validate FORCEnet Requirements/Architectures/Standards Spiral/Iteration. Update integrated FORCEnet Consolidated Compliance Checklist (FCCC) and continue to refine/expand DoN-wide implementation of FORCEnet/FCCC compliance under SECNAVINST 5000.2D .

2) Accelerating Joint Warfighting Capability (Trident Warrior): Explore Trident Warrior 09 (TW09) in Commander Second Fleet (C2F)/Commander Sixth Fleet (C6F) Area of Responsibility (AOR) using Carrier Strike Group/Expeditionary Strike Group (CSG/ESG) units with continued Coalition presence. Investigate operational level implementation of Maritime Domain Awareness (MDA), Maritime Headquarters (MHQ) Maritime Operations Center (MOC), Coalition, Global Information Grid (GIG) and Network Centric Enterprise Services (NCES) technologies and associated Tactics, Techniques, and Procedures (TTPs) and Concept of Operations (CONOPS). Provide support for the spiral development of programs of record. Support MDA Spiral 2 testing. Plan and execute TW09 operational events to accelerate transition of FORCEnet capability to the Fleet. Provide leave behind capability for one deployment cycle of successful technologies for extended operational assessment. Complete analysis of TW09 experiment results and deliver Military Utility Assessment to Naval Network Warfare Command (NETWARCOM), Commander Fleet Forces Command (CFFC) and the Sea Trial ESG. Begin planning for Trident Warrior 10. Develop FY 10-11 FORCEnet Sea Trial Plan.

3) Implementing FORCEnet Requirements: Perform POR compliance reviews using validated assessment tools, compliance test procedures/methodologies. Report POR level of FORCEnet compliance to OPNAV, NETWARCOM, ASN(RD&A) and the FORCEnet Coordination Council. Deliver two FORCEnet Implementation Tool Suite Spirals. Continue to refine/expand the FORCEnet Capabilities Development Process, integrating FORCEnet Compliance into the DoN Planning/Programming/Budgeting/Execution (PPBE) and JCIDS processes. Implement Netcentric Data Strategy across all Navy led Communities of Interest.

4) Systems Requirements Analysis / Systems Engineering (formerly Osprey Hawksbill): Conducts requirements analysis and systems engineering of systems under development by DoN/DoD. Provides technical and systems engineering expertise required for C4ISR systems technical requirements generation and tracking, architecture development, systems analysis to evaluate alignment and synchronization of infrastructure, resources and other existing/developing systems. Funding also supports the systems engineering for the synthesis of current net-centric C4ISR systems with existing and emerging C4ISR systems.

**CLASSIFICATION:**

| EXHIBIT R-2a, RDT&E Project Justification | | DATE: **May 2009** |
|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY<br>**RDT&E, N / BA-5** | PROGRAM ELEMENT NUMBER AND NAME<br>0604231N Tactical Command System | PROJECT NUMBER AND NAME<br>9123 FORCEnet |

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

FY10 Plans:

1) Department of the Navy (DON) C4ISR Transformation: Within the Department of Defense (DOD), Joint Staff (JS), and Combatant Commander management of Joint Capability Portfolios, assesses existing and emerging capabilities in selected operating environments, develops integration plans, execute systems engineering reviews and investment strategies, and accelerates innovation, technology insertion and incorporation of material and non-material solutions for enhanced, Joint operational capabilities in Net-Centric Operations Warfare (NCOW). Supports Navy implementation of Maritime Domain Awareness (MDA), Standing Joint Force Headquarters, Maritime Operations Centers (MOC) and coalition/Allied operations. (Portion realigned to Program Element 0604707N, Project 02144 SPACE AND ELECTRONIC WARFARE ENGINEERING starting in FY10.)

2) Accelerating Joint Warfighting Capability (Trident Warrior): Finalize analysis of TW09 experiment to result in delivery of Military Utility Assessment to Naval Network Warfare Command (NETWARCOM), Commander Fleet Forces Command (CFFC) and the Sea Trial ESG. Explore Trident Warrior 10 (TW10) in Commander Third Fleet (C3F)/Commander Seventh Fleet (C7F) Area of Responsibility (AOR) using Carrier Strike Group/Expeditionary Strike Group (CSG/ESG) units with continued Coalition presence. For TW10 direct, coordinate, assist and supervise participant compliance with specific goal identification, risk identification, and experiment plan including data requirements and collection on schedule and in accordance with standardized procedures derived from experimentation best practices. Assist participants to achieve required installation and security certifications, accreditations and approvals. Conduct Risk Reduction Limited Objective Experiment in a lab environment to ensure systems will have no negative impact on operational unit readiness and that systems provide valid data to support analysis and subsequent decisions. Assist in installation of experimental systems including conduct of a groom of ship operational systems to ensure they are operating as designed to support acquisition of valid data, providing subject matter experts (SMEs) to maintain core ship services during the experiment period. Provide independent experts in experimentation to coordinate the establishment and compliance with experiment plans and to lead analysis effort and provide unbiased assessment to decision makers. Provide results to government sponsors to support the program's Planning, Programming, and Budgeting System (PPBS) and engineering decisions. Anticipate some areas of investigation to be operational level implementation of Maritime Domain Awareness (MDA), Maritime Headquarters (MHQ) Maritime Operations Center (MOC), Coalition, Global Information Grid (GIG) and Network Centric Enterprise Services (NCES) technologies and associated Tactics, Techniques, and Procedures (TTPs) and Concept of Operations (CONOPS). Plan and execute TW10 operational events to accelerate transition of FORCEnet capability to the Fleet. Provide leave-behind capability for one deployment cycle of successful technologies for extended operational assessment. Begin planning for Trident Warrior 11: Solicit participation of government sponsored and industry sponsored technologies responsive to identified Naval capability gaps. Select technologies for participation in numbers supportable within resources, approximately 100 initiatives. Develop FY 11-12 FORCEnet Sea Trial Plan.

3) Implementing FORCEnet Requirements: Realigned to Program Element 0604707N, Project 02144 Space and Electronic Warfare Engineering starting in FY10.

4) Systems Requirements Analysis / Systems Engineering (formerly Osprey Hawksbill): Conducts requirements analysis and systems engineering of systems under development by DoN/DoD. Provides technical and systems engineering expertise required for C4ISR systems technical requirements generation and tracking, architecture development, systems analysis to evaluate alignment and synchronization of infrastructure, resources and other existing/developing systems. Funding also supports the systems engineering for the synthesis of current net-centric C4ISR systems with existing and emerging C4ISR systems.

**CLASSIFICATION:**

| EXHIBIT R-2a, RDT&E Project Justification | | DATE: **May 2009** |
|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY | PROGRAM ELEMENT NUMBER AND NAME | PROJECT NUMBER AND NAME |
| **RDT&E, N / BA-5** | 0604231N Tactical Command System | 9123 FORCEnet |

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

| Maritime Domain Awareness (MDA) | FY08 | FY09 | FY10 | FY11 |
|---|---|---|---|---|
| Accomplishments/Effort/Subtotal Cost | 7.024 | 19.322 | 0.000 | |
| RDT&E,N Articles Quantity | | | | |

FY08 Accomplishments:
Leveraged Comprehensive Maritime Awareness (CMA) Joint Capabilities Technology Demonstration's (JCTD) results and technologies and other MDA related initiatives to provide baseline capabilities for all-source data fusion and mining, sharing information with allies, and developing subject matter expertise and assessment tools to achieve MDA and enhance operational decision making. Based on OPNAV N6/N2 requirements determinations, conducted systems engineering, test and evaluation, fielding and training activities in support of MDA Prototype delivery . MDA Prototype Nodes were fielded at PACFLT, NAVCENT and NAVEUR/C6F and provided access to enhanced vessel tracking and long term storage and access to historical vessel tracking data to include Automatic Identification System (AIS) unclassified data sharing for greater fidelity in automated anomaly detection and enhanced pattern recognition, trend analysis. Culmination of efforts was successful Quick Reaction Assessment (QRA) conducted by OPTEVFOR on MDA Prototype.

FY09 Plans:

MDA
The MDA Prototype, including the Non-Classified Enclave (NCE), delivers enhanced vessel tracking, anomaly detection, threat detection, expanded maritime interdiction capabilities and improved access to national databases for Naval and Coast Guard activities supporting National Maritime Security. Specific planned activities for FY09 that support the MDA prototype include; implementing the FY08 QRA findings and recommendations, systems engineering and test and evaluation activities, deploying Forward System Engineering Teams (FSETS) to maintain prototype capabilities at fielded sites; delivering enhanced training materials, refresher training and long-term training development, logistics support and other program management support. Conduct CMA JCTD Operational Utility Assessment (OUA). Based on OUA findings, technology maturity, adaptability and expansion potential, Assistant Secretary of the Navy for Research Development and Acquisition (ASNRDA) will determine final Fielding Decision. Conduct successful Quick Reaction Assessment (QRA) on Non-Classified Enclave (NCE). Deployed NCE to Africa Partnership Station onboard USS Nashville. Plan to relocate NCE hosting facility to SOUTHCOM.

Deep Lightning Bolt / Rapid Capability Development (DLB/RCD)

The DLB/RCD is a transformational initiative for the Navy with two key objectives focused on the introduction of technologies that can immediately enhance the Navy's Sea Power 21 objectives: (1) the introduction of technology (that will transition into programs of record) that will push the evolution of doctrine, tactics, training and procedures to support network centric warfare and operations; and (2) the introduction of OPNAV and SECNAV instructions to support the acceleration of acquisition of key capabilities to support the global war on terrorism and sustained military operations. )

FY10 Plans: Funds realigned to Project Unit 2351.

**CLASSIFICATION:**

| EXHIBIT R-2a, RDT&E Project Justification | | DATE: **May 2009** |
|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY<br>**RDT&E, N / BA- 5** | PROGRAM ELEMENT NUMBER AND NAME<br>0604231N Tactical Command System | PROJECT NUMBER AND NAME<br>9123 FORCEnet |

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

Line Item No. & Name

Not Applicable

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

Not Applicable

**CLASSIFICATION:**

Exhibit R-3 Cost Analysis (page 1)

DATE: **May 2009**

| APPROPRIATION/BUDGET ACTIVITY | PROGRAM ELEMENT | PROJECT NUMBER AND NAME |
|---|---|---|
| **RDT&E, N / BA- 5** | 0604231N Tactical Command System | 9123 FORCEnet |

| Cost Categories | Contract Method & Type | Performing Activity & Location | Total PY s Cost | FY 09 Cost | FY 09 Award Date | FY 10 Cost | FY 10 Award Date | FY 11 Cost | FY 11 Award Date | Cost to Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Primary Hardware Dev - DLB/RCD | Various | Various | 0.000 | 1.421 | Various | | | | | | | |
| Ancillary Hardware Development | | | | | | | | | | | | |
| Aircraft Integration | | | | | | | | | | | | |
| Ship Integration | Various | Various | 0.935 | | | | | | | | | |
| Shore Integration | | | | | | | | | | | | |
| Systems Engineering - DLB/RCD | Various | Various | 0.000 | 0.650 | Various | | | | | | | |
| Systems Engineering | Various | Various | 1.600 | | | | | | | | | |
| Award Fees | | | | | | | | | | | | |
| Subtotal Product Development | | | 2.535 | 2.071 | | 0.000 | | | | | | |

Remarks: Funding for DLB/RCD for FY10 and FY11 realigned to Project Unit 2351.

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Development Support | Various | Various | | 2.700 | | | | | | | | | |
| Software Development | Various | Various | | 2.900 | | | | | | | | | |
| Integrated Logistics Support - DLB/RCD | Various | Various | | 0.000 | 0.250 | Various | 0.000 | Various | | | | | |
| Configuration Management - DLB/RCD | Various | Various | | 0.000 | 0.165 | Various | 0.000 | Various | | | | | |
| Development Support - DLB/RCD | Various | Various | | 0.000 | 0.250 | Various | 0.000 | Various | | | | | |
| Sys Req Analysis/Sys Eng | Various | Various | | 12.062 | 1.948 | Various | 1.101 | Various | | | | | |
| Software Development - DLB/RCD | Various | Various | | 0.000 | 2.250 | Various | 0.000 | Various | | | | | |
| Software Develop, Integrate, Demonstrate, Field - MDA Prototypes | Various | Various | | | 13.441 | Various | | | | | | | |
| Subtotal Support | | | | 17.662 | 18.304 | | 1.101 | | | | | | |

Remarks:

Exhibit R-3, Project Cost Analysis

**CLASSIFICATION:**

Exhibit R-3 Cost Analysis (page 2)

DATE: **May 2009**

APPROPRIATION/BUDGET ACTIVITY: **RDT&E, N / BA-5**

PROGRAM ELEMENT: 0604231N Tactical Command System

PROJECT NUMBER AND NAME: 9123 FORCEnet

| Cost Categories | Contract Method & Type | Performing Activity & Location | Total PY s Cost | FY 09 Cost | FY 09 Award Date | FY 10 Cost | FY 10 Award Date | FY 11 Cost | FY 11 Award Date | Cost to Complete | Total Cost | Target Value of Contract |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Developmental Test & Evaluation | Various | Various | 1.300 | | | | | | | | | |
| Accelerating Joint Warfighting Capability | Various | Various | 21.754 | 5.315 | Various | 4.616 | Various | | | | | |
| Imp FORCEnet Req (Fn Comp) | Various | Various | 13.571 | 3.867 | Various | | Various | | | | | |
| DoN Transformation (Strategic Planning) | Various | Various | 16.427 | 3.269 | Various | 1.041 | Various | | | | | |
| Developmental Test & Evaluation - DLB/RCD | Various | Various | 0.000 | 0.500 | Various | 0.000 | Various | | | | | |
| GFE | | | | | | | | | | | | |
| Subtotal T&E | | | 53.052 | 12.951 | | 5.657 | | | | | | |

Remarks: Funding for DLB/RCD for FY10 and FY11 realigned to Project Unit 2351.

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Technical Support | Various | Various | 2.124 | | | | | | | | | |
| Government Engineering Support | Various | Various | 3.899 | | | | | | | | | |
| Program Management Support - DLB/RCD | Various | Various | 0.000 | 0.250 | Various | | Various | | | | | |
| Travel - DLB/RCD | Various | Various | 0.000 | 0.145 | Various | | Various | | | | | |
| Program Management Support | Various | Various | 0.800 | | | | | | | | | |
| Travel | Various | Various | 0.299 | | | | | | | | | |
| Subtotal Management | | | 7.122 | 0.395 | | 0.000 | | | | | | |

Remarks:

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Cost | | | 80.371 | 33.721 | | 6.758 | | | | | | |

Remarks:

Exhibit R-3, Project Cost Analysis

**CLASSIFICATION:**

EXHIBIT R4, Schedule Profile

DATE: **May 2009**

APPROPRIATION/BUDGET ACTIVITY: **RDT&E / Navy BA-5**

PROJECT NUMBER AND NAME: 9123 FORCEnet

| Fiscal Year | 2008 | | | | 2009 | | | | 2010 | | | | 2011 | | | | 2012 | | | | 2013 | | | | 2014 | | | | 2015 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QTR | 6.24 | 12.5 | 12 | 19.4 | 19.8 | 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 |
| **TRIDENT WARRIOR** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TW[CFY-1] Military Utility Assessment | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TW [CFY] Execution | | △ | △ | | | △ | △ | | | △ | △ | | | | | | | | | | | | | | | | | | | | | |
| TW[CFY+1] Concept Development Conferences | | △ | | | | △ | | | | △ | | | | | | | | | | | | | | | | | | | | | | |
| TW[CFY+1] Data Calls & CAA | | △ | | | | △ | | | | △ | | | | | | | | | | | | | | | | | | | | | | |
| TW[CFY+1] Initial Planning Conferences | | | | △ | | | | △ | | | | △ | | | | | | | | | | | | | | | | | | | | |
| TW[CFY] Mid-Term Planning Conferences | △ | | | | △ | | | | △ | | | | | | | | | | | | | | | | | | | | | | | |
| TW[CFY] Final Planning Conferences | | △ | | | | △ | | | | △ | | | | | | | | | | | | | | | | | | | | | | |
| TW [CFY] Military Utility Assessment | | | | △ | | | | △ | | | | △ | | | | | | | | | | | | | | | | | | | | |
| **STRATEGIC PLANNING** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NNFE CFT Participation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Interoperability across Navy Report | | △ | | | | △ | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Interoperability across Joint Report | | | | △ | | | | △ | | | | | | | | | | | | | | | | | | | | | | | | |
| **Implementing FORCEnet Requirements (FORCEnet Compliance)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MS Reviews | △ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ISP Review | △ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C5I Mod Inputs | △ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NCIDS Profiles | △ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Verification/Validation Assessments | △ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NNFE Mod/LCS & Certs/Test | △ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Imp/SETR | △ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **FITS **** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FITS OIPT | | △ | | △ | | △ | | △ | | | | | | | | | | | | | | | | | | | | | | | | |
| S/W Test | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FITS IOC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FITS FOC | △ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Data Refresh | | | | △ | | | | △ | | | | | | | | | | | | | | | | | | | | | | | | |
| FITS Spiral Delivery | | △ | | △ | | △ | | △ | | △ | | △ | | | | | | | | | | | | | | | | | | | | |
| **DLB/RCD** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Planning Conference | | | | | △ | | | △ | **FY 10 Funding realigned to Project Unit 2351.** | | | | | | | | | | | | | | | | | | | | | | | |
| Program/Project Review | | | | | △ | △ | △ | △ | | | | | | | | | | | | | | | | | | | | | | | | |
| Project Testing | | | | | | | | △ | | | | | | | | | | | | | | | | | | | | | | | | |

** FITS and Strategic Planning efforts realigned to Program Element 0604707N, Project 02144 SPACE AND ELECTRONIC WARFARE ENGINEERING starting in FY10

Exhibit R-4, Schedule Profile

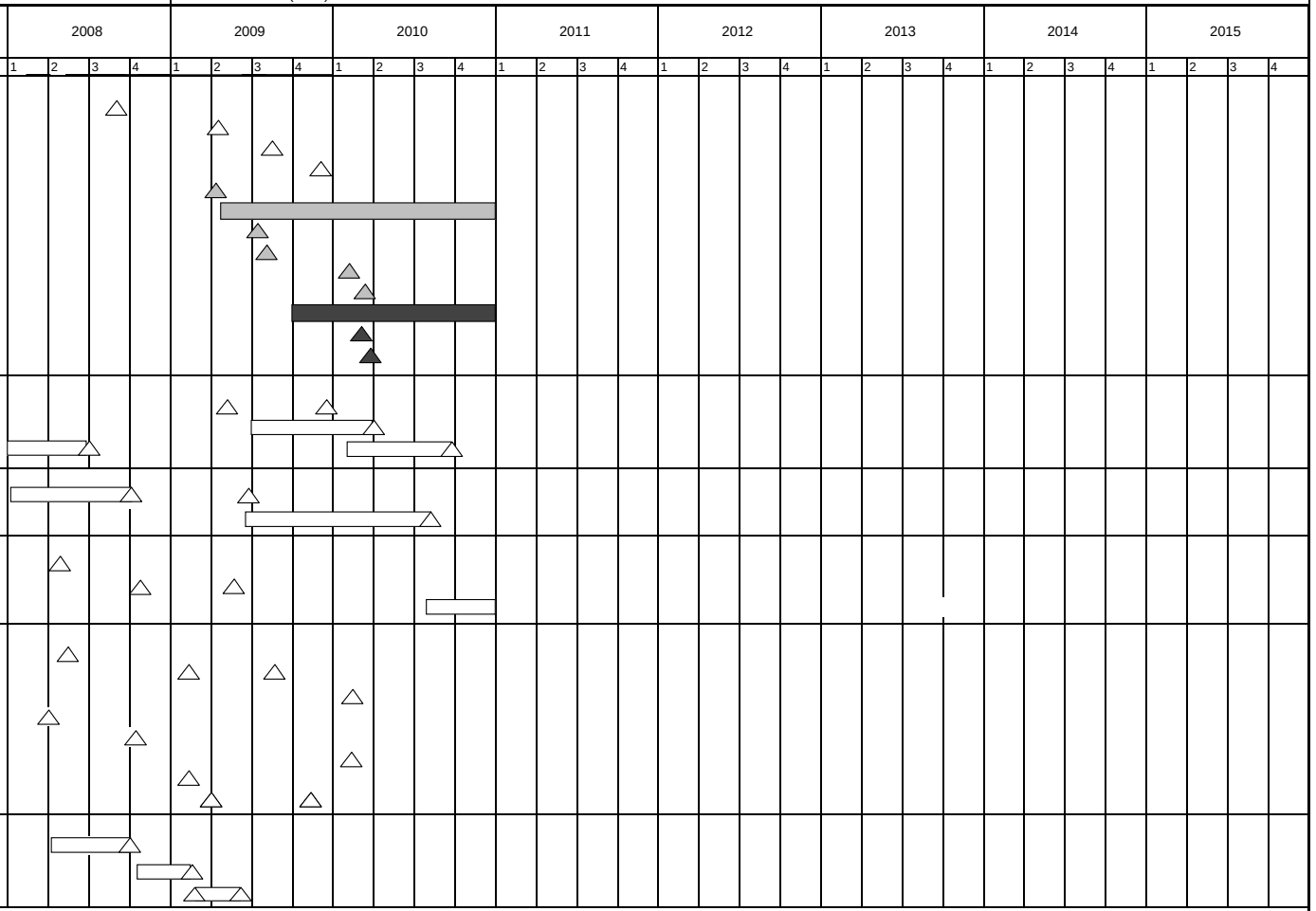
**CLASSIFICATION:**

EXHIBIT R4, Schedule Profile

DATE: **May 2009**

APPROPRIATION/BUDGET ACTIVITY
**RDT&E / Navy BA-5**

PROJECT NUMBER AND NAME
9123 - FORCEnet (MDA)




1. Funding in FY10 located in Project Unit 2351

Exhibit R4, Schedule Profile

CBA - Capabilities Based Assessment
CMA - Comprehensive Maritime Awareness
FAS - Fusion and Analysis Services
ICD - Initial Capabilities Document
ILSP - Integrated Logisitics Support Plan
IS E2E - Information Sharing End-to-End
MDA - Maritime Domain Awareness
MUA - Military Utility Assessment
NCE - Non-classified Environment
QRA - Quick Reaction Assessment
SOA - Service Oriented Architecture
SIT - Systems integration Testing
TW - Trident Warrior
ULSS - User's Logistics Support Summary

△ **MDA Spiral 1 Prototype**
△ **FAS Increment**
△ **IS E2E Increment**

**CLASSIFICATION:**

| Exhibit R-4a, Schedule Detail | | | | | | | DATE: **May 2009** | |
|---|---|---|---|---|---|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY<br>**RDT&E / Navy BA-5** | PROJECT NUMBER AND NAME<br>9123 FORCEnet | | | | | | | |
| Schedule Profile | FY 2008 | FY 2009 | FY 2010 | | | | | |
| **TRIDENT WARRIOR [CFY = Current Fiscal Year]** | | | | | | | | |
| TW[CFY-1] Military Utility Assessment | | | | | | | | |
| TW[CFY] Execution | 2Q/3Q | 2Q/3Q | 2Q/3Q | | | | | |
| TW[CFY+1] Concept Development Conferences | 2Q | 2Q | 2Q | | | | | |
| TW[CFY+1] Data Calls & CAA | 2Q | 2Q | 2Q | | | | | |
| TW[CFY+1] Initial Planning Conferences | 4Q | 4Q | 4Q | | | | | |
| TW[CFY] Mid-Term Planning Conferences | 1Q | 1Q | 1Q | | | | | |
| TW[CFY] Final Planning Conferences | 2Q | 2Q | 2Q | | | | | |
| TW[CFY] Military Utility Assessment | 4Q | 4Q | 4Q | | | | | |
| **STRATEGIC PLANNING** | | | | | | | | |
| NNFE CFT Participation | 1Q - 4Q | 1Q - 4Q | 1Q - 4Q | | | | | |
| Interoperability across Navy Report | 2Q | 2Q | | | | | | |
| Interoperability across Joint Report | 4Q | 4Q | | | | | | |
| **Implementing FORCEnet Requirements (FORCEnet Compliance)** | | | | | | | | |
| MS Reviews | 1Q - 4Q | 1Q - 4Q | 1Q - 4Q | | | | | |
| ISP Review | 1Q - 4Q | 1Q - 4Q | 1Q - 4Q | | | | | |
| C5I Mod Inputs | 1Q - 4Q | 1Q - 4Q | 1Q - 4Q | | | | | |
| NCIDS Profiles | 1Q - 4Q | 1Q - 4Q | 1Q - 4Q | | | | | |
| Verification/Validation Assessments | 1Q - 4Q | 1Q - 4Q | 1Q - 4Q | | | | | |
| NNFE Mod/LCS & Certs/Test | 1Q - 4Q | 1Q - 4Q | 1Q - 4Q | | | | | |
| Imp/SETR | 1Q - 4Q | 1Q - 4Q | 1Q - 4Q | | | | | |
| **FITS **** | | | | | | | | |
| FITS OIPT | 2Q/4Q | 2Q/4Q | | | | | | |
| S/W Test | 1Q/3Q | 1Q/3Q | | | | | | |
| FITS IOC | | | | | | | | |
| FITS FOC | 1Q | | | | | | | |
| Data Refresh | 4Q | 4Q | | | | | | |
| FITS Spiral Delivery | 2Q/4Q | 2Q/4Q | 2Q/4Q | | | | | |
| **DLB/RCD** | | | | | | | | |
| Planning Conference | | Q1, Q4 | | | | | | |
| Program/Project Review | | 1Q - 4Q | | | | | | |
| Project Testing | | Q4 | | | | | | |

**FY 10 to FY 11 Funding realigned to Project Unit 2351.**

** FITS and Strategic Planning efforts realigned to Program Element 0604707N, Project 02144 SPACE AND ELECTRONIC WARFARE ENGINEERING starting in FY10

**CLASSIFICATION:**

| Exhibit R-4a, Schedule Detail | | | | | | DATE: **May 2009** | |
|---|---|---|---|---|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY | PROJECT NUMBER AND NAME | | | | | | |
| **RDT&E / Navy BA-5** | 9123 - FORCEnet (MDA) | | | | | | |
| Schedule Profile | FY 2008 | FY 2009 | FY 2010 | FY 2011 | FY 2012 | FY 2013 | FY 2014 | FY 2015 |
| **Program Documents** | | | | | | | | |
| CBA Quick Turn Report | 3Q | | | | | | | |
| Prototype Build Decision Memorandum #3 | | 2Q | | | | | | |
| Transition Plan | | 3Q | | | | | | |
| Fielding Decision Memorandum | | 4Q | | | | | | |
| CBA Full Report | | 2Q | | | | | | |
| FAS Pre-acquisition activities | | 2Q-4Q | 1Q-4Q | | | | | |
| FAS ICD Component Approved | | 3Q | | | | | | |
| FAS Gate 1 | | 3Q | | | | | | |
| FAS ICD JROC Approved | | | 1Q | | | | | |
| FAS MDD | | | 1Q | | | | | |
| IS E2E Pre-acquisition activities | | 4Q | 1Q-4Q | | | | | |
| IS E2E ICD Component Approved | | | 1Q | | | | | |
| IS E2E Gate 1 | | | 1Q | | | | | |
| | | | | | | | | |
| **Tech Development** | | | | | | | | |
| Refine Architecture | | 2Q & 4Q | | | | | | |
| Enterprise Node Development | | 3Q-4Q | 1Q | | | | | |
| Integration | 1Q-2Q | | 1Q-3Q | | | | | |
| | | | | | | | | |
| **Software Build/SOA Implementation** | | | | | | | | |
| CMA OUA | 1Q-3Q | 2Q | | | | | | |
| CMA SOA Implementation | | 2Q-4Q | 1Q-3Q | | | | | |
| | | | | | | | | |
| **Logistics** | | | | | | | | |
| ILSP | 2Q | | | | | | | |
| ULSS | 4Q | 2Q | | | | | | |
| Sustainment Activities | | | 3Q-4Q | | | | | |
| | | | | | | | | |
| **Testing** | | | | | | | | |
| SECNAV Demo | 2Q | | | | | | | |
| Tech Refresh | | 1Q & 3Q | | | | | | |
| System Spec | | | 1Q | | | | | |
| TW08 SIT | 2Q | | | | | | | |
| TW08 with Spiral 1 QRA | 4Q | | | | | | | |
| Tech Demos | | | 1Q | | | | | |
| NCE QRA | | 1Q | | | | | | |
| Development Test | | 1Q & 4Q | | | | | | |
| | | | | | | | | |
| **Fielding** | | | | | | | | |
| Spiral 1 Tech Fielding | 2Q-3Q | | | | | | | |
| Extension Fielding | 4Q | 1Q | | | | | | |
| Operational Demonstration 4 Installs | | 1Q-2Q | | | | | | |

**CLASSIFICATION:**

| EXHIBIT R-2a, RDT&E Project Justification | | DATE: **May 2009** |
|---|---|---|
| APPROPRIATION/BUDGET ACTIVITY | PROGRAM ELEMENT NUMBER AND NAME | PROJECT NUMBER AND NAME |
| **RDT&E, N / BA-5** | 0604231N - Tactical Command System | 9999 Various Congressional Increases |

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

| **09C06 Distributed Multi-Platform Sensor Support System** | FY08 | FY09 | FY10 | FY11 |
|---|---|---|---|---|
| Accomplishments/Effort/Subtotal Cost | 2.410 | 0.000 | 0.000 | 0.000 |
| RDT&E Articles Quantity | | | | |

FY08: Anti-submarine warfare (ASW) combat and weapon systems were platform-centric and had limited capability in leveraging and utilizing other ASW sensors and weapon systems. A Detect-to-Engage architecture that integrated battle group sensors, data, control systems, weapons and platforms into a Sensor Grid, USW Control Grid and Weapon Grid is required. This project tied together the network efforts developed by AAC and MSU with the tactical shipboard sonar systems, thereby provided sensor data into the Global Command and Control System-Maritime (GCCS-M) Common Operational Picture.

| **09D68 Intelligence, Surveillance, and Reconnaissance Enhacements** | FY08 | FY09 | FY10 | FY11 |
|---|---|---|---|---|
| Accomplishments/Effort/Subtotal Cost | 0.000 | 3.989 | 0.000 | 0.000 |
| RDT&E Articles Quantity | | | | |

FY09:
Funding is for analysis, development of architectural alternatives, use case generation, CONOPS development, system engineering and prototyping activities necessary to incorporate multiple security enclaves (projected Objective requirement for Increment 2.1 and Threshold requirement for Increment 3.0) into Tactical Operation Centers (TOCs) and Mobile Tactical Operaitons Systems (MTOCs) to support the enhanced ISR capabilities of new and upgraded Maritime Patrol and Reconnaissance Aircraft (MPRA).