Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Navy										DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*				R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*							
COST ($ in Millions)	**FY 2009 Actual**	**FY 2010 Estimate**	**FY 2011 Base Estimate**	**FY 2011 OCO Estimate**	**FY 2011 Total Estimate**	**FY 2012 Estimate**	**FY 2013 Estimate**	**FY 2014 Estimate**	**FY 2015 Estimate**	**Cost To Complete**	**Total Cost**
Total Program Element	110.568	92.379	89.955	0.000	89.955	89.967	79.455	53.321	53.357	Continuing	Continuing
0486: *Tactical Support Center*	8.781	10.852	15.972	0.000	15.972	14.268	7.369	7.132	7.181	Continuing	Continuing
0521: *Shipboard Tactical Intel Proc*	3.803	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	51.330
0709: *GCCS-M Maritime Applications*	19.995	19.275	28.216	0.000	28.216	19.581	20.789	20.272	20.373	Continuing	Continuing
2009: *OSIS Evolutionary Development (OED)*	1.084	1.306	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	31.062
2213: *Mission Planning*	18.440	18.704	16.345	0.000	16.345	15.830	6.477	6.628	6.765	Continuing	Continuing
2307: *Shipboard LAN/WAN*	12.105	1.719	0.464	0.000	0.464	0.360	0.358	0.000	0.000	0.000	51.599
2351: *MDA*	0.000	21.111	19.630	0.000	19.630	15.489	7.670	1.061	0.089	Continuing	Continuing
3032: *NTCSS (Naval Tactical Command Spt Sys)*	0.050	6.332	3.661	0.000	3.661	13.114	26.053	0.603	1.065	Continuing	Continuing
9123: *FORCEnet*	42.321	6.707	5.667	0.000	5.667	11.325	10.739	17.625	17.884	Continuing	Continuing
9999: *Congressional Adds*	3.989	6.373	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	26.949

A. Mission Description and Budget Item Justification

The Tactical Command System 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): GCCS-M is a part of the GCCS Family of Systems (FoS). As such and responding to Congressional direction (Section 247 of Fiscal Year 2010 National Defense Authorization Act (NDAA)), it will form the basis for the evolution of new command and control capabilities and Maritime Tactical Command and Control (C2) capabilities within the Department of Defense (DoD). While sustaining and synchronizing currently fielded operations, the Navy will modernize and enhance current capabilities to support both the Service and Joint war fighter as a part of a synchronized, orchestrated DoD-wide effort that will transition the current GCCS FoS into a more agile, net-centric, services-oriented environment. These efforts will take advantage of both streamlined processes within the requirements community, such as the "IT Box" and ongoing changes in the information technology acquisition process, as described in chapter 6

of the March 2009 Report of the Defense Science Board (DSB) Task Force on DoD Policies and Procedures for the Acquisition of Information Technology (Section 804 of Fiscal Year 2010 NDAA).

Mission Planning: The Joint Mission Planning System (JMPS) is the Chief of Naval Operation's (CNOs) 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, United States Air Force, United States Army, and United States Special Operations Command. 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 policy, the next JMPS architecture version (Framework V 1.4) will support net-centric goals by providing route "publish and subscribe" capabilities.

Tactical Support Center: The Tactical Mobile 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 (formerly Tactical Support Centers), the Mobile Tactical Operations Centers (formerly Mobile Operations Control Centers), and the Joint Mobile Ashore Support Terminal. TacMobile C2 systems are based on the Global Command and Control System - Maritime architecture which is Defense Information Infrastructure Common Operating Environment compliant.

Trusted Information Systems: Radiant Mercury is a secure information platform that 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 products and other non/semi-formatted file types. It enables combat commanders and operational commanders, afloat and ashore, to disseminate and receive critical operational and intelligence information with coalition and allied forces.

Shipboard Local Area Network (LAN)/Wide Area Network (WAN) : Integrated Shipboard Network System (ISNS): ISNS provides Navy ships with reliable, high-speed SECRET and UNCLASSIFIED LANs, providing the network infrastructure (switches and drops to the PC), Basic Network Information Distribution Services and access to the Defense Information Systems 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, Global Command and Control System - Maritime, Defense Messaging System.

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Navy Standard Integrated Personnel System, Naval Mission Planning System, Theater Battle Management Core Systems, and Tactical Tomahawk Weapons Control System. 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 which is the mechanism to deliver the FORCEnet interface to the warfighter. The Afloat Core Services (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. 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 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 will begin migrating 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: ACS; and Multi-Level Security /Cross Domain Solutions. 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 WAN to include CENTRIXS Four-Eyes, Global Counter Terrorism Task Force, North Atlantic Treaty Organization Information Data Transfer System, Multinational Coalition Force - Iraq, bilateral networks such as CENTRIXS-J (Japan) and CENTRIXS-K (Korea), and Communities Of Interest virtual networks such as Coalition Naval Forces - U.S. Central Command (CENTCOM) (CNFC), and Cooperative Maritime Forces - Pacific. 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 WAN and incorporates the Common PC Operating System Environment 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 as means to share a Common Operational Picture and exchange information using Collaboration At Sea. The CENTRIXS program uses both Commercial Off The Shelf 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.

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.

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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 will start migrating to ISNS Inc 2/ Consolidated Afloat Networks and Enterprise Services (CANES) in FY09. Integrated Shipboard Network Systems (ISNS) Inc 2/Consolidated Afloat Networks and Enterprise Services (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)/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 operating system, office automation, security, and other basic network services used by all hosted applications. Funding supports the design, development, and testing of SubLAN for addition of capabilities in support of migration to the CANES program effort.

Naval Tactical Command Support System (NTCSS) Enterprise Database and Maritime Logistics Data Network (MLDN): The NTCSS is a multi-function program designed to provide standard tactical support information systems to various afloat and associated shore-based fleet activities. The mission is to provide the Navy and Marine Corps with an integrated, scalable system that supports the management of logistical information, personnel, material and funds required to maintain and operate ships, submarines, and aircraft.

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) Project 2351 and 9123 (FY09 only)): MDA 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. Additionally, MDA will ensure capability integration with related activities and sites (both technologies and facilities). 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, development

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and replication of MDA related data gathered in various operations such as Expanded-Maritime Intercept Operations, 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: 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: FY09 includes: Congressional increase for Intelligence, Surveillance, and Reconnaissance Enhancements. FY10 includes: Congressional increase for Intelligence, Surveillance, and Reconnaissance Enhancements and Shipboard Wireless Network.

B. Program Change Summary ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Previous President's Budget	102.164	86.462	0.000	0.000	0.000
Current President's Budget	110.568	92.379	89.955	0.000	89.955
Total Adjustments	8.404	5.917	89.955	0.000	89.955
• Congressional General Reductions		-0.401			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	-0.082			
• Congressional Adds		6.400			
• Congressional Directed Transfers		0.000			
• Reprogrammings	9.831	0.000			
• SBIR/STTR Transfer	-1.428	0.000			
• Program Adjustments	0.000	0.000	89.955	0.000	89.955
• Rate/Misc Adjustments	0.001	0.000	0.000	0.000	0.000

Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2009	FY 2010
Project: 9999: *Congressional Adds*		
Congressional Add: *Shipboard Wireless Network*	0.000	2.390
Congressional Add: *ISR Enhancements*	3.989	3.983
Congressional Add Subtotals for Project: 9999	3.989	6.373
Congressional Add Totals for all Projects	3.989	6.373

Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Navy	DATE: February 2010
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Change Summary Explanation

Technical: Not applicable.

Schedule: See below

Mission Planning (Project 2213):
Acquisition Milestones:
JMPS 1.2.4 OTRR (4Q FY08 - 1Q FY09) - Operational Testing (OT) resources not available during 4Q FY08.
JMPS V.1.4 OTRR (4Q FY10 - 4Q FY11) - Slipped due to prime contractor delays in meeting exit criteria for Preliminary Design Review (PDR).
JMPS V.1.2.4 OT (4Q FY08 - 1Q - 2Q FY09) - Corresponding change in OT schedule to reflect change in OTRR schedule.
JMPS V1.4 OT (4Q FY11 - 2Q FY12 to 1Q-2Q FY12) - FW 1.4 Development Schedule Slip.

Test and Evaluation Milestones:
JMPS 1.2.4 MPE Integration/Valid. (2Q FY09 - 4Q FY13) - JMPS 1.2.4 Integration will continue to be fielded longer than planned due to FW 1.4 schedule slips.
JMPS 1.4 MPE Integration/Valid. (1Q FY11 - 4QQ FY15) - Slipped due to prime contractor delays in meeting exit criteria for PDR (Preliminary Design Review).
JMPS V1.4 FQT (1Q FY 11 - 1Q FY 11) - Slipped due to Air Force Contracting Delays.
JMPS V1.4 DT (2Q FY09 - 2Q FY 11) - Sipped due to Air Force Contracting Delays.

Production Milestones:
JMPS V1.4 IOC (3QFY13 - 3Q FY12) - FW 1.4 IOC established during Integrated Baseline Review (IBR) completed May 09.

TACTICAL SUPPORT CENTER (Project 0486): MSC decision is scheduled for 4th Qtr FY11. Operational Test is scheduled for 2nd Qtr FY12. FRP is scheduled for 4th Qtr FY12.

Naval Tactical Command Support System (NTCSS) (Project 3032): Increasing requirements in information security and functional capability have required shifts in the approach for systems design and development. The updated schedule reflects a more integrated plan to accomplish refined requirements, fact-of-life changes, and modernization of the NTCSS system.

Global Command and Control System - Maritime (GCCS-M) (Project 0709): In August 2009, the MDA approved an alternate material solution of Increment 2 was approved to support the requirements of Group Level ships, Unit Level ships, and submarines. This solution was based on the Office of Naval Research (ONR)-funded project extensible Common Operational Picture (XCOP). The Increment 2 Milestone C decision is scheduled in FY2010.

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Radiant Mercury (RM) - Schedule slip of RM Version 5.0 from 4QFY09 to 3QFY10 caused by delay in award of follow-on developer contract.

CENTRIXS (Project 2307): The CENTRIXS-M program achieved MS C in July 2009 and the schedule has been modified to reflect a shift for Increment 1 (Inc 1) Development Test/Operational Test (DT/OT) Force Level (FL) from Jul 2010 (Q4 FY10) to Feb 2010 (2QFY10) and Increment 1 FL Full Rate Production (FRP) from 2Q FY10 to 3Q FY11]. Inc 1 FL Initial Operating Capability (IOC) is updated from (2Q FY11) to (2/3Q FY10) and Inc 1 Unit Level (UL) FRP is updated from (1Q FY12) to (4Q FY11). Inc 1 Low Rate Initial Production (LRIP) deliveries shift reflects updated production leadtime. Inc 1 DT/OT UL is scheduled for Jul 2010 (3QFY10) with a Inc 1 UL Fielding Decision scheduled from 4QFY11 to 1Q/FY12. Full transition to CANES Inc 1 occurs in FY 2010. COMPOSE 4.0 Software deliveries changed from 2Q FY10 to 4Q FY11 and has been updated to reflect current software fielding schedule.

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.

SubLAN (Project 2307): Multi Level Security requirements have been removed from SubLAN POR.

Maritime Domain Awareness (MDA) (Project 2351): MDA program schedule has been modified to reflect an acceleration of the MDA Fielded Enterprise Node integration to complete in FY11. This includes planned and approved enhancements to the MDA Fielded baseline to optimize performance with the Enterprise Node while realizing life-cycle cost savings through reduced hardware footprint at deployed locations. For Expanded-Maritime Intercept Operations (EMIO), the changes reflect the completion of the End to End EMIO capability enhancements which resulted in reduced time to capture, transmit, analyze and act on maritime boarding information from days to hours. The schedule also reflects increased testing and validation of EMIO capabilities supporting transition. The schedule has been updated to facilitate Requirement Manager's incorporation of stakeholder inputs.

FY11 from previous President's Budget is shown as zero because no FY11-15 data was presented in President's Budget 2010.

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COST ($ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
0486: *Tactical Support Center*	8.781	10.852	15.972	0.000	15.972	14.268	7.369	7.132	7.181	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

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), the Mobile Tactical Operations Centers (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 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 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.

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The TacMobile program was designated as an Acquisition Category III weapons system program July 2004 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 FOS, operational C4I integration support for new and upgraded MPRA such as MMA, AIP, BAM UAS as well as other Command and Control (C2) and fighter aircraft are primary objectives.

FY11 Base: Funding 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.

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Net Ready	0.806	0.978	0.829	0.000	0.829
FY 2009 Accomplishments: Communications: Began Integration of Wide Band Line of Sight (LOS) and Beyond Line of Sight (BLOS) Tactical Edge Networking Waveforms to support Internet Protocol (IP) connected end-to-end Net Centric Under Sea Warfare (USW) communications between TacMobile units and Maritime Patrol and Reconnaissance Aircraft (MPRA) enabling networked reach back, data sharing and real time collaborative analysis. Studied Integration of 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.					
FY 2010 Plans: Communications: Continue with Integration Wide Band LOS and BLOS Tactical Edge Networking Waveforms to meet migration of Defense Information Systems Agency (DISA) interoperability					

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
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. Begin research and coordination 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. *FY 2011 Base Plans:* Base - Communications: Continue to investigate technology readiness and overall maturity Level of Joint Tactical Radio System (JTRS) and other software definable radio options for applicability for incorporation into TacMobile communications architecture. Begin test and evaluate Cipher Text Routing Wide Band BLOS IP solutions. Begin integration of Converged IP interoperability standards to the Wide Band BLOS networking systems. Commence investigation of requirements for Range of Warfare Command and Control (ROWC2) reach-back Internet Protocol (IP) connectivity options.					
Fast Time Analysis System (FTAS)/Tactical Mobile Acoustic Support System (TACMASS) *FY 2009 Accomplishments:* Analysis: Began integration 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. Began integration of advanced Non-Acoustic Electro Optical/ Infrared (EO/IR) Analysis capabilities to support emerging and developing Maritime Patrol and Reconnaissance Intelligence Surveillance and Reconnaissance (ISR) sensor systems. *FY 2010 Plans:* Analysis: Continue Integration of Advanced Multi-static Acoustic Analysis Capabilities into Tactical Mobile Acoustic Support System (TacMASS). Continue integration of Non-Acoustic Electro Optical/ Infrared (EO/IR) Analysis capabilities. Begin to Develop/Integrate auto detection, tracking and screening capabilities to reduce acoustic analyst workload and increase ASW probability of detection. Begin to develop concurrent processing enhancements to increase processing capacity and reduce	0.717	0.951	0.745	0.000	0.745

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
processing time to support increased volume of recorded MPRA ASW acoustic data. Begin to integrate advanced Joint and Common display formats to enhance system Operator Machine Interface (OMI). *FY 2011 Base Plans:* Analysis: Continue test, assess and evaluate advanced multi static, digital and concurrent processing capabilities, automation capabilities, and advanced display formats. Begin development of enhanced broadband processing capabilities. Integrate Acoustic Intercept System updated screeners. Integrate analysis capabilities to support evolving data standards and media interfaces for Maritime Patrol Aircraft ISR and ASW sensor systems. Begin development and integration of Improved and Advanced Multi-Static Acoustic Analysis capabilities required to support fielding in P-8A Increment 2.0.					
NORAD-NORTHCOM Surveillance *FY 2011 Base Plans:* Commense NORAD-NORTHCOM Surveillance Tactical Command Systems.	0.000	0.000	7.100	0.000	7.100
Aircraft Interfaces *FY 2009 Accomplishments:* Media: Continued to develop new ground support capabilities to support capabilities being developed for Maritime Patrol and Reconnaissance Aircraft (MPRA). Continued 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), and other Command and Control (C2) and intelligence, Surveillance and Reconnaissance (ISR) platforms, to ensure platform Warfighting wholeness. Began integration and evaluation 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. Continued research and study	0.538	0.864	0.643	0.000	0.643

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 0486: *Tactical Support Center*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
of 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). *FY 2010 Plans:* Media: Continues to 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. *FY 2011 Base Plans:* Media: Continues to Test and Evaluate 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 begin design for those interfaces required to support Broad Area Maritime Surveillance Unmanned Aerial System (BAMS UAS) to ensure platform Warfighting wholeness. Continue to evaluate and assess network-centric interfaces. Begin review and analysis of integration requirements for P-8A MMA Increment 2.0, and MPRA Special Project Aircraft (SPA) . Continue to evaluate and assess those interfaces required to support Broad Area Maritime Surveillance Unmanned Aerial System (BAMS UAS).					
Tactical Data Links *FY 2009 Accomplishments:* Tactical Data Links: Continue integration of software and communications capabilities to provide interoperable IP addressable high bandwidth data transmission to support persistent C2, sensor,	0.161	0.210	0.169	0.000	0.169

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
and interagency information capabilities. Continued development and began integration of a portable LINK-16 capability solution. *FY 2010 Plans:* Tactical Data Links: Continue to 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. *FY 2011 Base Plans:* Continue to explore emergent TADIL standards and MPRA interface requirements, and develop Analysis of Alternatives (AoA) for TacMobile TADIL transition roadmap. Conduct integrated testing of Tactical Data Links (TADILs) in conjunction with P-8A operational evaluation. Review and assess potential Link-11 sundown replacement options.					
Enterprise Solutions *FY 2009 Accomplishments:* Computers/Knowledge Management: Continued integration of Tactical Operations Center (TOC) and Mobile Tactical Operations Center (MTOC) configurations. Began development of next generation software and hardware that is modular and scalable, surgeable and sustainable, promoting responsiveness to mission requirements. Continued development of replacement for obsolete, maintenance-intensive hardware, eliminate legacy systems and technologies to reduce logistics tail and ease training burden. Studied integration of 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.	0.921	1.301	1.040	0.000	1.040

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 0486: *Tactical Support Center*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2010 Plans: Continue of 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 Intelligence Surveillance Reconnaissance (ISR) data volume, provide redundant back-up and disaster recovery Quality of Service (QOS). Integrate architectural updates to maintain evolving information assurance standards. *FY 2011 Base Plans:* Continue design tactical mobile networking infrastructure to comply with net ready, DISA and Navy Net-Centric Operating standards that support evolutionary transition to a Services Oriented Architecture with Cross Domain accessibility . Integrate, test and evaluate network infrastructure to meet increased ISR data volume, provide redundant back-up and disaster recovery QOS. Continue 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 . Study data at rest storage, data content management and security requirements for P-8A Increment 2.0 and Broad Area Maritime Surveillance Unmanned Aircraft System mission data. Begin integration of appropriate Distributed Common Ground System Navy (DCGS-N) capabilities.					
Command and Control (C2) *FY 2009 Accomplishments:* Command and Control (C2): Continue to investigate and implemente plans to integrate updates to Intelligence Preparation of the Battle Space capabilities to provide access to Signal Intelligence (SIGINT), Electronic Warfare (EW), and General Military Intelligence database products, into	0.276	0.258	0.202	0.000	0.202

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
TacMobile systems architecture. Investigate, initiate, and implement transition plans to future release of Global Command and Control System (GCCS) or follow on Joint Command and Control capability. *FY 2010 Plans:* Command and Control (C2): Continue to integrate 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. *FY 2011 Base Plans:* Continue to test and evaluate GCCS-M 4.0.1 follow on to provide Intelligence Preparation of the Battle Space capabilities, access to Signal Intelligence (SIGINT), Electronic Warfare (EW), and General Military Intelligence database products, and COP management, display, and processing capabilities that meet information assurance standards and maintain interoperability. Identify and begin integration of follow on Command and Control (C2) prototype. Investigate and study Maritime Patrol and Reconnaissance Force (MPRF) Commander Task Force (CTF) C2 requirements. Investigate and identify C2 track data correlation and fusion tool options.					
Mission Planning *FY 2009 Accomplishments:* Mission Planning: Continue to analyze Fleet requirement to identify unique Maritime Patrol fixed wing mission planning capabilities for P-3C and Command Control Communications Computers Intelligence Surveillance Reconnaissance (C4ISR) Ground Support Systems (Tactical Operations Centers (TOC) and Mobile Tactical Operations Centers (MTOC)). Began development of 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	5.362	1.878	1.383	0.000	1.383

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
planning Tactical Decision Aids as well as ASW Decision Support Systems and Tactical Decision Aids (TDA) under development. Began development of Maritime Patrol weapons planning environment for weapons such as Standoff Land Attack Missile-Extended Range (SLAM-ER). Began integration of 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. *FY 2010 Plans:* Mission Planning: Continue to 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. *FY 2011 Base Plans:* Mission Planning: Continue to Test and Assess Maritime Patrol ASW mission planning user environment. Test and Assess Maritime Patrol weapons planning environment. Test and Assess TacMobile systems Aircraft Pre-flight Insertion Data outputs. Study and evaluate P-8A Increment 2.0 and Broad Area Maritime Surveillance Unmanned Aerial System (BAMS UAS) mission planning, and begin prototype development of alternatives.					
MPRF Interoperability/TacMobile Footprint Reduction *FY 2010 Plans:* Architecture Engineering: Continue to 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.	0.000	4.412	3.861	0.000	3.861

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Analyze convergence of Tactical Operations Center (TOC) and Mobile tactical Operations Center (MTOC) 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. *FY 2011 Base Plans:* Architecture Engineering: Continue to design for integration of modular and hardware independent solutions to reduce mobile system architecture footprint. Begin design for convergence of TSC and MOCC architecture toward common baseline to reduce platform unique training requirements and duplicative life cycle logistics costs. Analyze and assess alternative courses of action for incorporating automation of TacMobile system functionality to reduce operator workload, to offset increasing MPRF Intelligence Surveillance and Reconnaissance (ISR) Mission/Function/Task growth. Begin design to achieve reduction and consolidation of MPRA media interface devices and to streamline data transfer rates.					
Accomplishments/Planned Programs Subtotals	8.781	10.852	15.972	0.000	15.972

C. Other Program Funding Summary ($ in Millions)

N/A

D. Acquisition Strategy

Evolutionary Acquisition - Increment 2.0 provides enhanced Beyond Line of Site Global Information Grid 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. Future Increments will support introduction of the Broad Area Maritime Surveillance Unmanned Aerial System and other Maritime MPRF Family of Systems Aircraft and Systems.

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 0486: *Tactical Support Center*

E. Performance Metrics

The primary metrics utilized by the TacMobile program development process, include achieving/maintaining all required Interface Exchange Requirements (IER's) and successful achievement of 100% of Key Performance Parameters for incremental upgrade threshold capabilities, as observed by Commander Operational Test Force representatives during Operational Evaluation. TacMobile Inc 2.1 development in FY-09 and FY-10 supports increased IER requirements of 486% from 112 to 544. Development to support these new IER's tapers off in FY-11 as the Increment enters the Operational Evaluation Phase. Development focus then shifts to efforts required to retain fielded IER's and update IER's to comply with emerging and evolving standards and evolving operational employment concepts.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 0486: *Tactical Support Center*

Product Development ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Primary Hardware Development	Various/ Various	Various Various	1.226	1.832	Oct 2010	1.670	Oct 2011	0.000		1.670	Continuing	Continuing	Continuing
Systems Engineering	Various/ Various	Various Various	20.212	2.985	Oct 2010	8.932	Oct 2011	0.000		8.932	Continuing	Continuing	Continuing
Training Development	Various/ Various	Various Various	0.200	0.427	Oct 2010	0.384	Oct 2011	0.000		0.384	Continuing	Continuing	Continuing
		Subtotal	21.638	5.244		10.986		0.000		10.986			

Remarks

Support ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Software Development	Various/ Various	Various Various	36.810	2.919	Oct 2010	2.085	Oct 2011	0.000		2.085	Continuing	Continuing	Continuing
Integrated Logistics Support	Various/ Various	Various Various	0.000	0.125	Oct 2010	0.225	Oct 2011	0.000		0.225	Continuing	Continuing	Continuing
Configuration Management	Various/ Various	Various Various	0.000	0.100	Oct 2010	0.175	Oct 2011	0.000		0.175	Continuing	Continuing	Continuing
Technical Data	Various/ Various	Various Various	0.000	0.160	Oct 2010	0.220	Oct 2011	0.000		0.220	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 0486: *Tactical Support Center*

Support ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Studies & Analyses	Various/ Various	Various Various	0.000	0.325	Oct 2010	0.100	Oct 2011	0.000		0.100	Continuing	Continuing	Continuing
		Subtotal	36.810	3.629		2.805		0.000		2.805			

Remarks

Test and Evaluation ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	Various/ Various	SSC LANT Charleston, NC	0.000	0.600	Oct 2010	0.800	Oct 2011	0.000		0.800	Continuing	Continuing	Continuing
Operational Test & Evaluation	Various/ Various	OPTEVFOR Not Specified	3.585	0.226	Oct 2010	0.250	Oct 2011	0.000		0.250	Continuing	Continuing	Continuing
		Subtotal	3.585	0.826		1.050		0.000		1.050			

Remarks

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 0486: *Tactical Support Center*

Management Services ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Contractor Engineering Support	Various/ Various	Various Various	0.050	0.210	Oct 2010	0.220	Oct 2011	0.000		0.220	Continuing	Continuing	Continuing
Government Engineering Support	Various/ Various	SSC LANT Charleston, NC	0.200	0.387	Oct 2010	0.384	Oct 2011	0.000		0.384	Continuing	Continuing	Continuing
Program Management Support	Various/ Various	SSC LANT Charleston, NC	11.641	0.519	Oct 2010	0.494	Oct 2011	0.000		0.494	Continuing	Continuing	Continuing
Travel	Various/ Various	SSC LANT Charleston, NC	0.030	0.037	Oct 2010	0.033	Oct 2011	0.000		0.033	Continuing	Continuing	Continuing
		Subtotal	11.921	1.153		1.131		0.000		1.131			

Remarks

	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	73.954	10.852		15.972		0.000		15.972			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604231N: *Tactical Command System*	**PROJECT** 0486: *Tactical Support Center*

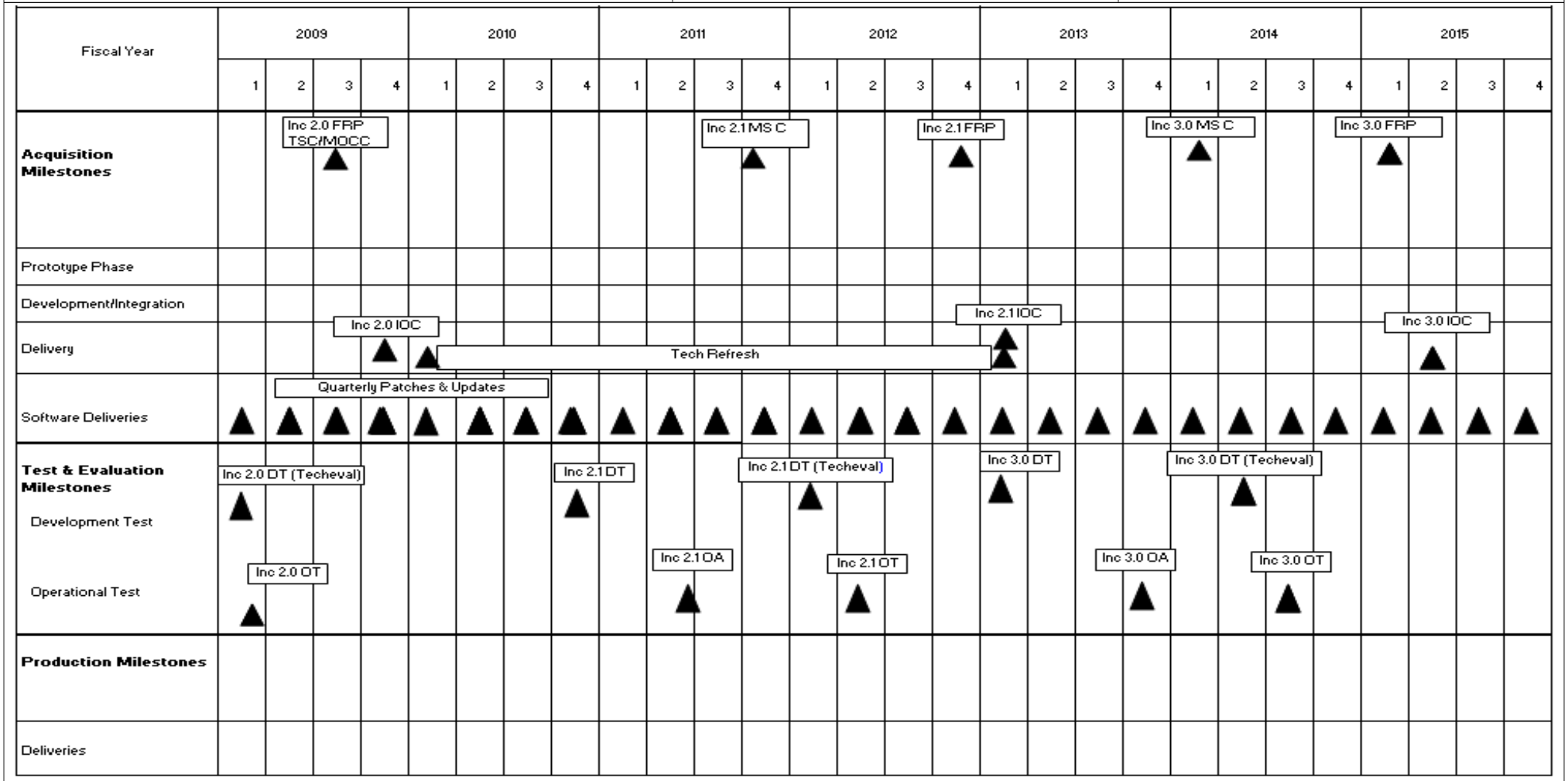

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 0486: *Tactical Support Center*

Schedule Details

	Start		End	
Event	Quarter	Year	Quarter	Year
Software Delivery (Quarterly)	1	2009	4	2015
Developmental Test (Increment 2.0 Tech Eval)	1	2009	1	2009
Operational Test (Increment 2.0)	1	2009	1	2009
Full Rate Production (Increment 2.0)	3	2009	3	2009
Initial Operational Capability (Increment 2.0) (TSC/MOCC)	4	2009	4	2009
Tech Refresh Delivery	1	2010	1	2013
Developmental Test (Increment 2.1)	4	2010	4	2010
Operational Assessment (Increment 2.1)	2	2011	2	2011
Milestone C (Increment 2.1)	4	2011	4	2011
Developmental Test (Increment 2.1 Tech Eval)	1	2012	1	2012
Operational Test (Increment 2.1)	2	2012	2	2012
Full Rate Production (Increment 2.1)	4	2012	4	2012
Initial Operational Capability (Increment 2.1) (TSC/MOCC)	1	2013	1	2013
Developmental Test (Increment 3.0)	1	2013	1	2013
Operational Assessment (Increment 3.0)	4	2013	4	2013
Milestone C (Increment 3.0)	1	2014	1	2014
Developmental Test (Increment 3.0 Tech Eval)	2	2014	2	2014
Operational Test (Increment 3.0)	3	2014	3	2014

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 0486: *Tactical Support Center*

	Start		End	
Event	Quarter	Year	Quarter	Year
Full Rate Production (Increment 3.0)	1	2015	1	2015
Initial Operational Capability (Increment 3.0) (TSC/MOCC)	2	2015	2	2015

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 0521: *Shipboard Tactical Intel Proc*	

COST ($ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
0521: *Shipboard Tactical Intel Proc*	3.803	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	51.330
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

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 also continued 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). 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), Maritime Domain Awareness (MDA), and sharing unique Navy sensor information across the DCGS enterprise.

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

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
C2 Fires Integration	1.017	0.000	0.000	0.000	0.000
FY 2009 Accomplishments: FY09: Continued to conduct operational testing, and provided 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.					

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Imagery/Video Processing *FY 2009 Accomplishments:* FY09: Imagery Exploitation - Continued 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.	0.852	0.000	0.000	0.000	0.000
Threat Order of Battle (OOB) *FY 2009 Accomplishments:* FY09: Continued to conduct operational testing and began 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.	1.915	0.000	0.000	0.000	0.000
Acquisition Workforce Fund *FY 2009 Accomplishments:* Funded Acquisition Workforce Fund.	0.019	0.000	0.000	0.000	0.000
Accomplishments/Planned Programs Subtotals	3.803	0.000	0.000	0.000	0.000

C. Other Program Funding Summary ($ in Millions)

N/A

D. Acquisition Strategy

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 0521: *Shipboard Tactical Intel Proc*

E. Performance Metrics

Milestone reviews.

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 0709: *GCCS-M Maritime Applications*	

COST ($ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
0709: *GCCS-M Maritime Applications*	19.995	19.275	28.216	0.000	28.216	19.581	20.789	20.272	20.373	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

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 mission requirements of the Chief of Naval Operations, Fleet Commanders, Numbered Fleet Commanders, Officer in Tactical Command/Composite Warfare Commander, Type Commanders, Commander Submarine Operations Authority, Commander Task Force, Commander Amphibious Task Force, Commander Landing Force, Ship's Commanding Officer/Tactical Action Officer, and Joint Task Force 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, Navy Status of Forces, 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 war fighting 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 War fighters and significantly improving interoperability. GCCS-M continues a hardware transition to Common Computing Environments such as Consolidated Afloat Networks and Enterprise Services along with a transition of capabilities into a Service Oriented Architecture. Currently, GCCS-M is a key system that is used to support real world operations afloat, ashore, and with tactical/mobile commanders. In FY2011, the program will focus on operational testing of GCCS-M Increment 2 for Force and Unit Level ships. Also, in FY2011, the program will develop, test and accredit GCCS-M Increment 2 for Group Level ships. Finally, in FY2011, the program will continue integration efforts with other C2 / Command, Control, Communication and Computers systems within the Navy and Joint community. FY11 program office will begin development of maritime tactical command and control capabilities in support of fleet requirements.

FY 2011 OCO - N/A

B. Accomplishments/Planned Program ($ in Millions)

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 0709: *GCCS-M Maritime Applications*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
GCCS-M Increment 2	5.928	8.101	24.398	0.000	24.398
FY 2009 Accomplishments: Continued integration and tested Global Command and Control System Maritime (GCCS-M) interfaces with organic shipboard systems to ensure integrity and accessibility of the Global Common Operating Picture (COP) 100K track database. Integrated and tested interfaces with Tactical Data Links. Integrated and tested the Global COP's filtering and management enhancements. Integrated and tested Integrated Imagery and Intelligence interfaces. Integrated and tested enhancements in force projection (enhanced WebSked), force readiness (Navy Status of Forces enhancements), force employment-maritime/littoral operations (enhanced Water Space Management and undersea warfare capabilities), force protection (Joint Effects Model/Joint Warning And Reporting Network), and other cross functional areas such as collaboration, messaging, and information assurance. Tested in the Common Computing Environment/Consolidated Afloat Networks and Enterprise Services (CCE/ CANES) environment to ensure that capabilities transitioning into a Service Oriented Architecture (SOA) are effective and suitable for Fleet use.					
FY 2010 Plans: Continue GCCS-M Increment 2 integration and testing of interfaces. Develop and test interfaces with Program Executive Office Integrated Warfare Systems (PEO IWS) Command and Control (C2) systems, Ship Self-Defense Systems (SSDS) and systems from other Services, Agencies, and traditional and non-traditional partners. Migrate and integrate Maritime Command, Control, Communication, Computers and Intelligence capabilities in Increment 2 for Group and Unit Level ships to the CCE/CANES environment. Investigate and adopt SOA, open standards-based design and data management methodologies, where appropriate.					
FY 2011 Base Plans: Continue GCCS-M Increment 2 integration and testing of interfaces. Transition GCCS-M Increment 2 for Unit Level, Group Level, and Force Level ships to the CCE/CANES environment. Continue developing and testing interfaces with PEO IWS C2 systems, (SSDS) and systems from other					

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 0709: *GCCS-M Maritime Applications*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Services, Agencies, and traditional and non-traditional partners. Investigate and adopt SOA, open standards-based design and data management methodologies, where appropriate. FY11 program office will begin development of maritime tactical command and control capabilities in support of fleet requirements.					
Acquisition Workforce Fund *FY 2009 Accomplishments:* Completed the funding for the acquisition workforce fund.	0.101	0.000	0.000	0.000	0.000
Undersea Superiority/Undersea Forcenet *FY 2009 Accomplishments:* Continued the development of effort funds development of Undersea FORCEnet capabilities to support a real-time command and control capability of all Undersea Warfare (USW) assets (Maritime Patrol Aircraft (MPA) & Submersible Ship, Nuclear (SSN)). The ASW (Anti-Submarine Warfare) Commander had 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 Global Command and Control System Maritime (GCCS-M) Increment 2. Efforts 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. *FY 2010 Plans:* Finalize and complete integrating and testing Undersea FORCEnet capabilities into the GCCS-M Increment 2 baseline. Begin Composeable FORCEnet (CFn) migration to the Common Computing	13.966	11.174	2.089	0.000	2.089

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 0709: *GCCS-M Maritime Applications*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Environment, a precursor to Consolidated Afloat Network Enterprise System (CANES). These capabilities will be integrated into the Force Level and Ashore baseline implementations. *FY 2011 Base Plans:* Finalize and complete CFn migration to the GCCS M Increment 2 Force level baseline. Continue integration of additional data sources and interfaces as required to meet program objectives.					
Navy C2 Air Planning Capability *FY 2011 Base Plans:* Start the Command and Control (C2) Air Planning Capability portion which provides initial engineering for software application transition to an afloat Common Computing Environment (CCE) and requirements development to support increased Joint interoperability and enhanced capability including theater level planning plus distributed planning and execution processes.	0.000	0.000	1.729	0.000	1.729
Accomplishments/Planned Programs Subtotals	19.995	19.275	28.216	0.000	28.216

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• OPN/2608: *Trusted Information Systems*	23.468	13.552	0.338	0.000	0.338	0.471	0.539	0.535	0.555	Continuing	Continuing
• OPN/2618: *Navy Command and Control System*	0.000	0.000	8.920	0.000	8.920	3.778	7.191	10.065	8.666	Continuing	Continuing

D. Acquisition Strategy

Increment 2 delivers two different materiel solutions: (1) Force Level, based on the GCCS-J 4.2 or higher software, and (2) Group and Unit Level, based on the Office of Naval Research (ONR) extensible Common Operational Picture (XCOP) software. This approach satisfies the current validated requirements, supports the accelerated retirement of legacy systems, and reduces overall risk to the program. Each solution will integrate maritime-specific capabilities and will be scalable to the ship class.

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 0709: *GCCS-M Maritime Applications*

The Global Command and Control System-Maritime (GCCS-M) Program Office promotes full and open competition by competitively awarding software and Fleet support engineering services contracts. Additionally, the Program Office has awarded a Command and Control (C2) Indefinite Delivery Indefinite Quantity (IDIQ) Multi-Award Contract (MAC) from which task orders will be competitively awarded to one of the C2 IDIQ MAC awardees. Any contract awards for software development subsequent to the Milestone C will also be competitively awarded.

E. Performance Metrics

GCCS-M Increment 2 leverages software investments by Defense Information Systems Agency (DISA) and ONR to realize both the Force Level and Group/Unit Level material solutions. This leverage greatly reduces the integration and testing costs associated with each software release. The Force Level solution will reside on Common Computing Environment/Consolidated Afloat Networks and Enterprise Services (CCE/CANES) architecture; the Group/Unit Level solution will be implemented on the current/future infrastructure. These Increment 2 software-only solutions eliminate the GCCS-M hardware procurement, installation and sustainment costs.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 0709: *GCCS-M Maritime Applications*

Product Development ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Systems Engineering	Various/ Various	Various Various	29.141	6.546	Nov 2009	12.710	Nov 2010	0.000		12.710	Continuing	Continuing	Continuing
		Subtotal	29.141	6.546		12.710		0.000		12.710			

Remarks

Support ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Software Development	Various/ Various	Various Various	76.502	6.541	Nov 2009	9.898	Nov 2010	0.000		9.898	Continuing	Continuing	Continuing
		Subtotal	76.502	6.541		9.898		0.000		9.898			

Remarks

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 0709: *GCCS-M Maritime Applications*

Test and Evaluation ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	Various/ Various	Various Various	0.500	0.500	Nov 2009	1.675	Nov 2010	0.000		1.675	Continuing	Continuing	Continuing
Operational Test & Evaluation	Various/ Various	Various Various	3.030	1.000	Nov 2009	1.675	Nov 2010	0.000		1.675	Continuing	Continuing	Continuing
		Subtotal	3.530	1.500		3.350		0.000		3.350			

Remarks

Management Services ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Contractor Engineering Support	Various/ Various	Various Various	1.976	1.947	Nov 2009	0.000		0.000		0.000	0.000	3.923	2.976
Program Management Support	Various/ Various	Various Various	16.240	2.741	Nov 2009	2.258	Nov 2010	0.000		2.258	Continuing	Continuing	Continuing
Acquisition Workforce	Various/ Various	Various Various	0.101	0.000		0.000		0.000		0.000	0.000	0.101	Continuing
		Subtotal	18.317	4.688		2.258		0.000		2.258			

Remarks

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 0709: *GCCS-M Maritime Applications*	

	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	127.490	19.275		28.216		0.000		28.216			

Remarks

Exhibit R-4, **RDT&E Schedule Profile:** PB 2011 Navy		**DATE:** February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604231N: *Tactical Command System*	**PROJECT** 0709: *GCCS-M Maritime Applications*

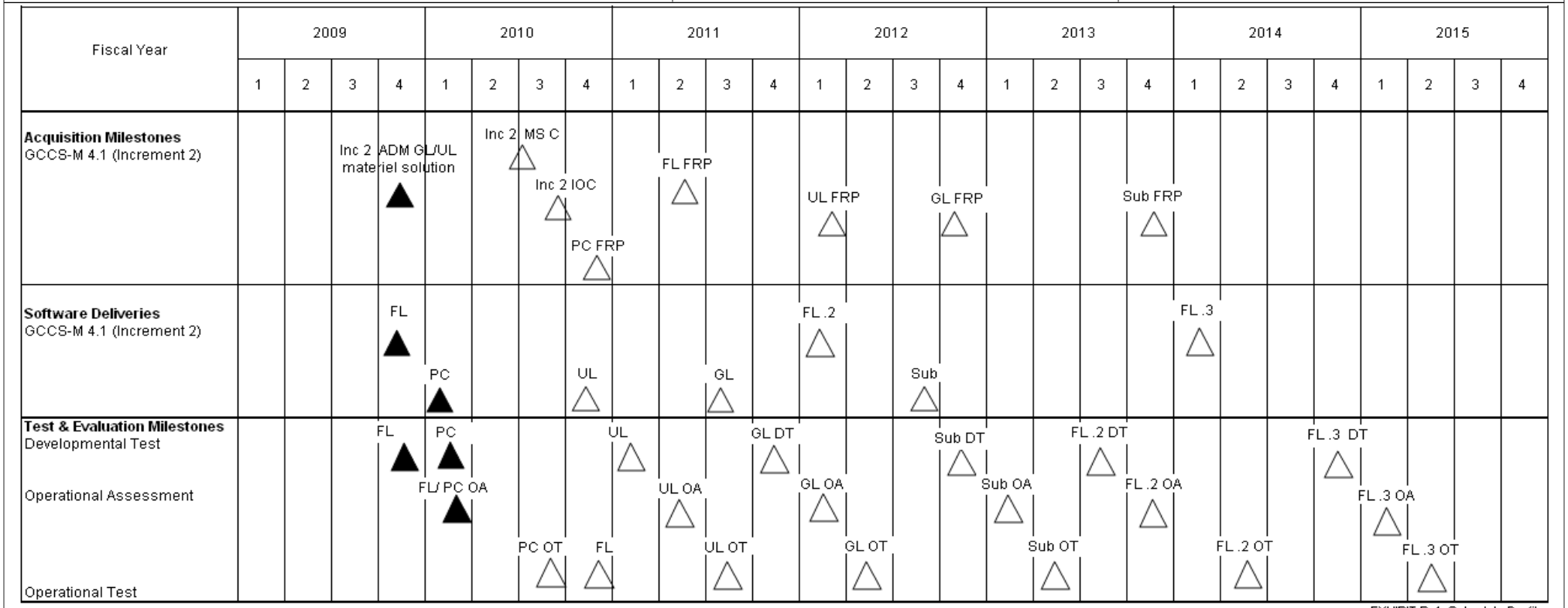

EXHIBIT R-4, Schedule Profile

Legend:
FRP - Full Rate Production
PC - Patrol Craft
FL - Force Level
GL - Group Level
UL - Unit Level
DT - Developmental Test
OT - Operational Test
OA - Operational Assessment

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 0709: *GCCS-M Maritime Applications*

Schedule Details

	Start		End	
Event	Quarter	Year	Quarter	Year
Increment 2 ADM GL/UL materiel solution	4	2009	4	2009
Force Level (FL) - software delivery	4	2009	4	2009
Force Level - Developmental Test (DT)	4	2009	4	2009
Patrol Craft (PC) - software delivery	1	2010	1	2010
Patrol Craft - developmental test	1	2010	1	2010
Force Level/Patrol Craft - Operational Assessment (OA)	1	2010	1	2010
Increment 2 Milestone C	3	2010	3	2010
Increment 2 - Initial Operating Capability (IOC)	3	2010	3	2010
Patrol Craft - Operational Test (OT)	3	2010	3	2010
Patrol Craft - Full Rate Production (FRP)	4	2010	4	2010
Unit Level (UL) - software delivery	4	2010	4	2010
Force Level - Operational Test	4	2010	4	2010
Unit Level - Developmental Test	1	2011	1	2011
Force Level - Full Rate Production	2	2011	2	2011
Unit Level - Operational Assessment	2	2011	2	2011
Group Level (GL) - software delivery	3	2011	3	2011
Unit Level - Operational Test	3	2011	3	2011
Group Level - Developmental Test	4	2011	4	2011

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604231N: *Tactical Command System*	**PROJECT** 0709: *GCCS-M Maritime Applications*

	Start		End	
Event	**Quarter**	**Year**	**Quarter**	**Year**
Unit Level - Full Rate Production	1	2012	1	2012
Group Level - Operational Assessment	1	2012	1	2012
Force Level.2 - software delivery	1	2012	1	2012
Group Level - Operational Test	2	2012	2	2012
Sub - software delivery	3	2012	3	2012
Group Level - Full Rate Production	4	2012	4	2012
Sub - Developmental Test	4	2012	4	2012
Sub - Operational Assessment	1	2013	1	2013
Sub - Operational Test	2	2013	2	2013
Force Level.2 - Developmental Test	3	2013	3	2013
Sub - Full Rate Production	4	2013	4	2013
Force Level.2 - Operational Assessment	4	2013	4	2013
Force Level.3 - software delivery	1	2014	1	2014
Force Level.2 - Operational Test	2	2014	2	2014
Force Level.3 - Developmental Test	4	2014	4	2014
Force Level.3 - Operational Assessment	1	2015	1	2015
Force Level.3 - Operational Test	2	2015	2	2015

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 2009: *OSIS Evolutionary Development (OED)*	

COST ($ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
2009: *OSIS Evolutionary Development (OED)*	1.084	1.306	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	31.062
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

Radiant Mercury (RM): Trusted Information System (TIS) RM is a 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 world-wide. 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 RM. RM enables US Navy to operate in a multi-national environment.

TIS RM provides automated, bi-directional sanitization, transliteration and guarding capability for formatted and unformatted data between security enclaves. RM helps ensure critical intelligence is provided quickly to operational decision-makers. TIS RM provides the capability to disseminate information for operating forces worldwide, including the operating forces of key allies in Pacific, Central and Europe Command regions. 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. 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 and Automatic Identification System), Maritime Operations Centers, Distributed Common Ground System-Navy, Tactical Ranges, and numerous other DoD and Intelligence agencies.

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Radiant Mercury (RM)	1.084	1.306	0.000	0.000	0.000
FY 2009 Accomplishments: Ported RM software from Trusted Solaris 8 Trusted Extension to Trusted Solaris 10 Trusted Solaris Trusted Extension. Factory Acceptance and Alpha Tests were conducted to test added functionalities.					

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 2009: *OSIS Evolutionary Development (OED)*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
RM 5.0's new capabilities to include IPv6, web-based interface for status control, wider hardware options, multiple configuration management, enhanced parsing and formatting using Commercial-off-the-shelf (COTS) Extended Markup Language (XML) tools, remote monitoring and centralized account/configuration object management. Investigated and developed support for emerging communication mechanisms. Continued the development, integration and testing of emerging unformatted file types. Developed criteria and procedures for system verification and validation in anticipation of updated information assurance and cross-domain policies. *FY 2010 Plans:* 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					
Accomplishments/Planned Programs Subtotals	1.084	1.306	0.000	0.000	0.000

C. Other Program Funding Summary ($ in Millions)

N/A

D. Acquisition Strategy

N/A

E. Performance Metrics

Provide and develop certified, accredited Cross Domain Solution (CDS) and transfer capabilities to the Department of Defense and Intelligence Community, and provide the capability to disseminate and receive operational and intelligence information for 100% of authorized sites.
Complete 100% of certification, system and security testing of Radiant Mercury (RM) version 5.x for release. Provide the capability to sanitize, downgrade, guard, and transliterate formatted data at various classifications, compartments and releasabilities to combat and operational commanders, coalition and allied forces at over 330 sites world wide.

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 2213: *Mission Planning*	

COST ($ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
2213: *Mission Planning*	18.440	18.704	16.345	0.000	16.345	15.830	6.477	6.628	6.765	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

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, follow-on version of 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 support net-centric goals by providing route "publish and subscribe" capabilities.

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
JMPS Version 1.2.4, FRAMEWORK V1.4 & CC	4.653	0.928	0.102	0.000	0.102
JMPS Framework Version 1.2.4 efforts: development of common helo tool sets and navigation functionality and common helo transfer devices. 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 .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). Common Capabilities					

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 2213: *Mission Planning*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
(CC) software updates augment core mission planning capabilities across multiple aircraft. No further CCs are funded within current budget controls. *FY 2009 Accomplishments:* Completed Integrated Baseline Review, Interim Design Review, System Requirements Review and Preliminary Design Review #1. *FY 2010 Plans:* Plan to complete Interim Design Review #2, Beta Releases #1, and #2 and release of Framework 1.4 software. *FY 2011 Base Plans:* JMPS Framework 1.4 Functional Qualification Test (FQT) and Operational Test Readiness Review (OTRR).					
JMPS Expeditionary (JMPS-E)	1.688	0.470	0.325	0.000	0.325
JMPS Expeditionary (JMPS-E): The goal of the JMPS-E team is to produce a scalable, tailorable, mission planning and execution monitoring tool for Amphibious Squadron staffs. The primary focus of this system is to provide an automated capability to assist planners with mission analysis, course of action development and automated creation of doctrinal orders based on planning data inputted into the system. Current expeditionary planning is done manually on paper charts. JMPS-E will provide a digital map allowing for better response times to changing plans, easier distribution of planning artifacts and a reduction in human error during the planning process. The variety and geographically separated nature of forces involved with Ship to Shore Maneuver 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. The primary outputs are tasking orders, route plans, battlespace geometries and decision briefs. The system will also incorporate modeling and simulation					

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 2213: *Mission Planning*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
tools to rehearse and deconflict mission plans. This capability will be initially fielded using Framework Version 1.2.4. *FY 2009 Accomplishments:* JMPS-E software version 1.2.1 was released for developmental testing in July 09. *FY 2010 Plans:* Plan to conduct operational testing in March 2010; plan to initially field JMPS-E version 1.2.1 to PHIBRON 3 in May 2010. Full Operational Capability (FOC) fielding to seven PHIBRONs planned to begin in 2010. *FY 2011 Base Plans:* Plan to continue FOC fielding in FY11. Plan to begin software development of JMPS-E version 2.0.					
MPE Integration and Test 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 of 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 FY10. *FY 2009 Accomplishments:* Integration and test of thirty-one (31) MPEs in progress; six (6) MPEs were completed and fleet released: AV-8B H50 2.1.0, EA-6B I2B4 (Release 3), EA-6B I3B3 (Release 4), F/A-18 H5E/21X 2.2.0, E-2C 2.0, C-2A 1.0; one Maritime Patrol Reconnaissance Force (MPRF) MPE prototype was completed.	12.099	17.306	15.918	0.000	15.918

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2010 Plans: Integration & test of twenty-nine MPEs are planned: AV-8B H50 2.1.0, AV-8B H60 3.0, AV-8B H70 4.0, BAMS 1.0, C-130 1.0, C-2A 1.0, C-2A 2.0, CNATRA 1.0, CNATRA 1.1, E-2C 2.0, E-2C 3.0, E-2C 4.0, E-2D 1.0, EA-6B I3B4 (Rel 5), EA-6B I3B5 (Rel 6), F/A-18 H6E/23X (2.3), F/A-18 H8E/G (2.4), JMPS-E 1.0, Marine Helo 2.0, Marine Helo 2.1, Marine Helo 3.0, MH-60 R/S 1.0, MH-60 R/S 2.0, Maritime Patrol Reconnaissance Force 1.0, Navy Legacy Helo 1.0, P-3 2.0, P-3 3.0, V-22 1.2 and VH-3/VH-60 1.0. *FY 2011 Base Plans:* Integration and test of twenty-one (21) MPEs are planned.					
Accomplishments/Planned Programs Subtotals	18.440	18.704	16.345	0.000	16.345

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• OPN/287600: *TAC A/C Mission Plng System*	9.484	9.074	9.098	0.000	9.098	9.465	4.885	5.159	6.448	Continuing	Continuing
• RDTE/3858: *A/P Mission Plng Support System*	97.296	91.995	99.261	0.000	99.261	101.224	101.635	0.000	0.000	Continuing	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

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
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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. 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.

E. Performance Metrics

Average time to plan a flight: Threshold value is < 1 hour average time to plan a flight that includes a Military Training Route (MTR), routing to and from the MTR, producing kneeboard cards, Instrument Flight Rules (IFR) flight planning materials and a Data Transfer Device (DTD) Load.
Objective value is < 30 minutes average time to plan a flight that includes a Military Training Route (MTR), routing to and from the MTR, producing kneeboard cards, Instrument Flight Rules (IFR) flight planning materials and a Data Transfer Device (DTD) Load.

Interoperability: Threshold value is 100% of top level IERs designated critical will be satisfied.
Objective value is 100% of top level IERs will be satisfied.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy			DATE: February 2010
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Product Development ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Primary Hardware Development/CC	C/CPAF	USAF Hanscom AFB, MA	0.001	0.001	Mar 2010	0.001	Mar 2011	0.000		0.001	Continuing	Continuing	Continuing
Primary Hardware Development/FW	C/CPAF	USAF Hanscom AFB, MA	20.540	0.778	Mar 2010	0.000		0.000		0.000	Continuing	Continuing	Continuing
Primary Hardware Development/JMPS-E	C/CPFF	USAF Hanscom AFB, MA	3.971	0.310	Mar 2010	0.343	Feb 2011	0.000		0.343	Continuing	Continuing	Continuing
Primary Hardware Development	SS/CPIF	Northrop Grumman VA	68.091	0.000		0.000		0.000		0.000	0.000	68.091	Continuing
Primary Hardware Development	Various/ Various	Various Various	13.164	2.614	Dec 2009	1.925	Jan 2011	0.000		1.925	0.000	17.703	Continuing
Award Fees 9%	Various/ Various	Various Various	1.543	0.136		0.061		0.000		0.061	0.000	1.740	Continuing
FY99-06	Various/ Various	Various Various	15.791	0.000		0.000		0.000		0.000	0.000	15.791	Continuing
		Subtotal	123.101	3.839		2.330		0.000		2.330			

Remarks

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy		DATE: February 2010
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Support ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Integrated Logistics Support	WR	SPAWAR Philadelphia, PA	11.538	0.000		0.000		0.000		0.000	0.000	11.538	Continuing
Integrated Logistics Support	C/CPAF	Lockheed Martin Marlton, NJ	0.000	0.876	Jan 2010	0.400	Jan 2011	0.000		0.400	0.000	1.276	Continuing
Integrated Logistics Support	WR	NAWCWD Point Mugu, CA	0.000	0.000		0.500	Jan 2011	0.000		0.500	0.000	0.500	Continuing
		Subtotal	11.538	0.876		0.900		0.000		0.900	0.000	13.314	

Remarks

Test and Evaluation ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
System Eng Integration & Test	WR	NAWCWD Point Mugu, CA	35.710	11.669	Dec 2009	11.415	Dec 2010	0.000		11.415	Continuing	Continuing	Continuing
Test & Evaluation	WR	COTF Norfolk, VA	0.287	0.564	Jan 2010	0.150	Jan 2011	0.000		0.150	Continuing	Continuing	Continuing
		Subtotal	35.997	12.233		11.565		0.000		11.565			

Remarks

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy		DATE: February 2010
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Management Services ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support	WR	NAWCAD Patuxent River, MD	26.845	1.756	Dec 2009	1.550	Dec 2010	0.000		1.550	Continuing	Continuing	Continuing
		Subtotal	26.845	1.756		1.550		0.000		1.550			

Remarks

	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	197.481	18.704		16.345		0.000		16.345			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Navy		DATE: February 2010
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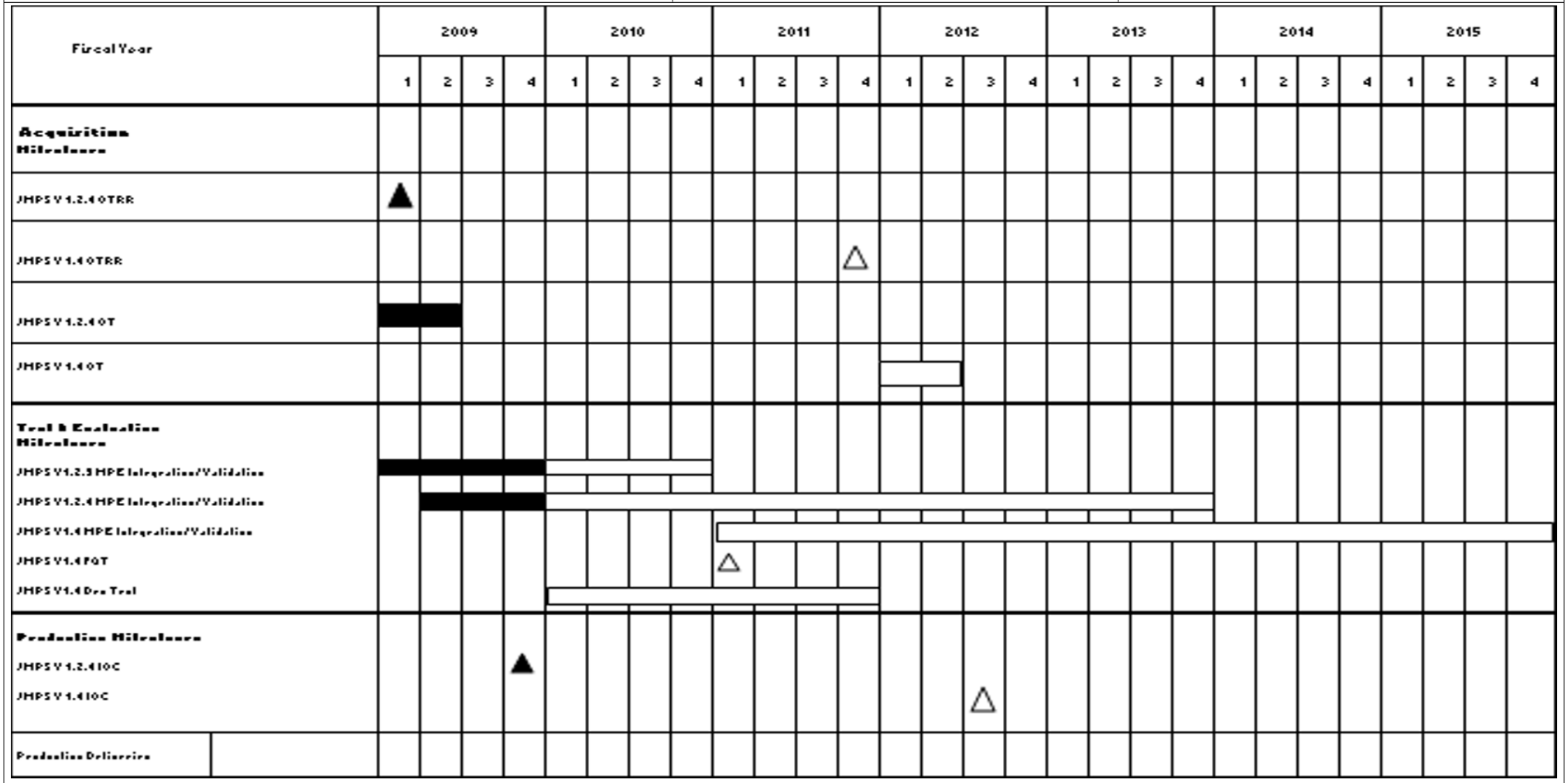

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604231N: *Tactical Command System*	**PROJECT** 2213: *Mission Planning*

Schedule Details

	Start		End	
Event	**Quarter**	**Year**	**Quarter**	**Year**
JMPS V1.2.4 OTRR	1	2009	1	2009
JMPS V1.2.4 OT	1	2009	2	2009
JMPS V1.2.3 MPE Integration/Validation	1	2009	4	2010
JMPS V1.2.4 MPE Integration/Validation	2	2009	4	2013
JMPS V1.2.4 IOC	4	2009	4	2009
JMPS V1.4 Development Test	1	2010	4	2011
JMPS V1.4 FQT	1	2011	1	2011
JMPS V1.4 MPE Integration/Validation	1	2011	4	2015
JMPS V1.4 OTRR	4	2011	4	2011
JMPS V1.4 OT	1	2012	2	2012
JMPS V1.4 IOC	3	2012	3	2012

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy			DATE: February 2010
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COST ($ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
2307: *Shipboard LAN/WAN*	12.105	1.719	0.464	0.000	0.464	0.360	0.358	0.000	0.000	0.000	51.599
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

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 Afloat Core Services (ACS) which is the mechanism to deliver the FORCEnet interface to the warfighter. 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 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). ACS will empower the end user to pull information

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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 will begin migrating 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.

The Combined Enterprise Regional Information Exchange System - Maritime (CENTRIXS-M) 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-US. 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 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 will begin migrating to ISNS Inc 2/CANES in FY09. ISNS Inc 2/CANES will serve to transition numerous Fleet networks to a single, adaptive, available, secure computing network

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infrastructure while delivering enhanced technologies in: Integrated Voice, Video and Data; Common Computing Environment (CCE); Afloat Core Services (ACS); and Multi-Level Security (MLS)/Cross Domain Solutions (CDS).

Submarine Local Area Network (SubLAN): The SubLAN program provides Navy submarines, with reliable, high-speed mission critical SECRET and mission critical UNCLASSIFIED Local Area Networks (LANs). When the SubLAN network is combined with other subsystems, it delivers an end-to-end network-centric warfare capability by hosting applications capable of connectivity with coalition communications enclaves. 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 operating system, office automation, security, and other basic network services used by all hosted applications.

FY11 OCO: N/A

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Integrated Shipboard Network System (ISNS)	7.199	0.832	0.419	0.000	0.419
FY 2009 Accomplishments: Integrated Shipboard Network System (ISNS): Continued 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. Supported studies for an Ashore ISNS variant in support of the COMUSFLTFORCOM MOC requirement. Continued 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) Completed acquisition documentation required for ISNS Inc 1 and 2/CANES. Awarded the prototype development contract for ISNS Incr 1 . Set up lab for applicable Early Adopter testing. Performed					

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
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. Implemented Fielding Decision (FD) D(V)X. SubLAN: Tested and integrated follow-on COMPOSE software package in support of Consolidated Afloat Networks and Enterprise Services (CANES) migration strategy. Demonstrated Cross Domain Solution architecture with Common Personal Computer Operating System Enviornment (COMPOSE) software packages that enabled capability for SCI, JWICS, and Combined Enterprise Regional Information Exchange System (CENTRIXS) in support of CANES migration strategy rescheduled for Trident Warrior (TW) to FY09. CENTRIXS-M: Obtained MS C Decision and Low Rate Initial Production (LRIP) for Inc 1. MS C for INC 1 slipped to 3QFY09 due to approval delays of the Capabilities Production Document (CPD). No program impacts. Utilized existing Q-70 contract for LRIP. Performed Operational Assessment (OA) on Force Level (FL) Block II. Began migration to ISNS Inc 2/CANES. Developed CENTRIXS capability on submarines. *FY 2010 Plans:* Integrated Shipboard Network System (ISNS): Complete development of the ISNS Increment 1and 2/ CANES capabilities consolidating Afloat LANs and Enterprise Services aboard ships and Ashore sites. These capabilities included 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. CDS					

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
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. SubLAN: Perform OTRR and Follow on Operational Test & Evaluation (FOT&E) of Inc. 1. CENTRIXS-M: Perform environmental testing for Unit Level Inc 1. Conduct a combined Development Test / Operational Test (DT/OT) for Inc 1 FL with COMPOSE 4.0. Support Inc I Unit level (UL) Enviornmental Qualification DT/OT transition to Canes Inc I. Program transitions from ISNS Inc 2/ CANES to CANES Inc 1. *FY 2011 Base Plans:* Integrated Shipboard Network System (ISNS): Continue transition support from ISNS Increment 1 to CANES Inc 1 through continued consolidation of Afloat LANs and Enterprise Services aboard ships and Ashore sites. Continue development of replacement solutions for End of Life (EOL) equipment as EOL occurs. Develop replacement solutions for End of Sale (EOS) equipment/software as EOS occurs. Support Certification and Accreditation activities for efforts under development. Continue support of at sea demonstrations. Continue working with the ISNS labs on Early Adopter and ACS testing and integration. Investigate new technologies associated with classified wireless LANs. Support Test and Evaluation events for efforts under development. SubLAN: Investigate and test server architecture in support of Commercial off the Shelf (COTS) End-of-Life (EOL).					
Combined Enterprise Regional Information Exchange System (CENTRIXS)	3.674	0.290	0.000	0.000	0.000

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B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: N/A *FY 2010 Plans:* N/A					
Submarine Local Area Network (SubLAN) *FY 2009 Accomplishments:* N/A *FY 2010 Plans:* N/A *FY 2011 Base Plans:* N/A	1.232	0.597	0.045	0.000	0.045
Accomplishments/Planned Programs Subtotals	12.105	1.719	0.464	0.000	0.464

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• OPN/3050/ISNS: *ISNS*	147.389	137.373	124.041	0.000	124.041	68.953	0.000	0.000	0.000	0.000	477.756
• OPN/3050/CENTRIX: *CENTRIXS-M*	28.299	16.220	15.911	0.000	15.911	0.000	0.000	0.000	0.000	0.000	60.430
• OPN/3050/SubLAN: *SubLAN*	32.720	29.959	22.440	0.000	22.440	32.356	36.114	0.806	0.816	0.000	155.211

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 2307: *Shipboard LAN/WAN*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• OPN/3051: *CENTRIXS-M MDA*	0.000	4.898	9.250	0.000	9.250	24.566	1.161	0.000	0.000	0.000	39.875

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.

E. Performance Metrics

The Shipboard LAN/WAN/Integrated Shipboard Network System (ISNS) development efforts are nearing completion and is currently 96.7% completed. The ISNS, CENTRIXS-M and SubLAN programs will transition to CANES in FY14. ISNS development and testing against ISNS variants as well as Early Adopter Common Computing Envrionment (CCE) testing on the Lincoln Strike Group met and exceeded all measures of effectiveness and suitability of the system. Technologies developed for the CENTRIXS-M Increment 1 system included the Multi-Level Thin Client (MLTC) and associated accreditation and testing. SubLAN development efforts included SubLAN End of Life solutions and Early Adopter CANES solutions. Remaining funds in FY11-FY14 or 3.3% of the project will support SubLAN to develop and test upgrades to mitigate End of Life (EOL) issues and the directed CANES Early Adopter architecture for submarine local area networks. These efforts will continue until the program transitions to CANES in FY14. ISNS efforts include Trident Warrior At Sea Demonstrations, annual certification and accreditation efforts and investigate End of Life (EOL)/End of Sale (EOS) technology replacement options. X2307 Shipboard LAN/WAN/Integrated Shipboard Network System funding completes in FY2013.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 2307: *Shipboard LAN/WAN*

Product Development ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Primary Hardware Development	C/CPAF	Titan Various	1.194	0.000		0.000		0.000		0.000	Continuing	Continuing	Continuing
Integration & Test	WR	SSC PAC San Diego, CA	1.949	0.075	Dec 2009	0.131	Dec 2010	0.000		0.131	Continuing	Continuing	Continuing
Systems Engineering	Various/ Various	Various Various	4.143	0.000		0.000		0.000		0.000	Continuing	Continuing	Continuing
Systems Engineering	WR	SSC PAC San Diego, CA	2.256	0.344	Dec 2009	0.000		0.000		0.000	Continuing	Continuing	Continuing
Systems Engineering	C/CPAF	SAIC Various	0.383	0.000		0.000		0.000		0.000	Continuing	Continuing	Continuing
Systems Engineering	WR	SSC LANT Charleston, SC	2.663	0.201	Dec 2009	0.000		0.000		0.000	Continuing	Continuing	Continuing
Systems Engineering	C/CPIF	TBD TBD	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	Continuing
		Subtotal	12.588	0.620		0.131		0.000		0.131			

Remarks

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 2307: *Shipboard LAN/WAN*

Support ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Software Development	C/TBD	TBD TBD	0.725	0.173	Dec 2009	0.095	Dec 2010	0.000		0.095	Continuing	Continuing	Continuing
Software Development	C/CPAF	Titan Various	0.069	0.000		0.000		0.000		0.000	Continuing	Continuing	Continuing
		Subtotal	0.794	0.173		0.095		0.000		0.095			

Remarks

Test and Evaluation ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	WR	SSC Various	8.490	0.233	Dec 2009	0.000		0.000		0.000	Continuing	Continuing	Continuing
Developmental Test & Evaluation	WR	NIOC Various	0.053	0.000		0.000		0.000		0.000	Continuing	Continuing	Continuing
Developmental Test & Evaluation	MIPR	JITC Various	0.309	0.000		0.000		0.000		0.000	Continuing	Continuing	Continuing
Developmental Test & Evaluation	Various/ Various	NSMA Various	0.807	0.125	Dec 2009	0.078	Dec 2010	0.000		0.078	Continuing	Continuing	Continuing
Developmental Test & Evaluation	C/CPAF	NAVSEA/LM Various	0.350	0.000		0.000		0.000		0.000	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 2307: *Shipboard LAN/WAN*

Test and Evaluation ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	Various/ Various	Various Various	0.583	0.113	Dec 2009	0.000		0.000		0.000	Continuing	Continuing	Continuing
Developmental Test & Evaluation	WR	COMOPTEVFOR Various	1.162	0.075	Dec 2009	0.160	Dec 2010	0.000		0.160	Continuing	Continuing	Continuing
Developmental Test & Evaluation2	WR	SSC Various	1.181	0.000		0.000		0.000		0.000	Continuing	Continuing	Continuing
		Subtotal	12.935	0.546		0.238		0.000		0.238			

Remarks

FY10/FY11 award dates left blank are 'Various'

Management Services ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support	WR	SSC PAC San Diego, CA	1.639	0.210	Dec 2009	0.000		0.000		0.000	Continuing	Continuing	Continuing
Program Management Support	Various/ Various	Various Various	3.848	0.170	Dec 2009	0.000		0.000		0.000	Continuing	Continuing	Continuing
Program Management Support	C/CPAF	Booz Allen Hamilton Various	1.937	0.000		0.000		0.000		0.000	0.000	1.937	Continuing
Acquisition Workforce	C/FP	Not Specified	0.055	0.000		0.000		0.000		0.000	0.000	0.055	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 2307: *Shipboard LAN/WAN*

Management Services ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
		Not Specified											
		Subtotal	7.479	0.380		0.000		0.000		0.000			

Remarks

	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	33.796	1.719		0.464		0.000		0.464			

Remarks

Exhibit R-4, **RDT&E Schedule Profile:** PB 2011 Navy		**DATE:** February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604231N: *Tactical Command System*	**PROJECT** 2307: *Shipboard LAN/WAN*

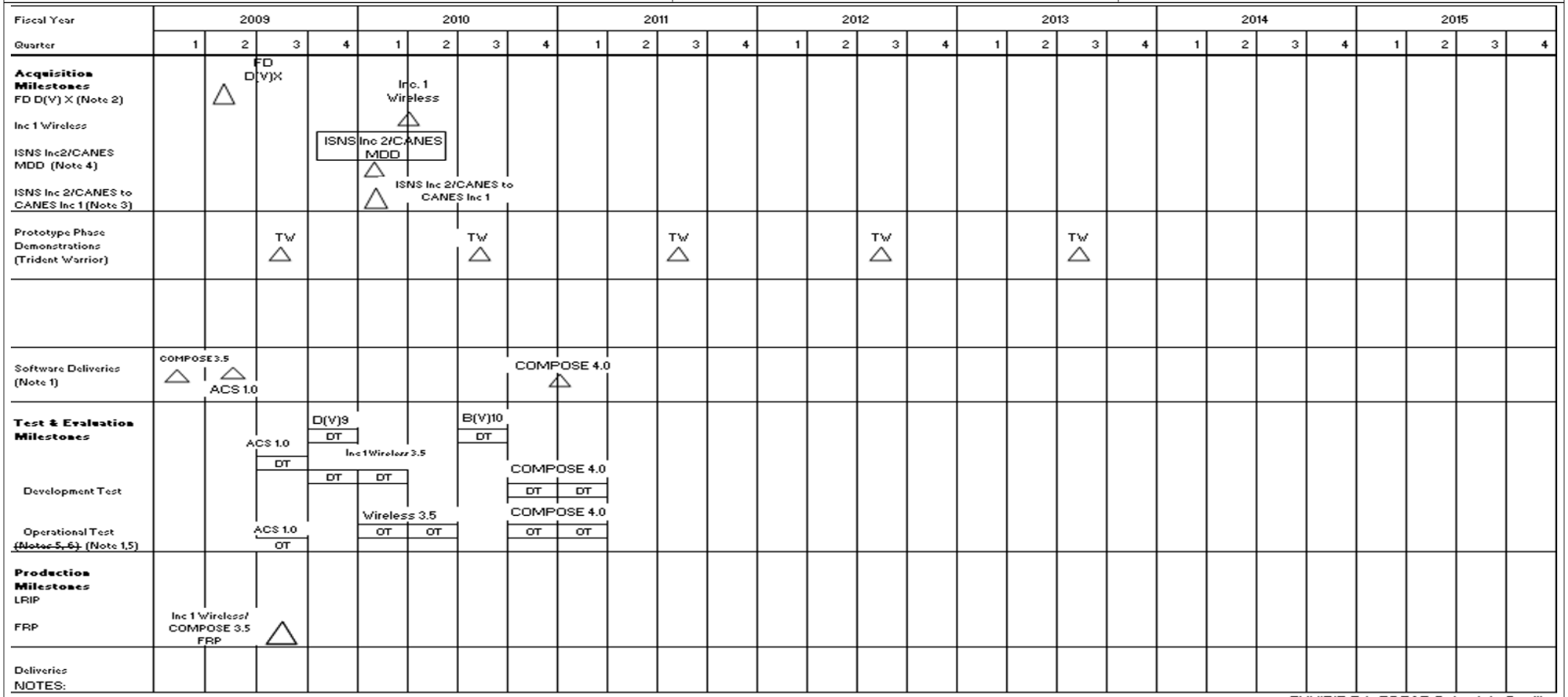


EXHIBIT R4, RDT&E Schedule Profile

1. Common Personal Computer Operating System Environment (COMPOSE) 4.0 Software release versions and delivery dates updated to reflect current software fielding schedule.
2. Acquisition Milestone - Fielding Decision (FD) D(V)X
3. FY10 Program transitions from ISNS Inc 2/CANES to CANES Inc 1.
4. Material Development Decision (MDD) per DoD 5000.2 required prior to MS B.
5. DT/OT event included for FY11.

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 2307: *Shipboard LAN/WAN*

Schedule Details

	Start		End	
Event	Quarter	Year	Quarter	Year
Acquisition Milestone - FD D(V)X (Note 2: Acquisition Milestone - Fielding Decision D(V)X)	2	2009	2	2009
Acquisition Milestone - Inc 1 Wireless	1	2010	2	2010
Acquisition Milestone - MDD ISNS Inc 2/CANES (Note 3: FY10 Program transitions from ISNS Inc 2/CANES to CANES Inc 1)	1	2010	1	2010
Acquisition Milestone - ISNS Inc 2/CANES to CANES Inc 1(Note 4: Material Development Decision (MDD) per DoD 5000.2 required for MS B)	1	2010	1	2010
Prototype Phase - TW Demonstration	2	2009	3	2013
Software Delivery - 3.5	1	2009	1	2009
Software Delivery - ACS 1.0	2	2009	2	2009
Software Delivery - 4.0 (Note 1: COMPOSE Software release versions and delivery dates updated to reflect current software fielding schedule)	4	2010	1	2011
Development Test - D(V)9	4	2009	4	2009
Development Test - B(V)10	3	2010	3	2010
Development Test - Inc 1/COMPOSE 3.5	2	2009	2	2009
Development Test - ACS 1.0	2	2009	2	2009
Development Test - 4.0	4	2010	1	2011
Operational Test - ACS 1.0	4	2009	4	2009
Operational Test - D(V)9	4	2009	4	2009
Operational Test - B(V)10	3	2010	3	2010

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 2307: *Shipboard LAN/WAN*

	Start		End	
Event	Quarter	Year	Quarter	Year
Operational Test - 4.0	4	2010	1	2011
Production Milestone - Inc 1/COMPOSE 3.5 FRP	3	2009	3	2009

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 2351: *MDA*	

COST ($ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
2351: *MDA*	0.000	21.111	19.630	0.000	19.630	15.489	7.670	1.061	0.089	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

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. Additionally, MDA will ensure capability integration with related activities and sites (both technologies and facilities). 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, development and replication of MDA related data gathered in various operations such as Expanded-Maritime Intercept Operations (E-MIO), sharing information with allies, and developing subject matter expertise and assessment tools to achieve MDA and enhance operational decision making.

In FY11 funding supports the following efforts: planned enhancements to Spiral One Prototype (SP1P) and fielded capabilities; development of MDA enterprise wide alerting capabilities and integration with C2 decision support systems; Verification and Validation (V&V) testing; development regression and acceptance testing and transition of the E-MIO systems to applicable Programs of Records (PORs); continuation of pre-acquisition activities for the Maritime Fusion and Analysis (MFAS) and End to End MDA (E2E MDA) Increments as they move into the Technology Development phase.

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

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
MDA	0.000	14.228	13.164	0.000	13.164

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 2351: *MDA*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2010 Plans: Maritime Domain Awareness (MDA): 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 Service Oriented Architecture (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 Prototype hardware, software and other technical support for components deployed at Commander: 2nd, 3rd, 4th, 5th (Navy, Central Command), Naval Forces Europe (NAVEUR), Pacific Fleet (PACFLT), U.S. Fleet Forces Command (USFF), National Maritime Intelligence Center (NMIC), Maritime Intelligence Fusion Center (MIFC) MIFC Atlantic (LANT), MIFC Pacific (PAC), Joint Interagency Task Force (JIATF)-South, JIATF- West and the MDA Enterprise Node. Supports the National Maritime Intelligence Center (NMIC) and MIFC LANT/PAC to facilitate data integration with the Intelligence Community systems, Department of Homeland Security (DHS) and Department of Justice (DOJ). MDA will also support the development and replication of ongoing MDA related data gathering activities, such as Expanded-Maritime Intercept Operations (EMIO), as well as ensuring MDA capabilities are projected through non-classified, unclassified and classified networks. Maritime Fusion and Analysis Services (MFAS) Increment and End to End MDA (E2E MDA): The Navy's Resources, Requirements, Review Board (R3B) approved the MDA Capabilities Based Assessment (CBA) as briefed in January 2009. The MDA CBA identified capability gaps that will be resolved through non-materiel and materiel solutions. Continue pre-acquisition activities such as the development of an E2E MDA Initial Capabilities Document (ICD) and the completion of MFAS and					

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 2351: *MDA*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
E2E MDA Analysis of Alternatives (AoA) which will identify potential materiel solutions and form the requirements basis for follow-on development efforts. *FY 2011 Base Plans:* Maritime Domain Awareness (MDA): Spiral 1 Prototype (SP1P): Provide planned enhancements for SP1P and fielded capabilities. Support development of MDA enterprise wide alerting capabilities and integration with C2 decision support systems. Provide for Verification and Validation (V&V) and development regression and acceptance testing for baseline changes required for Prototype Information Technology (IT) upgrade/refresh activities. Support the transition of the Expanded-Maritime Intercept Operations (EMIO) systems to applicable Programs of Records (PORs). Maritime Fusion and Analysis (MFAS) Increment and End to End MDA (E2E MDA): Continue pre-acquisition activities for MFAS and E2E MDA as these increments move from the Material Solutions Analysis phase into the Technology Development phase of the Integrated Defense Acquisition, Technology, and Logistics Life Cycle Management System. Specific activities will include identifying a Material Solution based on the Analysis of Alternatives (AoA) and Systems Engineering Technical Reviews (SETR), drafting Key Performance Parameters (KPPs) and Key System Attributes (KSAs) followed by the Capability Development Document (CDD), developing a Technology Development strategy to guide prototyping and component development, and determining an appropriate Acquisition and Contracting Strategy. Also includes MFAS prototyping activities for key fusion and analytical technologies IAW SECNAVINST 5000.2D Para 3.4.					
DLB *FY 2010 Plans:* Deep Lightning Bolt / Rapid Capability Development (DLB/RCD): Transformational initiative for the Navy which will focus on the introduction of technologies that will enhance the Navy's Sea Power 21 objectives and support network centric warfare and operations. Will	0.000	6.883	6.466	0.000	6.466

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 2351: *MDA*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
provide a low cost initiative to with the ability to react immediately to newly discovered technology(s), enemy threat(s) or to respond to significant and urgent safety situations through special, tailored procedures designed to: - Integrate and demonstrate, hardware / software solutions for either immediate or near term deployment - Expedite technical, programmatic, and financial decisions in order to make emergent technologies available to the Fleet in a timely manner - Expedite, within statutory limitations, the procurement and contracting processes. - Offer disruptive technologies with the intent of leaping technology within traditional programs of record (POR) *FY 2011 Base Plans:* Deep Lightning Bolt / Rapid Capability Development (DLB/RCD): Transformational initiative for the Navy which will focus on the introduction of technologies that will enhance the Navy's Sea Power 21 objectives and support network centric warfare and operations. Will provide a low cost initiative to with the ability to react immediately to newly discovered technology(s), enemy threat(s) or to respond to significant and urgent safety situations through special, tailored procedures designed to: - Integrate and demonstrate, hardware / software solutions for either immediate or near term deployment - Expedite technical, programmatic, and financial decisions in order to make emergent technologies available to the Fleet in a timely manner - Expedite, within statutory limitations, the procurement and contracting processes.					
Accomplishments/Planned Programs Subtotals	0.000	21.111	19.630	0.000	19.630

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604231N: *Tactical Command System*	**PROJECT** 2351: *MDA*

C. Other Program Funding Summary ($ in Millions)

N/A

D. Acquisition Strategy

The MDA Fielded Project (also known as Spiral 1 Prototype (SP1P)) entered the sustainment phase based on direction by Assistant Secretary of the Navy, Research, Development and Acquisition (ASN RDA) in 4QFY09. The prototype will be enhanced/modified every six months until it can transition or be replaced by a Program of Record capability, currently targeted for FY-14. Commander Operational Test and Evaluation Force will observe testing during Developmental Testing events.

Pre-acquisition activities for MDA follow-on efforts commenced in FY09. A Maritime Fusion and Analysis Services (MFAS) Initial Capabilities Document (ICD) was staffed for approval in FY10. An approved ICD can support a Material Development Decision (MDD) for purposes of a transition to a Program of Record.

E. Performance Metrics

Maritime Domain Awareness (MDA): SP1P compliance with Net-Centric Enterprise Solutions for Interoperability (NESI) guidance and conform to the Net-Centric Enterprise Services (NCES) standards; fuses multiple disparate data sources, analyzes MDA activity to identify potential threats to security of the United States and US interests and forces around the world. MDA will alert based on a number of simple and complex user defined conditions improving efficiency and effectiveness in monitoring the maritime domain for threats. MDA provides accurate MDA vessel track information to the common operational picture; generate alerts for vessels entering and existing geospatial, user defined, areas of interest; anomaly alerts will be verified at 65% accuracy against ground truth; reduction in the number of manual steps required to find and retrieve MDA relevant data; SP1P material availability will be no less than 85%. MDA provided Extended Maritime Intercept Operations (EMIO) capabilities have reduced the time between data entry by the boarding team and data analysis both in theater and globally. MDA provided EMIO capabilities are improving all elements of the MIO process.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 2351: *MDA*	

Product Development ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Primary Hardware Development DLB/RCD	Various/ Various	Various Various	0.000	1.641	Feb 2010	1.174	Feb 2011	0.000		1.174	0.000	2.815	Continuing
Systems Engineering DLB/RCD	Various/ Various	TBD TBD	0.000	0.721	Feb 2010	0.771	Feb 2011	0.000		0.771	0.000	1.492	Continuing
Systems Engineering - MDA	Various/ Various	Various Various	0.000	2.500	Nov 2009	2.859	Nov 2010	0.000		2.859	0.000	5.359	Continuing
		Subtotal	0.000	4.862		4.804		0.000		4.804	0.000	9.666	

Remarks

Support ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Integrated Logistics Support DLB/RCD	Various/ TBD	TBD TBD	0.000	0.297	Feb 2010	0.297	Feb 2011	0.000		0.297	0.000	0.594	Continuing
Configuration Mgmt DLB/RCD	Various/ TBD	TBD TBD	0.000	0.196	Feb 2010	0.196	Feb 2011	0.000		0.196	0.000	0.392	Continuing
Development Support DLB/RCD	Various/ TBD	TBD TBD	0.000	0.297	Feb 2010	0.297	Feb 2011	0.000		0.297	0.000	0.594	Continuing
Software Development DLB/RCD	Various/ Various	TBD TBD	0.000	2.669	Feb 2010	2.669	Feb 2011	0.000		2.669	0.000	5.338	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 2351: *MDA*

Support ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Development Support - MDA	Various/ Various	Various Various	0.000	0.705	Jan 2010	1.063	Jan 2011	0.000		1.063	0.000	1.768	Continuing
Integrated Logistics Support - MDA	Various/ Various	Various Various	0.000	1.573	Jan 2010	0.950	Jan 2011	0.000		0.950	0.000	2.523	Continuing
Configuration Management - MDA	Various/ Various	Various Various	0.000	0.368	Jan 2010	0.152	Jan 2011	0.000		0.152	0.000	0.520	Continuing
Sys Req Analysis/Sys Eng - MDA	Various/ Various	Various Various	0.000	2.033	Nov 2009	1.389	Nov 2010	0.000		1.389	0.000	3.422	Continuing
		Subtotal	0.000	8.138		7.013		0.000		7.013	0.000	15.151	

Remarks

Test and Evaluation ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation DLB/RCD	Various/ TBD	TBD TBD	0.000	0.593	Feb 2010	0.593	Feb 2011	0.000		0.593	0.000	1.186	Continuing
System Test & Evaluation-MDA	Various/ Various	Various Various	0.000	2.058	Feb 2010	2.110	Feb 2011	0.000		2.110	0.000	4.168	Continuing
		Subtotal	0.000	2.651		2.703		0.000		2.703	0.000	5.354	

Remarks

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 2351: *MDA*

Management Services ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support DLB/RCD	C/CPFF	SSC LANT Charleston, SC	0.000	0.297	Feb 2010	0.297	Feb 2011	0.000		0.297	0.000	0.594	Continuing
Travel DLB/RCD	WR	DTS Various	0.000	0.172	Feb 2010	0.172	Feb 2011	0.000		0.172	0.000	0.344	Continuing
Acquisition Management - MDA	Various/ Various	Various Various	0.000	2.213	Nov 2009	2.369	Nov 2010	0.000		2.369	0.000	4.582	Continuing
Program Management Support - MDA	Various/ Various	Various Various	0.000	2.618	Nov 2009	2.122	Nov 2010	0.000		2.122	0.000	4.740	Continuing
Travel - MDA	WR	DTS Various	0.000	0.160	Nov 2009	0.150	Nov 2010	0.000		0.150	0.000	0.310	Continuing
		Subtotal	0.000	5.460		5.110		0.000		5.110	0.000	10.570	

Remarks

	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	21.111		19.630		0.000		19.630	0.000	40.741	

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604231N: *Tactical Command System*	**PROJECT** 2351: *MDA*

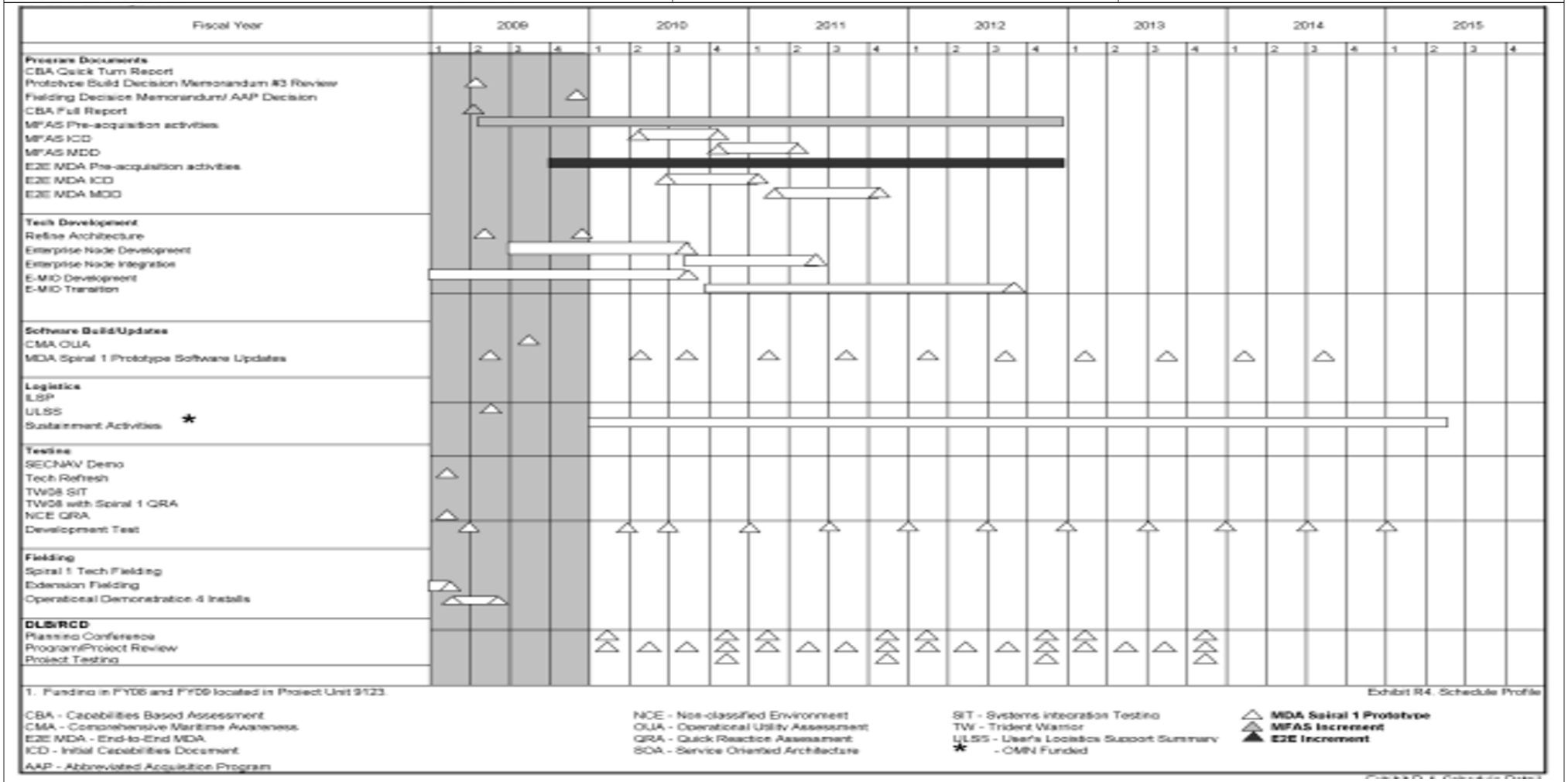


Exhibit R-4A, RDT&E Schedule Details: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 2351: *MDA*

Schedule Details

	Start		End	
Event	Quarter	Year	Quarter	Year
DLB/RCD Planning Conference (1st Qtrs only)	1	2010	1	2013
DLB/RCD Planning Conference (4th Qtrs Only)	4	2010	4	2013
DLB/RCD Monthly Program/Project Review	1	2010	4	2013
DLB/RCD Project Testing (4th Qtrs only)	4	2010	4	2013
MFAS Pre-Acquisition Activities	2	2010	4	2012
MFAS ICD	2	2010	4	2010
MFAS MDD	4	2010	2	2011
E2E MDA Pre-Acquisition Activities	4	2009	4	2012
E2E MDA ICD	3	2010	1	2011
E2E MDA MDD	1	2011	4	2011
Enterprise Node Development	3	2009	3	2010
Enterprise Node Integration Transition	3	2010	2	2011
EMIO Development	1	2010	2	2010
EMIO Transition	3	2010	3	2012
MDA Spiral 1 Prototype Software Updates (2nd Qtr FY09 only)	2	2009	2	2009
MDA Spiral 1 Prototype Software Updates (2nd Qtr only)	2	2010	2	2010
MDA Spiral 1 Prototype Software Updates (3rd Qtr only)	3	2010	3	2010
MDA Spiral 1 Prototype Software Updates (1st Qtrs only)	1	2011	1	2014

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 2351: *MDA*

	Start		End	
Event	Quarter	Year	Quarter	Year
MDA Spiral 1 Prototype Software Updates (3rd Qtrs only)	3	2011	3	2014
Sustainment Activities	1	2010	2	2015
Development Test (2nd Qtrs only)	2	2009	2	2010
Development Test (1st Qtrs only)	1	2011	1	2015
Development Test (3rd Qtrs only)	3	2010	3	2014

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 3032: *NTCSS (Naval Tactical Command Spt Sys)*	

COST ($ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
3032: *NTCSS (Naval Tactical Command Spt Sys)*	0.050	6.332	3.661	0.000	3.661	13.114	26.053	0.603	1.065	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

The Naval Tactical Command Support System (NTCSS) is a multi-function program designed to provide standard tactical support information systems to various afloat and associated shore-based fleet activities. The mission is to provide the Navy and Marine Corps with an integrated, scalable system that supports the management of logistical information, personnel, material and funds required to maintain and operate ships, submarines, and aircraft. FY2011 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. This will provide streamlined maintenance management for Navy and Marine Corps aviation. Funding also supports design, development, and migration of NTCSS into the Maritime Logistics Data Network concept of operations featuring multi-UIC (Unit Identification Code) which will provide a consolidated logistics management system by combining logistics data from multiple fleet operational platforms into a single database management system ashore with bi-directional replication and transactional capabilities. In conjunction with, and to better facilitate the development of One-NALCOMIS and multi-UIC, product improvements are planned to modernize the NTCSS system by migrating from a client-server based architecture to a service-oriented architecture (SOA) and web-based services. This will align with the initiative to bring Navy systems into a common computing environment afloat, interface with Navy ERP ashore, and provide a more flexible system platform with greater responsiveness to security, information assurance, functional, and system requirements and with greater speed to capability.

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
NTCSS (Naval Tactical Command Spt Sys) Maintenance and Supply Management Capability	0.050	6.332	3.661	0.000	3.661

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 3032: *NTCSS (Naval Tactical Command Spt Sys)*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: Continued program management and system engineering efforts for the transition of prior fiscal years' developments in NTCSS enterprise database and MLDN (Maritime Logistics Data Network) technologies to One NALCOMIS (Naval Aviation Logistics Command/Management Information System). *FY 2010 Plans:* Begin design and development efforts for NTCSS One NALCOMIS, multi-UIC (Unit Identification Code), enterprise database, and replication capabilities. Begin product improvement efforts for Service-Oriented Architecture (SOA) and web-based services to leverage multi-UIC and the enterprise system. Integrate NTCSS with CCE/CANES (Common Computing Environment/Consolidated Afloat Networks and Enterprise Services) afloat and NMCI (Navy/Marine Corps Intranet) ashore with required interfaces to Navy systems including ERP (Enterprise Resource Planning). *FY 2011 Base Plans:* Continue design, development, and testing efforts for NTCSS One NALCOMIS, multi-UIC, and enterprise database system. Continue design, development, and testing efforts for NTCSS product improvements of SOA and web-based services.					
Accomplishments/Planned Programs Subtotals	0.050	6.332	3.661	0.000	3.661

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 3032: *NTCSS (Naval Tactical Command Spt Sys)*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• OPN/2611: *Naval Tactical Command Support System*	29.564	35.823	33.358	0.000	33.358	35.859	36.501	33.859	34.462	0.000	660.031

D. Acquisition Strategy

The NTCSS Acquisition Strategy is defined in its Single Acquisition Management Plan (SAMP) dated February 2004. This SAMP provides the acquisition strategy and implementation plans for all NTCSS applications and is based on the following six tenants: Migration to Optimized Software Architecture, Migration to PC Workstations and UNIX/NT Servers, Migration to the Common Operating Environment (COE), Business Process Improvements, Focused Logistics, and Streamlined Acquisition Process. The SAMP provides a single point of focus and presents these efforts in an integrated and coordinated fashion.

E. Performance Metrics

One NALCOMIS reduces NTCSS Aviation software baseline configuration management support by 50%. Additionally, the NTCSS Aviation system hardware requirement realizes a 50% reduction at Fleet Readiness Centers (ashore) and Aircraft Intermediate Maintenance Departments (afloat).

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 3032: *NTCSS (Naval Tactical Command Spt Sys)*

Product Development ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Primary Hardware Development	Various/ Various	Various Various	0.668	0.000		0.000		0.000		0.000	0.000	0.668	0.668
Systems Engineering	Various/ Various	Various Various	1.050	0.150	Feb 2010	0.251	Nov 2010	0.000		0.251	0.000	1.451	Continuing
Licenses	Various/ Various	Various Various	0.700	0.000		0.000		0.000		0.000	0.000	0.700	0.700
		Subtotal	2.418	0.150		0.251		0.000		0.251	0.000	2.819	1.368

Remarks

Support ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Software Development	Various/ Various	Various Various	10.716	6.008	Feb 2010	2.352	Nov 2010	0.000		2.352	0.000	19.076	Continuing
Integrated Logistics Support	Various/ Various	Various Various	0.000	0.100	Feb 2010	0.100	Nov 2010	0.000		0.100	0.000	0.200	Continuing
Configuration Management	Various/ Various	Various Various	0.460	0.000		0.000		0.000		0.000	0.000	0.460	0.460
Technical Data	Various/ Various	Various Various	0.200	0.000		0.000		0.000		0.000	0.000	0.200	0.200

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 3032: *NTCSS (Naval Tactical Command Spt Sys)*

Support ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	11.376	6.108		2.452		0.000		2.452	0.000	19.936	0.660

Remarks

Test and Evaluation ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	Various/ Various	Various Various	0.000	0.000		0.400	Nov 2010	0.000		0.400	0.000	0.400	Continuing
Operational Test & Evaluation	Various/ Various	Various Various	0.585	0.000		0.200	Nov 2010	0.000		0.200	0.000	0.785	Continuing
		Subtotal	0.585	0.000		0.600		0.000		0.600	0.000	1.185	

Remarks

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 3032: *NTCSS (Naval Tactical Command Spt Sys)*

Management Services ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Contractor Engineering Support	Various/ Various	Various Various	0.896	0.000		0.000		0.000		0.000	0.000	0.896	0.896
Government Engineering Support	Various/ Various	Various Various	0.279	0.000		0.000		0.000		0.000	0.000	0.279	0.279
Program Management Support	Various/ Various	Various Various	0.000	0.074	Feb 2010	0.358	Nov 2010	0.000		0.358	0.000	0.432	Continuing
		Subtotal	1.175	0.074		0.358		0.000		0.358	0.000	1.607	1.175

Remarks

	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	15.554	6.332		3.661		0.000		3.661	0.000	25.547	3.203

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 3032: *NTCSS (Naval Tactical Command Spt Sys)*

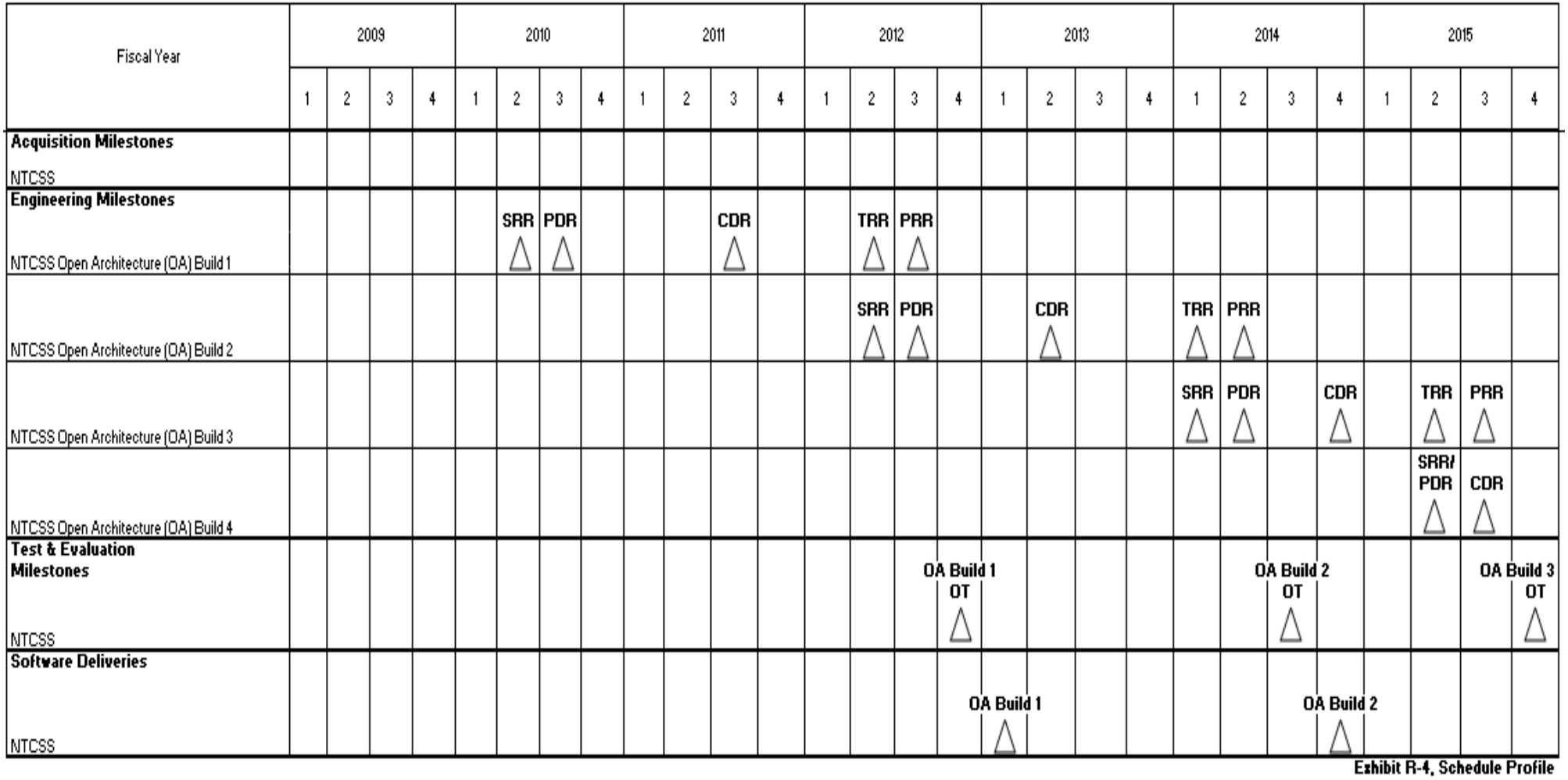


Exhibit R-4, Schedule Profile

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 3032: *NTCSS (Naval Tactical Command Spt Sys)*

Schedule Details

	Start		End	
Event	Quarter	Year	Quarter	Year
NTCSS Open Architecture Build 1- System Requirements Review (SRR)	2	2010	2	2010
NTCSS Open Architecture Build 1- Preliminary Design Review (PDR)	3	2010	3	2010
NTCSS Open Architecture Build 1- Critical Design Review (CDR)	3	2011	3	2011
NTCSS Open Architecture Build 1- Test Readiness Review (TRR)	2	2012	2	2012
NTCSS Open Architecture Build 1- Production Readiness Review (PRR)	3	2012	3	2012
NTCSS Open Architecture Build 1- Operational Test (OT)	4	2012	4	2012
NTCSS Open Architecture Build 1- Delivery	1	2013	1	2013
NTCSS Open Architecture Build 2- System Requirements Review (SRR)	2	2012	2	2012
NTCSS Open Architecture Build 2- Preliminary Design Review (PDR)	3	2012	3	2012
NTCSS Open Architecture Build 2- Critical Design Review (CDR)	2	2013	2	2013
NTCSS Open Architecture Build 2- Test Readiness Review (TRR)	1	2014	1	2014
NTCSS Open Architecture Build 2- Production Readiness Review (PRR)	2	2014	2	2014
NTCSS Open Architecture Build 2- Operational Test (OT)	3	2014	3	2014
NTCSS Open Architecture Build 2- Delivery	4	2014	4	2014
NTCSS Open Architecture Build 3- System Requirements Review (SRR)	1	2014	1	2014
NTCSS Open Architecture Build 3- Preliminary Design Review (PDR)	2	2014	2	2014
NTCSS Open Architecture Build 3- Critical Design Review (CDR)	4	2014	4	2014
NTCSS Open Architecture Build 3- Test Readiness Review (TRR)	2	2015	2	2015

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 3032: *NTCSS (Naval Tactical Command Spt Sys)*

	Start		End	
Event	Quarter	Year	Quarter	Year
NTCSS Open Architecture Build 3- Production Readiness Review (PRR)	3	2015	3	2015
NTCSS Open Architecture Build 3- Operational Test (OT)	4	2015	4	2015
NTCSS Open Architecture Build 4- System Requirements Review (SRR)	2	2015	2	2015
NTCSS Open Architecture Build 4- Preliminary Design Review (PDR)	2	2015	2	2015
NTCSS Open Architecture Build 4- Critical Design Review (CDR)	3	2015	3	2015

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 9123: *FORCEnet*	

COST ($ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
9123: *FORCEnet*	42.321	6.707	5.667	0.000	5.667	11.325	10.739	17.625	17.884	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

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) DoN C4ISR Transformation/Strategic Planning within DoN/Joint/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 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 MDA with 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 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. 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, Naval Network Warfare Command, Assistant Secretary of the Navy Research, Development and Acquisition 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.

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 9123: *FORCEnet*

(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 Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR) systems technical requirements generation, requirements tracking, architecture development, and detailed analyses on various warfare systems under development to determine if the required Command, Control, Communications, and Computers 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) MDA: MDA 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.

This MDA focused Deep Lightning Bolt 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, sharing information with allies, and developing subject matter expertise and assessment tools to achieve MDA and enhance operational decision making.

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FORCEnet	18.308	6.707	5.667	0.000	5.667
FY 2009 Accomplishments: 1) Department of Navy (DoN) Transformation within Joint/Department of Defense (DoD) Framework (Strategic Planning): Refined expanded Joint/Interagency/Allied/Coalition coordination/policy/ planning. Convened the fifth annual FRCC Review Board and FRCC Flag Board. Validated FORCEnet Requirements/Architectures/Standards Spiral/Iteration. Updated integrated FORCEnet					

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 9123: *FORCEnet*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
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): Conducted Trident Warrior 09 (TW09) in Commander Second Fleet/Commander Sixth Fleet Area of Responsibility using Expeditionary Strike Group (CSG/ESG) units with continued Coalition presence. Successfully performed experimentation on approximately 100 technologies. Investigated operational level implementation of Maritime Domain Awareness (MDA), 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 (PORs). Planned and executed TW09 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 TW09 experiment results and delivered Military Utility Assessment (MUA) to Naval Network Warfare Command (NETWARCOM), Commander Fleet Forces Command (CFFC) and the Sea Trial ESG. Began planning for Trident Warrior 10. Developed FY 10-11 FORCEnet Sea Trial Plan. 3) Implementing FORCEnet Requirements: Performed POR compliance reviews using validated assessment tools, compliance test procedures/methodologies. Reported POR 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, integrating FORCEnet Compliance into the DoN Planning/Programming/Budgeting/Execution (PPBE) and JCIDS processes. Implemented Netcentric Data Strategy across all Navy led Communities of Interest. 4) Systems Requirements Analysis / Systems Engineering (formerly Osprey Hawksbill): Conducted requirements analysis and systems engineering of systems under development by DoN/DoD. Provided technical and systems engineering expertise required for C4ISR systems technical					

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 9123: *FORCEnet*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
requirements generation and tracking, architecture development, systems analysis to evaluate alignment and synchronization of infrastructure, resources and other existing/developing systems. Funding also supported the systems engineering for the synthesis of current net-centric C4ISR systems with existing and emerging C4ISR systems. 5) Deep Lightning Bolt/Rapid Capability Development (DLB/RCD): Based on current critical needs identified by the Fleet, DLB bridged gaps between Science & Technology efforts and Warfighter requirements, focused on developing technology for: Active / Passive Radio Frequency Exploitation Systems, Visualized Service Oriented Architecture Applications extended from Maritime Operations Center to Ship, Navy Tactical Networks communications applications allowing full access by disadvantaged users and the improvement of communications support for distributed operations to allow tactical and reachback networks over low bandwidth, Rapidly deployable reachback communication alternatives for use in the event of Satellite Communications (SATCOM) loss, Innovative Information Assurance solutions, Enhanced fusion of tactical data with National Technical Means. FY 2009 OCO: N/A *FY 2010 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 MDA, Standing Joint Force Headquarters, MOC and coalition/Allied operations.*					

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 9123: *FORCEnet*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
2) Accelerating Joint Warfighting Capability (Trident Warrior): Finalize analysis of Trident Warrior 09 (TW09) experiment to result in delivery of MUA to NETWARCOM, CFFC and the Sea Trial Expeditionary Strike Group (ESG). Explore ident Warrior 10 (TW10) in Commander Third Fleet (C3F)/ Commander Seventh Fleet (C7F) AOR using 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 (RR LOE) 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, Budgeting, and Execution System (PPBES) and engineering decisions. Anticipate some areas of investigation to be operational level implementation of MDA, Maritime Operations Center (MOC), Coalition, GIG and NCES technologies and associated TTPs and 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: *					

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 9123: *FORCEnet*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
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. *Efforts realigned to Program Element 0604707N, Project 2144 Space and Electronic Warfare Engineering starting in FY10. FY 2010 OCO: N/A *FY 2011 Base 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 NCOW. Supports Navy implementation of Maritime Domain Awareness (MDA), Standing Joint Force Headquarters, Maritime Operations Centers (MOC) and coalition/Allied operations.* 2) Accelerating Joint Warfighting Capability (Trident Warrior): Funds At-Sea experiment venue focused on improving Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR) operational capabilities across all Naval and Joint platforms across a range of Technology Readiness Levels (TRLs), representing both Next Step Science and Technology (S&T) Innovations and higher TRL POR-hosted technologies. Finalize analysis of Trident Warrior 10					

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 9123: *FORCEnet*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
(TW10) experiment and deliver a MUA to NETWARCOM, CFFC and the Sea Trial Expeditionary Strike Group (ESG). Conduct and execute TW11 in Commander Second Fleet (C2F)/Commander Sixth Fleet (C6F) Area of Responsibility (AOR) using Carrier Strike Group/CSG/ESG units with continued Coalition presence. Direct, coordinate, assist and supervise technology provider compliance with specific goal identification, risk identification, and experiment planning to include data collection requirements. Direct and ensure required installation and security certification, accreditation, and approvals for all technologies. Conduct Risk Reduction Limited Objective Experiment (RR LOE) in a lab environment to ensure systems will not have a negative impact on operational unit readiness and provide value-added data to support analysis and subsequent acquisition decisions. Engineer and install experimental C4ISR systems, including a groom of existing onboard ship operational C4ISR systems to ensure that they are operating as designed and support the acquisition of Net Ready Key Performance Parameters (NR KPPs). Provide subject matter experts (SMEs) to maintain core ship services during the experiment period and troubleshoot system failures and interoperability issues. In addition, provide independent experts in experimentation best practices to coordinate experiment and test plans; lead the Data Collection and Analysis Plan (DCAP) effort, and provide unbiased assessment to Fleet and Acquisition key decision makers. Provide results to government sponsors to support the program's Planning, Programming, Budgeting, and Execution System (PPBES) and engineering decisions. Areas of investigation anticipated to be in the following categories: Range of Operational Warfare Command and Control (ROWC2), operational level implementation of Maritime Domain Awareness (MDA), Maritime Operations Center (MOC), Coalition, GIG and NCES technologies and associated TTPs and CONOPS. Plan and execute TW11 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 12: 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 90 initiatives. Develop FY 12-13 FORCEnet Sea Trial Plan.					

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 9123: *FORCEnet*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
3) Implementing FORCEnet Requirements: * 4) Systems Requirements Analysis/Systems Engineering: 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. *Efforts realigned to Program Element 0604707N, Project 2144 Space and Electronic Warfare Engineering starting in FY10. FY 2011 OCO: N/A					
Acquistion Workforce Fund *FY 2009 Accomplishments:* N/A	0.165	0.000	0.000	0.000	0.000
Maritime Domain Awareness (MDA) *FY 2009 Accomplishments:* Maritime Domain Awareness (MDA) The MDA Prototype, including the Non-Classified Enclave (NCE), delivered enhanced vessel tracking, anomaly detection (Track Assessment and Anomaly Detection - Maritime (TAANDEM)), threat detection, expanded maritime interdiction capabilities and improved access to national databases for Naval and Coast Guard activities supporting National Maritime Security. Specific planned	23.848	0.000	0.000	0.000	0.000

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 9123: *FORCEnet*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
activities for FY09 that support the MDA prototype included: implementing the FY08 Quick Reaction Assessment (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. Conducted Comprehensive Maritime Awareness (CMA) Joint Capabilities Technology Demonstrations (JCTD) Operational Utility Assessment (OUA), MDA Capabilities Based Assessment (CBA) Resources and Requirements Review Board (R3B), approval of Gate 1 Review; approval to proceed with MDA Enterprise Node. 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. Conducted successful Quick Reaction Assessment (QRA) on the Operational Demonstration 4 (OD4) and NCE. Deployed NCE to Africa Partnership Station onboard USS Nashville. Relocated NCE hosting facility to SOUTHCOM.					
Accomplishments/Planned Programs Subtotals	42.321	6.707	5.667	0.000	5.667

C. Other Program Funding Summary ($ in Millions)

N/A

D. Acquisition Strategy

Not Applicable

E. Performance Metrics

FORCEnet Performance Metrics: Goal: CNO strategic planning and supporting acquisition of N89 classified efforts. Metric: Echelon 1 response to emergent strategic needs and classified warfighting capability.

Accelerating Joint Warfighting Capability (Trident Warrior) Performance Metrics: Confirmation of Fleet and Joint Interoperability with technology candidates, Information Assurance certification and accreditation, and alignment with current Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR) Technology Roadmaps as well as related Program Executive Office (PEO) Objectives and projected architectures. Metrics for individual technologies are

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 9123: *FORCEnet*

independently determined and validated by Naval Post Graduate School (NPS). Metrics are chosen to ensure that the experiment results in the accurate assessment of the technology to either address a capability gap or support Program of Record (POR) programmatic decisions.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 9123: *FORCEnet*	

Product Development ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Primary Hardware Development DLB/RCD	Various/ Various	Various Various	1.196	0.000		0.000		0.000		0.000	Continuing	Continuing	Continuing
Systems Engineering-DLB/RCD	Various/ Various	Various Various	0.600	0.000		0.000		0.000		0.000	Continuing	Continuing	Continuing
Ship Integration	Various/ Various	Various Various	0.935	0.000		0.000		0.000		0.000	0.000	0.935	Continuing
Systems Engineering	Various/ Various	Various Various	1.600	0.000		0.000		0.000		0.000	0.000	1.600	Continuing
		Subtotal	4.331	0.000		0.000		0.000		0.000			

Remarks

Support ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Integrated Logistics Support DLB/RCD	Various/ Various	Various Various	0.250	0.000		0.000		0.000		0.000	Continuing	Continuing	Continuing
Configuration Management DLB/RCD	Various/ Various	Various Various	0.115	0.000		0.000		0.000		0.000	Continuing	Continuing	Continuing
Development Support DLB/RCD	Various/ Various	Various Various	0.250	0.000		0.000		0.000		0.000	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 9123: *FORCEnet*

Support ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Software Development DLB/RCD	Various/ Various	Various Various	1.971	0.000		0.000		0.000		0.000	Continuing	Continuing	Continuing
Development Support	Various/ Various	Various Various	2.700	0.000		0.000		0.000		0.000	0.000	2.700	Continuing
Software Support	Various/ Various	Various Various	2.900	0.000		0.000		0.000		0.000	0.000	2.900	Continuing
Sys Req Analysis/Sys Eng	Various/ Various	Various Various	14.010	1.093	Feb 2010	0.818	Feb 2011	0.000		0.818	Continuing	Continuing	Continuing
S/W Develop,Integ,Demo, Field - MDA Prototypes	Various/ Various	Various Various	108.910	0.000		0.000		0.000		0.000	0.000	108.910	Continuing
		Subtotal	131.106	1.093		0.818		0.000		0.818			

Remarks

Test and Evaluation ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	Various/ Various	Various Various	1.300	0.000		0.000		0.000		0.000	0.000	1.300	Continuing
Accelerating Joint Warfighting Capability	Various/ Various	Various Various	26.195	4.580	Feb 2010	4.076	Feb 2011	0.000		4.076	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 9123: *FORCEnet*

Test and Evaluation ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Imp FORCEnet Req (Fn Comp)	Various/ Various	Various Various	17.144	0.000		0.000		0.000		0.000	Continuing	Continuing	Continuing
DoN Transformation (Strategic Planning)	Various/ Various	Various Various	19.496	1.034	Feb 2010	0.773	Feb 2011	0.000		0.773	Continuing	Continuing	Continuing
Developmental Test & Evaluation DLB/RCD	Various/ Various	Various Various	0.500	0.000		0.000		0.000		0.000	Continuing	Continuing	Continuing
		Subtotal	64.635	5.614		4.849		0.000		4.849			

Remarks

Management Services ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Technical Support	Various/ Various	Various Various	2.124	0.000		0.000		0.000		0.000	0.000	2.124	Continuing
Government Engineering Support	Various/ Various	Various Various	3.899	0.000		0.000		0.000		0.000	0.000	3.899	Continuing
Program Management Support DLB/RCD	Various/ Various	Various Various	0.250	0.000		0.000		0.000		0.000	Continuing	Continuing	Continuing
Travel DLB/RCD	Various/ Various	Various Various	0.145	0.000		0.000		0.000		0.000	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 9123: *FORCEnet*

Management Services ($ in Millions)

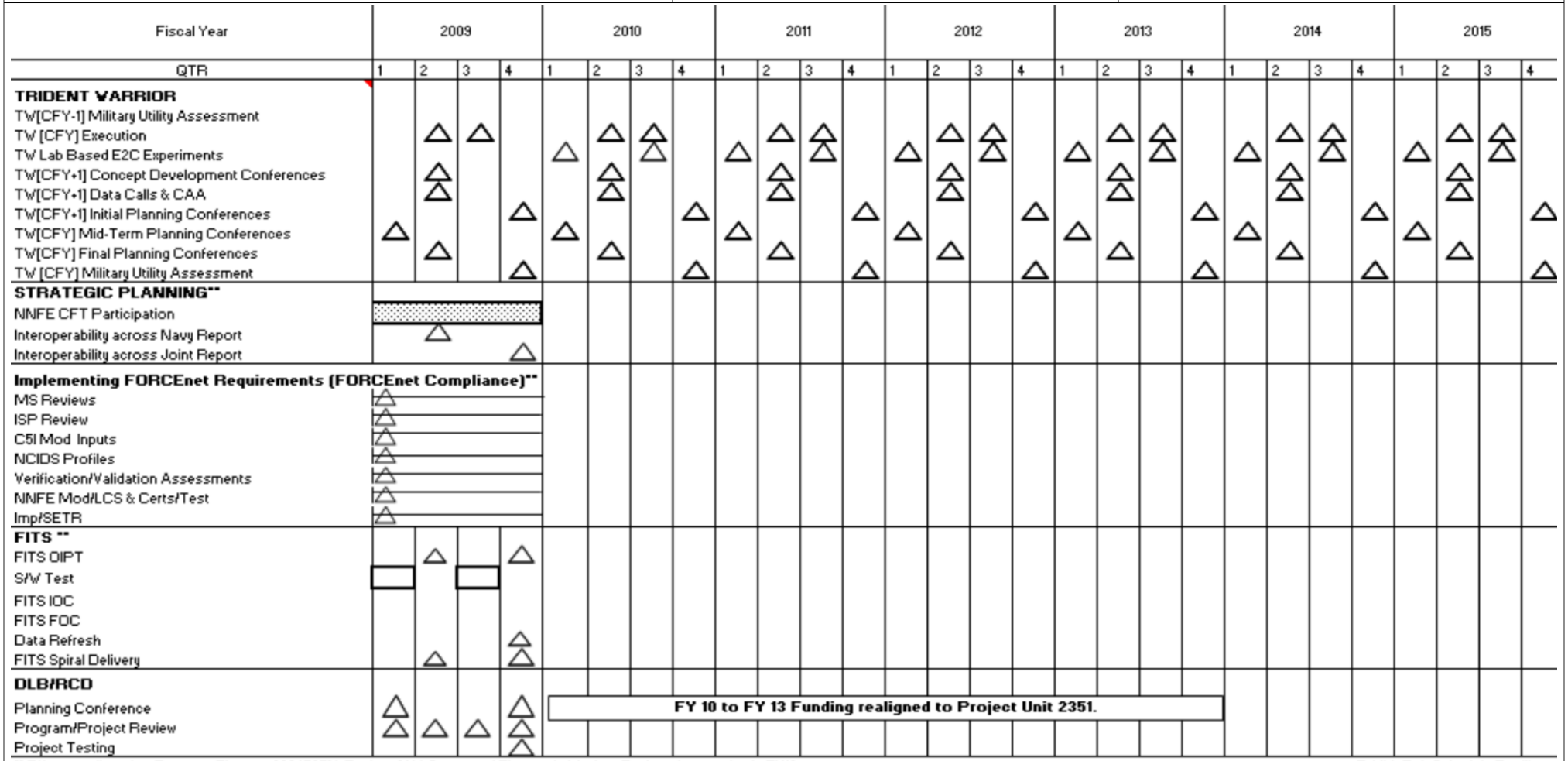
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support	Various/ Various	Various Various	0.800	0.000		0.000		0.000		0.000	0.000	0.800	Continuing
Travel	Various/ Various	Various Various	0.299	0.000		0.000		0.000		0.000	0.000	0.299	Continuing
Acquisition Workforce	Various/ Various	Various Various	0.165	0.000		0.000		0.000		0.000	0.000	0.165	Continuing
		Subtotal	7.682	0.000		0.000		0.000		0.000			

Remarks

	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	207.754	6.707		5.667		0.000		5.667			

Remarks

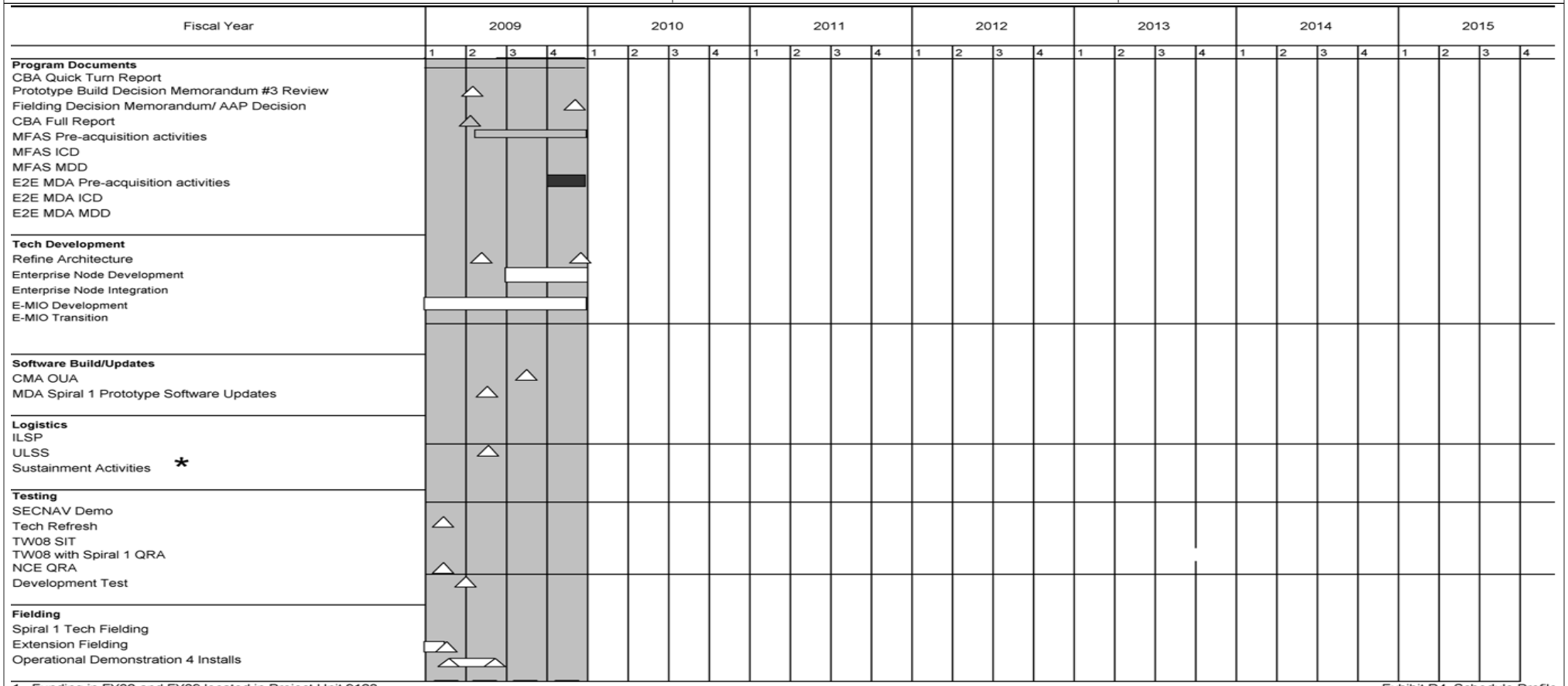
Exhibit R-4, RDT&E Schedule Profile: PB 2011 Navy		**DATE:** February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604231N: *Tactical Command System*	**PROJECT** 9123: *FORCEnet*



** Efforts realigned to Program Element 0604707N, Project 2144 Space and Electronic Warfare Engineering starting in FY10

Exhibit R-4, Schedule Profile

Exhibit R-4, **RDT&E Schedule Profile:** PB 2011 Navy		**DATE:** February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604231N: *Tactical Command System*	**PROJECT** 9123: *FORCEnet*



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

Exhibit R4, Schedule Profile

CBA - Capabilities Based Assessment
CMA - Comprehensive Maritime Awareness
E2E MDA - End-to-End MDA
ICD - Initial Capabilities Document
AAP - Abbreviated Acquisition Program

NCE - Non-classified Environment
OUA - Operational Utility Assessment
QRA - Quick Reaction Assessment
SOA - Service Oriented Architecture

SIT - Systems integration Testing
TW - Trident Warrior
ULSS - User's Logistics Support Summary
* - OMN Funded

MDA Spiral 1 Prototype
MFAS Increment
E2E Increment

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 9123: *FORCEnet*

Schedule Details

	Start		End	
Event	Quarter	Year	Quarter	Year
Trident Warrior (TW) Execution	2	2009	3	2015
TW Lab Based E2C Experiments	1	2010	3	2015
TW Concept Development Conferences	2	2009	2	2015
TW Data Calls & CAA	2	2009	2	2015
TW Initial Planning Conferences	4	2009	4	2015
TW Mid-Term Planning Conferences	1	2009	1	2015
TW Final Planning Conferences	2	2009	2	2015
TW Military Utility Assessment	4	2009	4	2015
Strategic Planning (SP) NNFE CFT Participation	1	2009	4	2009
SP Interoperability across Navy Report	2	2009	2	2009
SP Interoperability across Joint Report	4	2009	4	2009
FORCEnet Compliance (Fn Comp) MS Reviews	1	2009	4	2009
Fn Comp ISP Review	1	2009	4	2009
Fn Comp C5I Mod Inputs	1	2009	4	2009
Fn Comp NCIDS Profiles	1	2009	4	2009
Fn Comp Verification/Validation Assessments	1	2009	4	2009
Fn Comp NNFE Mod/LCS & Certs/Test	1	2009	4	2009
Fn Comp Imp/SETR	1	2009	4	2009

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 9123: *FORCEnet*

	Start		End	
Event	Quarter	Year	Quarter	Year
FORCEnet Implementation Tool Suite (FITS) OIPT	2	2009	4	2009
FORCEnet Implementation Tool Suite (FITS) S/W Test	1	2009	3	2009
FORCEnet Implementation Tool Suite (FITS) Data Refresh	4	2009	4	2009
FORCEnet Implementation Tool Suite (FITS) Spiral Delivery	2	2009	4	2009
DLB/RCD Planning Conference	1	2009	4	2009
DLB/RCD Program/Project Review	1	2009	4	2009
DLB/RCD Project Testing	4	2009	4	2009
Prototype Build Decision Memorandum #3	2	2009	2	2009
Fielding Decision Memorandum	4	2009	4	2009
CBA Full Report	2	2009	2	2009
MFAS Pre-acquisition activities	2	2009	4	2009
E2E MDA Pre-acquisition activities	4	2009	4	2009
Refine Architecture	2	2009	4	2009
Enterprise Node Development	3	2009	4	2009
EMIO Development	1	2009	4	2009
CMA OUA	3	2009	3	2009
MDA Spiral 1 Prototype Software Updates	2	2009	2	2009
ULSS	2	2009	2	2009
Tech Refresh	1	2009	1	2009
NCE QRA	1	2009	1	2009

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 9123: *FORCEnet*

	Start		End	
Event	Quarter	Year	Quarter	Year
Development Test	1	2009	1	2009
Extension Fielding	1	2009	1	2009
Operational Demonstration 4 Installs	1	2009	2	2009

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 9999: *Congressional Adds*	

COST ($ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
9999: *Congressional Adds*	3.989	6.373	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	26.949
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

Congressional Add.

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010
Congressional Add: Shipboard Wireless Network *FY 2010 Plans:* Initiate hardware development of 60 GHz VI-FI technology from NAVSEA SBIR to work in a shipboard environment. Begin systems engineering efforts to modify design and interfaces to be interoperable wtih current and planned wireless network implementations, as well as client devices provided by NAVSEA and NAVAIR programs. Conduct modeling and simulation, network integration and electromagnetic testing to verify interoperability with existing shipboard systems.	0.000	2.390
Congressional Add: ISR Enhancements *FY 2009 Accomplishments:* Funded requirements analysis, development of architectural alternatives, use case generation, CONOPS development and system engineering activities necessary to incorporate multiple security enclaves (projected Objective requirement for Increment 2.1 and Threshold requirement for Increment 3.0) into Tactical Support Centers (TSCs) and Mobile Operations Control Centers (MOCCs) to support	3.989	3.983

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 9999: *Congressional Adds*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010
the enhanced ISR capabilities of new and upgraded Maritime Patrol and Reconnaissance Aircraft (MPRA). *FY 2010 Plans:* Continue to fund requirements analysis, development of architectural alternatives, use case generation, CONOPS development and system engineering activities necessary to incorporate multiple security enclaves (projected Objective requirement for Increment 2.1 and Threshold requirement for Increment 3.0) into Tactical Support Centers (TSCs) and Mobile Operations Control Centers (MOCCs) to support the enhanced ISR capabilities of new and upgraded Maritime Patrol and Reconnaissance Aircraft (MPRA).		
Congressional Adds Subtotals	3.989	6.373

C. Other Program Funding Summary ($ in Millions)

N/A

D. Acquisition Strategy

N/A

E. Performance Metrics

Congressional Add.