Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Navy										DATE: February 2011	
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*				R-1 ITEM NOMENCLATURE PE 0204163N: *Fleet Tactical Development*							
COST ($ in Millions)	**FY 2010**	**FY 2011**	**FY 2012 Base**	**FY 2012 OCO**	**FY 2012 Total**	**FY 2013**	**FY 2014**	**FY 2015**	**FY 2016**	**Cost To Complete**	**Total Cost**
Total Program Element	33.750	26.894	1.739	-	1.739	1.058	1.030	1.047	1.028	Continuing	Continuing
0725: *Communication Automation*	13.194	6.805	1.739	-	1.739	1.058	1.030	1.047	1.028	Continuing	Continuing
1083: *Shore To Ship Com System*	18.963	20.089	-	-	-	-	-	-	-	0.000	39.052
9999: *Congressional Adds*	1.593	-	-	-	-	-	-	-	-	0.000	1.593

A. Mission Description and Budget Item Justification

The Communications Automation Program - This project is a continuing program that provides for automation and communications upgrades for fleet tactical users. It includes Automated Digital Network System (ADNS), Tactical Switching Ashore, High Frequency Internet Protocol/Sub Network Relay. In Fiscal Year (FY) 10 and 11, begin Common Radio Room communications for requirements analysis, system design and the Mobile Networking High Band Increments 1 and 2.

ADNS is the method by which tactical Navy units transfer Internet Protocol (IP) data to Navy and Department of Defense communities on the Global Information Grid (GIG). ADNS serves as a gateway to enable joint and coalition interoperability for these tactical assets and ensures GIG connectivity. ADNS allows unclassified, secret, top secret traffic, and various joint, allied, and coalition services to reconnect to the Defense Information Systems Network ashore via radio paths and pier connectivity.

Tactical Switching Ashore will support the migration of the shore sites and their terrestrial interconnections into a coherent, scalable, network capability.

The Shore to Ship Communications System develops communication system elements which provide positive command and control of deployed submarines. The Shore to Ship Communications System which provides continuous assessment of the command and control links between the National Command Authority and missile platforms is conducted to ensure compliance with Nuclear Technical Performance Criteria (NTPC). The Shore to Ship Communications System addresses joint system design issues for Emergency Action Message (EAM) distribution to all nuclear platforms and provides evaluation of joint interoperability of EAM delivery systems. Tools are developed to provide strategic command and control planning within the submarine shore infrastructure to support deployed ballistic missile submarines.

FY12 funds will be used for ADNS development, an increase in Common Radio Room development and Mobile Networking High Band Increment 2.

Maritime Aerial Layer Network (MALN) Increment 1 (previously Mobile Networking High Band (MNH)) is the Navy solution set to support the Joint Aerial Layer Network (JALN). This collaborative effort will provide an overarching solution to fleet communications and networking requirements. MALN provides an advanced wideband communications network which was initiated in response to Littoral Combat Ship (LCS) requirements to communicate with off-board systems via a NAVSEA SBIR program. Inc. 1 will provide a networking radio designed to operate in an open ocean environment and support multiple naval platforms. This radio will provide a common wireless networking capability aboard LCS with applicability to other hull types, as well as other networked applications.

Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Navy	DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0204163N: *Fleet Tactical Development*

Maritime Aerial Layer Network (MALN) Increment 2 is an advanced wideband communications network which will transport intelligence data, non-traditional Intelligence, Surveillance, and Reconnaissance (ISR) communications, and backbone network traffic using IP-based connectivity to achieve GIG (Global Information Grid) interoperability. It will achieve substantial spectral efficiency (frequency reuse) via narrow-beam antennas. Inc. 2 provides theater-wide connectivity to units outside degraded Satellite Communication areas. Features next generation directional antenna technology to support multiple node connections.

B. Program Change Summary ($ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	36.799	26.894	25.758	-	25.758
Current President's Budget	33.750	26.894	1.739	-	1.739
Total Adjustments	-3.049	-	-24.019	-	-24.019
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-2.046	-			
• SBIR/STTR Transfer	-0.845	-			
• Program Adjustments	-	-	-23.981	-	-23.981
• Section 219 Reprogramming	-0.128	-	-	-	-
• Rate/Misc Adjustments	-	-	-0.038	-	-0.038
• Congressional General Reductions Adjustments	-0.030	-	-	-	-

Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2010	FY 2011
Project: 9999: *Congressional Adds*		
Congressional Add: *Shipboard Automated Radio Room System*	1.593	-
Congressional Add Subtotals for Project: 9999	1.593	-
Congressional Add Totals for all Projects	1.593	-

Change Summary Explanation

Technical: Project Unit 1083 was realigned from Program Element 0204163N to 0101402N

Schedule: ADNS: Operational Testing (OT) for ADNS INC III Surface and Ashore was conducted in 2nd Qtr FY10. INC III Surface and Ashore Full Rate Production was approved 1st Qtr FY11. INC III Submarine test events will occur in FY11 and FY12. System integration within the Common Submarine Radio

Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Navy	DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0204163N: *Fleet Tactical Development*

Room (CSRR) will be ongoing in FY11 and early FY12. Additional interface design development and integration will occur with emerging SATCOM and RF paths.

NC3 LTS: The Request for Proposal (RFP) release was delayed from 4QFY10 to 2QFY11. As a result of the RFP delay, contract award, system design and development, Preliminary Design Review (PDR), Milestone C, system test events and system fielding were delayed accordingly.

Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0204163N: *Fleet Tactical Development*	PROJECT 0725: *Communication Automation*	

COST ($ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
0725: *Communication Automation*	13.194	6.805	1.739	-	1.739	1.058	1.030	1.047	1.028	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

This project is a continuing program that provides for automation and communications upgrades for Fleet tactical users.

Automated Digital Network System (ADNS) provides routing, switching, baseband, configuration and monitoring capabilities for interconnecting naval, coalition and joint enclaves worldwide. ADNS utilizes off the shelf equipment and network protocols as specified by the Joint Technical Architecture. ADNS Increment (INC) II provides capabilities of load balancing, radio frequency restoral, initial quality of service to include application prioritization, initial traffic management, and enhancements designed to maximize use of available bandwidth for surface, shore, and airborne platforms. ADNS INC III converges all Navy tactical voice, video, and data requirements into a converged IP data stream. ADNS INC III interoperates with higher bandwidth satellites, supporting up to 25 mega bytes per second (Mbps) of throughput on unit level ships and up to 50 Mbps on force level ships. Increment III architecture also incorporates an IPv4/IPv6 dual stack and a cipher text security architecture to align to joint and coalition networks, in addition to greater security utilizing the High Assurance Internet Protocol (IP) Encryptor devices. ADNS INC III serves as the Navy tactical interface for IP Networking with Joint Tactical Radio System, and Advanced Extremely High Frequency. ADNS will investigate emerging technologies to integrate with additional Department of Defense C4I Programs to improve interstrike group networking and extend the network to the tactical edge.

The Tactical Switching Ashore (TSw) program rebuilds 1970s based shore high frequency based infrastructure to current and future scalable technical standards in order to provide a commercially standardized, technically compliant, and robust network. TSw is the shore component for Consolidated Afloat Networks and Enterprise Services. TSw will migrate the shore sites and their terrestrial interconnections into a coherent, scalable, network-centric capability. While leveraging off recent shore upgrades for the major shore communication regions, TSw will incorporate a system integrator approach to develop, design, and implement a plan to remove bandwidth limitations, create failover communication paths, provide secure and available communications, provide dynamic bandwidth management, and reduce costly dependencies on legacy systems. This plan is designed to increase efficiencies, and reduce manpower and the overall footprint of the Navy's shore sites. In addition, TSw will provide an enterprise-wide network operations capability providing full network situational awareness, network visualization, network management and control, and automation capabilities. TSw will bring new technologies and capabilities that converge legacy, circuit-based, communications to a standard, integrated, and interoperable IP network. This enabling system, of which United States Navy enterprise network (FORCEnet) is a part, supports the four pillars of Sea Power 21 by providing the infrastructure required to support collaborative decision-making, faster decision cycles, and shared superior situational awareness required for overseas contingency operations and to mitigate network vulnerabilities. FY10 completed development for the implementation of all-IP interoperability which will allow for the removal of the remaining legacy and Navy network architectures. TSw developed the end to end quality of service to provide global situational awareness, survivability, and bandwidth expansion to ensure a robust, reliable, scalable, sustainable, and dynamic failover global network architecture. TSw will develop the integration plan to maximize the DISN core for transport, route diversification, and distributed joint services to allow access anywhere via distributed services. Beginning in FY11, TSw has no developmental requirements.

Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0204163N: *Fleet Tactical Development*	PROJECT 0725: *Communication Automation*

Maritime Aerial Layer Network (MALN) Increment 1 is the Navy solution set to support the Joint Aerial Layer Network (JALN). This collaborative effort will provide an overarching solution to fleet communications and networking requirements. MALN provides an advanced wideband communications network which was initiated in response to Littoral Combat Ship (LCS) requirements to communicate with off-board systems via a NAVSEA SBIR program. Increment 1 will provide a networking radio designed to operate in an open ocean environment and support multiple naval platforms. This radio will provide a common wireless networking capability aboard Littoral Combat Ship (LCS) with applicability to other hull types, as well as other networked applications.

Maritime Aerial Layer Network (MALN) Increment 2 is an advanced wideband communications network which will transport intelligence data, non-traditional Intelligence, Surveillance, and Reconnaissance (ISR) communications, and backbone network traffic using Internet Protocol (IP)-based connectivity to achieve Global Information Grid (GIG) interoperability. It will reuse frequencies via narrow-beam antennas. Increment 2 provides theater-wide connectivity to units outside degraded satellite communication areas. Features next generation directional antenna technology to support multiple node connections.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
Title: Automated Digital Network System (ADNS)	6.143	3.154	1.739
Articles:	5	0	0

FY 2010 Accomplishments:
Conducted INC III Developmental Testing (DT), conducted Operational Testing (OT) of ADNS INC III and Joint Interoperability Test Command (JITC) Certification of ADNS INC III. Continued the development of dynamic Quality of Service (QoS)/Ethernet modems. Continued the development of the system modification of ADNS INC III for HAIPE integration. Continued the development of acquisition documents, specifications, and capability requirements for INC III Subs. Continued the system development and demonstration phase for ADNS INC III for submarines. Performed acceptance test for ADNS INC III Subs, and began the Common Submarine Radio Room (CSRR) integration effort. Continued the development of and update to system and subsystem interface designs for integration with new SATCOM and RF paths, as they emerged. Continued the research and evaluation of emergent technology maturity for inclusion into future capabilities developed for ADNS systems. The 5 procured units are submarine production representative units received from the vendor which were utilized for the ongoing efforts listed in FY10 plans.

FY 2011 Plans:
Develop Traffic Engineering via Multiprotocol Label Switching/Virtual Private Networks (MPLS-VPNs) to support advance load distribution in ADNS INC III. ADNS INC III will enhance joint and coalition interoperability through new network routing architectures. Continue the CSRR integration effort for ADNS INC III submarine systems, and conduct the Operational Assessment for ADNS INC III submarine systems. Evaluate technology insertion opportunities to provide ADNS capabilities will enhance network mobility for aircraft by developing a mobile ad hoc network (MANET) architecture. ADNS INC II and III will develop reduced size, weight and power (SWAP) designs for submarines, aircraft, and small vessels. Continue the development of updated system and subsystem interface designs for integration with new SATCOM and Radio Frequency (RF) paths, as

Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0204163N: *Fleet Tactical Development*	PROJECT 0725: *Communication Automation*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
they emerge. Continue the research and evaluation of emergent technology maturity for inclusion into ADNS systems based on defined capabilities requirements. ***FY 2012 Plans:*** Complete the ADNS INC III system integration into the CSRR system. Conduct the Developmental Testing (DT), Operational Testing (OT) and Joint Interoperability Test Command (JITC) Certification of ADNS INC III Submarines. Continue the evaluation of technology insertion capabilities to the ADNS system to enhance network mobility for aircraft by developing a mobile ad hoc network (MANET) architecture.			
Title: Tactical Switching (Ashore) ***Articles:*** ***FY 2010 Accomplishments:*** Completed development for the implementation of ALL-Internet Protocol (IP) interoperability which will allow for the removal of legacy and Navy unique network architectures. Additionally, TSw developed the end to end Quality of Service (QoS) to provide global situational awareness, survivability, and bandwidth expansion to ensure a robust, reliable, scalable, sustainable, and dynamic failover for a global network architecture.	2.333 0	-	-
Title: Martime Aerial Layer Network Inc 1 ***Articles:*** ***FY 2010 Accomplishments:*** Initiated acquisition documentation and Analysis of Alternatives (AoA). ***FY 2011 Plans:*** Continue system development, testing, demonstration and technical assessment of various systems for consideration in Joint Aerial Layer Network (JALN) Analaysis of Alternatives (AoA). Completion of AoA in support of JALN.	1.533 0	0.937 0	-
Title: Martime Aerial Layer Network Inc 2 ***Articles:*** ***FY 2010 Accomplishments:*** Initiated acquisition documentation and Analysis of Alternatives (AoA). Conducted technology demonstration. ***FY 2011 Plans:*** Continue system development, testing, demonstration and technical assessment of various systems for consideration in Joint Aerial Layer Network (JALN) Analysis of Alternatives (AoA). Completion of AoA in support of JALN.	2.406 0	2.714 0	-
Title: Battle Force Tactical Network (BFTN) (Formerly High Frequency Internet Protocol/SubNet Relay (SNR/HFIP))	0.779	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0204163N: *Fleet Tactical Development*	**PROJECT** 0725: *Communication Automation*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
Articles:	0		
FY 2010 Accomplishments: Completed Test and Evaluation Master Plan (TEMP) and Operation Assessment (OA) event.			
Accomplishments/Planned Programs Subtotals	13.194	6.805	1.739

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
• OPN/3050/1: *Ship Comm Auto-ADNS*	34.772	50.529	53.613	0.000	53.613	48.641	38.456	38.197	37.262	Continuing	Continuing
• OPN/3050/2: *Ship Comm Auto-Tactical Switching*	27.175	22.672	22.836	0.000	22.836	11.832	10.911	11.519	11.701	Continuing	Continuing
• OPN/3057: *Comm Items Under $5M-BFTN*	17.300	8.677	9.296	0.000	9.296	5.261	0.000	0.000	0.000	0.000	40.534
• OPN/3415: *Info Sys Sec Prgm-ADNS SCIP IWF*	8.601	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	19.057

D. Acquisition Strategy

Automated Digital Network System (ADNS): Evolutionary acquisition approach with overlapping development and implementation phases for defined Increment I, II, and III baselines. Increment I , II , and III will use competitively awarded contracts to implement changes consistent with acquisition initiatives. ADNS leverages Commercial Off The Shelf (COTS) products while capitalizing on acquisition reform initiatives to achieve material savings in the logistics, installation, integration and training areas. Where feasible, differing types of advantageous contract vehicles will be used to provide flexibility, decreased contract administrative costs, and encourage acquisition streamlining through the use of COTS products.

Tactical Switching Ashore: Evolutionary acquisition approach with overlapping development and implementation increments. Use existing contract vehicles during Increment I implementation of procurement upgrades to existing shore legacy equipment at the major communication centers (Naval Computer & Telecommunications Area Master Station (NCTAMS) Pacific (PAC), NCTAMS Atlantic (LANT), NCTAMS Europe Central (EURCENT), Naval Computer & Telecommunications Station (NCTS) Bahrain, and NCTS San Diego) and to include 40+ shore communication facilities (Communication Stations (COMSTATIONs), Naval Operations Centers (NOCs), Mini-NOCs, and Standard Tactical Data Entry Point (STEP) sites). Increment I upgrades serve as an enabler to Increment II activities. Based upon the future shore communication architecture as defined by the Navy, Increment II transitions the Navy's two NCTAMS and three major Network Control Terminal (NCT) Shore infrastructure to a two regional network operations and security center (RNOSC) and one global network operations and security center (GNOSC) concept to achieve a Joint/Department of Defense (DoD) Net-Centric environment through FY16. Increment II will be organized into two steps. Each step will build upon the previous step and serve as risk mitigation for the succeeding step. This strategy provides flexibility in a rapidly evolving technology environment and allows earlier implementation of

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APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0204163N: *Fleet Tactical Development*	PROJECT 0725: *Communication Automation*

developmental technology as it becomes available. Tactical Switching will maximize the Defense Information Systems Network (DISN) Core for unified Navy transport, allowing for route diversification and distributed joint services allowing access anywhere via distributed services.

Maritime Aerial Layer Network (MALN) will utilize an incremental approach to address capability gap analysis/studies. Continue to provide technical and acquisition support in support of Joint Aerial Layer Network (JALN) Analysis of Alternatives (AoA). Technical support includes conducting experiments, performing technical assessments and evaluations for AoA consideration. Completion of AoA in support of JALN.

E. Performance Metrics

ADNS - Included in the ADNS program goals are the improvements to bandwidth throughput, to connectivity to multiple Radio Frequency (RF) paths, greater security, and system capability delivered within a smaller form factor. The ADNS program will, at a minimum, provide bandwidth throughput enhancements resulting in an increase from 2Mbps to 25 Mbps. ADNS will also provide the ability to transport data across multiple paths simultaneously vice the current limitations of single or secondary paths. ADNS will reduce the rack unit (U) requirement from 81U to 54U and investigate the ability to reduce this Unit allocation for smaller Navy platforms. ADNS will provide greater security posture by encrypting each enclave, and securing the core via cipher text.
Tactical Switching - Provide Evaluation, Research and Design for Joint IP Shore C4ISR Architectures. Leverages COTS technology to achieve Navy NetOps-Enterprise Network Management in support of FORCEnet. Efforts include Design of Infrastructure, Operational Testing, Network Control, Independent Verification & Validation Agent, Configuration Management, Analysis and Assessment support, Risk Management, Modeling and Simulation, Test Planning/Testing QA, System Engineering, and I/A Support. Metric: Numerous potential integration catastrophes have been mitigated.
MALN - Reduce the number of Network Communications capability gaps, in a SATCOM denied environment, to technology gaps.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Navy		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0204163N: *Fleet Tactical Development*	PROJECT 0725: *Communication Automation*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Primary Hardware Development	PO	SSC:PAC/LANT	1.025	-		-		-		-	0.000	1.025	
Primary Hardware Development	C/CPFF	Northrop Grumman:McLean, Virginia	7.793	-		-		-		-	0.000	7.793	
Primary Hardware Development	C/CPFF	General Dynamics:Maryland	17.909	-		-		-		-	0.000	17.909	
Primary Hardware Development	C/CPFF	SRA:San Diego	0.016	-		-		-		-	0.000	0.016	
Primary Hardware Development	C/FFP	Boeing:Washington State	1.347	-		-		-		-	0.000	1.347	
Primary Hardware/Software	C/CPFF	Air Force:Various	2.078	-		-		-		-	0.000	2.078	
Primary Hardware/Software	C/CPFF	RSS/ Harris:Melobourne, FL	0.324	-		-		-		-	0.000	0.324	
Integration and Test	C/CPFF	RSS/ Harris:Melobourne, FL	0.400	-		-		-		-	0.000	0.400	
Integration and Test	WR	SSC:PAC/LANT	1.157	-		-		-		-	0.000	1.157	
Integration and Test	C/CPFF	VAR:Various	0.079	-		-		-		-	0.000	0.079	
Systems Engineering-ADNS	WR	SSC:PAC/LANT	21.904	0.210	Nov 2010	0.144	Nov 2011	-		0.144	Continuing	Continuing	Continuing
Systems Engineering	Various	VAR:Various	6.096	-		-		-		-	0.000	6.096	
Systems Engineering	MIPR	CECOM (MITRE):New Jersey	0.585	-		-		-		-	0.000	0.585	
Systems Engineering-ADNS	WR	NUWC:Newport, RI	0.969	0.460	Dec 2010	0.315	Dec 2011	-		0.315	0.000	1.744	
Prime Mission Product	PO	SSC:PAC/LANT	4.353	-		-		-		-	0.000	4.353	
Integration and Test-ADNS	WR	NUWC:Newport	-	0.821	Nov 2010	0.341	Nov 2011	-		0.341	0.000	1.162	
Systems Engineering	C/CPFF	Boeing:Washington State	-	2.087	Jan 2011	-		-		-	0.000	2.087	
Integration and Test-ADNS	WR	SSC:PAC/LANT	-	0.464	Feb 2011	-		-		-	0.000	0.464	
Integration and Test-MALN INC II	WR	SSC:PAC/LANT	-	0.300	Feb 2011	-		-		-	0.000	0.300	
Systems Engineering-ADNS	C/CPFF	Solute:San Diego	-	0.253	Oct 2010	-		-		-	0.000	0.253	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Navy		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0204163N: *Fleet Tactical Development*	PROJECT 0725: *Communication Automation*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	66.035	4.595		0.800		-		0.800			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Development Support	WR	SSC:PAC/LANT	0.160	-		-		-		-	0.000	0.160	
Software Development	Various	VAR:Various	7.250	-		-		-		-	0.000	7.250	
Integrated Logistics Support-ADNS	WR	SSC:PAC/LANT	0.060	0.078	Nov 2010	-		-		-	0.000	0.138	
Integrated Logistics Support	Various	VAR:Various	1.150	-		-		-		-	0.000	1.150	
Documentation	Various	VAR:Various	0.706	-		-		-		-	0.000	0.706	
Technical Data	Various	VAR:Various	0.500	-		-		-		-	0.000	0.500	
Studies and Analysis	WR	SSC:PAC/LANT	0.960	-		-		-		-	0.000	0.960	
		Subtotal	10.786	0.078		-		-		-	0.000	10.864	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation-ADNS	WR	SSC:PAC/LANT	6.544	0.115	Nov 2010	-		-		-	0.000	6.659	
Developmental Test & Evaluation-ADNS	MIPR	JTIC:Fort Huachuca, AZ	0.244	0.130	Oct 2010	0.254	Oct 2011	-		0.254	0.000	0.628	
Operational Test & Evaluation-ADNS	WR	COMOPTEVOR:Norfolk, VA	1.143	0.249	Nov 2010	0.254	Nov 2011	-		0.254	0.000	1.646	
Operational Test & Evaluation	Various	VAR:Various	4.955	-		-		-		-	0.000	4.955	
Developmental Test & Evaluation-MALN INC I	WR	SSC:PAC/LANT	-	0.544	Jan 2011	-		-		-	0.000	0.544	
	WR	SSC:PAC/LANT	-	0.550	Jan 2011	-		-		-	0.000	0.550	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Navy		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0204163N: *Fleet Tactical Development*	PROJECT 0725: *Communication Automation*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation-MALN INC II													
		Subtotal	12.886	1.588		0.508		-		0.508	0.000	14.982	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Contractor Engineering Support	Various	VAR:Various	0.546	-		-		-		-	0.000	0.546	
Government Engineering Support	WR	SSC:PAC/LANT	0.817	-		-		-		-	0.000	0.817	
Program Management Support	C/CPAF	VAR:Various	8.363	-		-		-		-	0.000	8.363	
Program Management Support	C/CPAF	BAH:McLean, Virginia	0.122	0.170	Jan 2011	-		-		-	0.000	0.292	
Acquisition Workforce	Various	VAR:Various	0.055	-		-		-		-	0.000	0.055	
Contractor Engineering Support	C/CPFF	X-FEDS:San Diego	-	0.130	Oct 2010	0.130	Oct 2011	-		0.130	0.000	0.260	
Program Management Support	C/CPFF	Solute:San Diego	-	0.244	Oct 2010	0.301	Nov 2011	-		0.301	0.000	0.545	
		Subtotal	9.903	0.544		0.431		-		0.431	0.000	10.878	

	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	99.610	6.805		1.739		-		1.739			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2012 Navy		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0204163N: *Fleet Tactical Development*	PROJECT 0725: *Communication Automation*

Exhibit R-4A, RDT&E Schedule Details: PB 2012 Navy		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0204163N: *Fleet Tactical Development*	**PROJECT** 0725: *Communication Automation*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 0725				
ADNS: INCREMENT III_Interface Design Development with SATCOM and Radio Frequency (RF) paths	1	2010	4	2016
ADNS: INCREMENT III_Fielding and Sustainment Inc III Surface	1	2012	4	2016
ADNS: INCREMENT III_Subs Preliminary Design Review (PDR)	1	2010	1	2010
ADNS: INCREMENT III_Subs Critical Design Review (CDR)	2	2010	2	2010
ADNS: INCREMENT III_Subs Acceptance Test	3	2010	3	2010
ADNS: INCREMENT III_Subs Deliver 3 Sub First Articles and 2 BCAs	3	2010	3	2010
ADNS: INCREMENT III_Subs Test Asset Decision	3	2011	3	2011
ADNS: INCREMENT III_Subs Developmental Testing (DT)	3	2012	3	2012
ADNS: INCREMENT III_Subs Operational Testing (OT)	4	2012	4	2012
ADNS: INCREMENT III_Fielding Decision	1	2013	1	2013
ADNS: INCREMENT III_Subs Fielding and Sustainment	1	2013	4	2016
ADNS: INCREMENT II_ Full Operational Capability	1	2013	1	2013
ADNS: INCREMENT IIa_Fielding and Sustainment (Inc II/IIa/IIb) Airborn	1	2010	1	2013
ADNS: INCREMENT III_System Development	1	2010	3	2010
ADNS: INCREMENT III_Low Rate Initial Production (LRIP) Fielding & Sustainment	1	2010	4	2011
ADNS: INCREMENT III_Developmental Testing (DT)	1	2010	1	2010
ADNS: INCREMENT III_OperationalTesting (OT)	2	2010	2	2010
ADNS: INCREMENT III_Full Rate Production Decision Review (FRPDR)	1	2011	1	2011
ADNS: INCREMENT III_Initial Operational Capability	4	2010	4	2010

Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0204163N: *Fleet Tactical Development*	PROJECT 1083: *Shore To Ship Com System*	

COST ($ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
1083: *Shore To Ship Com System*	18.963	20.089	-	-	-	-	-	-	-	0.000	39.052
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

Beginning in FY12, the efforts in this project are funded in PE 0101402N.

A. Mission Description and Budget Item Justification

This program develops communication system elements which provide positive Nuclear Command, Control and Communications (NC3) from originator to shooter. This portfolio of programs provides design and development for shore-to-ship transmit and receive communications systems.

The Low Band Universal Communications System (LBUCS) is the modernization program that will upgrade the Transmit and Receive subsystems of the Fixed Submarine Broadcast System (FSBS) which are approaching their operational end of life. LBUCS will ensure operational capability through the Very Low Frequency (VLF) architecture by providing system life extension and flexibility of submarine broadcast traffic to the submarine in stealth posture. The flexibility includes enhanced throughput and anti-jam capability, ensuring more operational products are delivered to a submarine without risking mast exposure. The flexibility further includes simplified shore architecture to maintain capability while maximizing use of shore nodes (Broadcast Keying Sites). LBUCS also provides an upgrade to the VLF receive system to ensure continued compliance with Nuclear Technical Performance Criteria.

The Nuclear Command, Control and Communications (NC3) Long-Term Solution (LTS) will replace the shore-based, nuclear command and control (NC2) message dissemination infrastructure of the NC3 Hybrid Solution while addressing capability gaps identified in the NC3 LTS Capability Based Analysis. The mission of the NC3 LTS is to provide a reliable, secure, timely and robust messaging capability between Senior Leadership (The President of the United States, Secretary of Defense, and Chairman of the Joint Chiefs of Staff), Combatant Commanders and United States nuclear force elements. Specifically, the NC3 LTS shall support the dissemination of Emergency Action Messages and other NC2 messages.

The Strategic Communications Assessment Program /Continued Evaluation Program provides constant assessment of the effectiveness of the end-to-end Nuclear Command and Control network and analysis of system performance in various mission locations.

Concept Development/System Planning provides Network Enabled Operation (NEO) that addresses Allied interoperability issues for submarine communications in an Internet Protocol (IP) environment. As new technologies are realized, coalition architectures are developed and tested to ensure continued interoperability. Concept Development/System Planning also provides for the modeling of unique Very Low Frequency/Low Frequency (VLF/LF) submarine communications which include large physical shore broadcast antennas and underwater depth penetration studies. The results of Concept Development/System Planning are reflected in future Broadcast Control Authority /Operational Control planning tools. Technologies to improve high voltage insulators, helix house bushings and antenna components used in the Fixed VLF transmit systems are evaluated and tested through the High Voltage Improvement Program. Development of Information Assurance solutions for the Broadcast Control Authority (BCA) and Submarine Operating Authority Wide Area Network are being investigated to mitigate vulnerability concerns.

Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0204163N: *Fleet Tactical Development*	PROJECT 1083: *Shore To Ship Com System*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
Title: Low Band Universal Communication System (LBUCS)	8.828	7.067	-
Articles:	0	0	
FY 2010 Accomplishments: Contractor continued development effort of LBUCS Production Representative Article (PRA) transmit hardware and software. Commenced Capabilities Production Document (CPD) development for transmit terminal in support of Milestone C. Completed Preliminary Design Review for transmit terminal. Continued updating acquisition documentation for Milestone C. Commenced preparations of acquisition documentation for receive terminal.			
FY 2011 Plans: Complete Critical Design Review and Technology Readiness Review for transmit terminal. Continue development of acquisition documentation for Milestone C. Continue development of CPD and Information Support Plan (ISP) for transmit terminal. Continue PRA development.			
Title: Nuclear Command, Control, Communications Long Term Solution (NC3 LTS)	4.642	7.708	-
Articles:	0	0	
FY 2010 Accomplishments: Completed development of Request For Proposal/System Performance Specification. Continued development of Test and Evaluation Master Plan (TEMP). Continued preparation of Milestone B acquisition documentation. Completed Capability Development Document (CDD) Navy review.			
FY 2011 Plans: Release Request for Proposal/System Performance Specification to industry. Complete TEMP. Complete CDD. Complete MS B.			
Title: Strategic Communications Assessment Program (SCAP)/Continuing Evaluation Program (CEP)	3.584	3.600	-
Articles:	0	0	
FY 2010 Accomplishments: Continued strategic communications capabilities and deficiencies assessment for evaluation of Nuclear Strategic Communications and Emergency Action Message (EAM) delivery.			
FY 2011 Plans: Conduct mission analysis of E-6B Mercury aircraft transmission and Ship Submersible Ballistic Nuclear Submarine (SSBNs) EAM reception for a sample of SSBN patrols. Provide reports on performance, adherence to delivery time requirements and shortfalls. Develop automated data collection and analysis tools to reduce latency time between missions and results availability.			
Title: Concept Development/Systems Planning	0.944	0.850	-
Articles:	0	0	

Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0204163N: *Fleet Tactical Development*	PROJECT 1083: *Shore To Ship Com System*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
FY 2010 Accomplishments: Continued the integration of Joint/Allied Network Enabled Operation (NEO) with other FORCEnet applications. ***FY 2011 Plans:*** Conduct US/UK developmental testing between US and UK Submarine Operating Authority (SUBOPAUTH) to validate NEO interoperability concepts.			
Title: High Voltage Improvement Program ***Articles:*** ***FY 2010 Accomplishments:*** Completed examination of ultra quick cut off devices to prevent overload conditions. Continued examination of nanocrystalline ferrites to reduce the loss and size of helix enclosures. ***FY 2011 Plans:*** Complete the study of new ferrites to reduce the loss and size of helix enclosures. Commence the examination of the new ferrites to dynamic tuning elements with the goal of lowering of shore antenna frequencies allowing for greater broadcast signal in seawater depth penetration.	0.516 0	0.486 0	-
Title: Broadcast Control Authority ***Articles:*** ***FY 2010 Accomplishments:*** Continued development of Submarine Operating Authority (SUBOPAUTH) communications tools. ***FY 2011 Plans:*** Continue development of water space management and messaging automation support tools, integrate into SUBOPAUTH toolset, and deliver to the fleet.	0.449 0	0.378 0	-
Accomplishments/Planned Programs Subtotals	18.963	20.089	-

Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0204163N: *Fleet Tactical Development*	PROJECT 1083: *Shore To Ship Com System*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
• OPN/3107: *Submarine Broadcast Support*	0.105	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

D. Acquisition Strategy

Low Band Universal Communications System (LBUCS): LBUCS is the modernization program that will upgrade the Transmit and Receive subsystems of the Fixed Submarine Broadcast System which are approaching their operational end of life. A cost plus incentive fee contract was awarded for Transmit subsystem development in 4Q FY09 with three sequential fixed price options Contract Line Item Numbers for production and deployment. The development of LBUCS Receive will commence in FY13.

The Nuclear Command, Control and Communications Long Term Solution (NC3 LTS): NC3 LTS will provide accurate and reliable delivery of time-critical messages for the nuclear forces by developing a Dedicated IP Network utilizing Defense Information Systems Network circuits. Milestone B for the program is projected in 4QFY11 with Milestone C occurring in 4QFY14. Contract planning activities commenced in 4QFY09, leading to a Request for Proposal release in 2QFY11 and corresponding contract award in 2QFY12. Full Operational Capability is expected in 4QFY17.

E. Performance Metrics

LBUCS: Take delivery of Transmit Production Representative Article. Complete transmit acquisition documentation and Capabilities Production Document for Milestone C. Commence transmit system Developmental Testing/Operational Assessment.

NC3 LTS: Award contract for system design and development. Complete Preliminary Design Review.

Strategic Communications Assessment Program/Continuing Evaluation Program: Delivery of patrol reports and development plan for automated data collection and analysis toolset.

Concept Development: Delivery of Network Enabled Operations testing scenarios and shore architecture design to support shore to submarine testing scenarios.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Navy		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0204163N: *Fleet Tactical Development*	PROJECT 1083: *Shore To Ship Com System*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Primary Hardware Development	WR	SSC PAC:San Diego, CA	18.861	-		-		-		-	0.000	18.861	
Ancillary Hardware Development	WR	SSC PAC:SSC PAC	2.316	-		-		-		-	0.000	2.316	
Systems Engineering	WR	SSC PAC:San Diego, CA	50.733	-		-		-		-	0.000	50.733	
Systems Engineering	WR	NUWC Newport:Newport, RI	13.471	-		-		-		-	0.000	13.471	
SCAP/CEP: Systems Engineering	C/CPFF	APL/JHU:Baltimore, MD	43.049	2.100	Dec 2010	-		-		-	0.000	45.149	
LBUCS: Systems Engineering	WR	SSC LANT:Charleston, SC	-	0.475	Oct 2010	-		-		-	0.000	0.475	
LBUCS: Primary Hardware Development	C/CPFF	SAIC:San Diego, CA	6.183	4.157	Nov 2010	-		-		-	0.000	10.340	
NC3LTS: Systems Engineering	MIPR	U.S. Army:Monmouth, NJ	7.622	1.620	Oct 2010	-		-		-	0.000	9.242	
NC3LTS: Ancillary Hardware Development	WR	SSC PAC:SSC PAC	-	0.589	Oct 2010	-		-		-	0.000	0.589	
Shore to Ship: Ancillary Hardware Development	WR	SSC PAC:San Diego, CA	-	0.147	Nov 2010	-		-		-	0.000	0.147	
Shore to Ship: Systems Engineering	WR	SSC PAC:San Diego, CA	-	0.222	Nov 2010	-		-		-	0.000	0.222	
		Subtotal	142.235	9.310		-		-		-	0.000	151.545	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Development Support	WR	SSC Pacific:San Diego, CA	4.853	-		-		-		-	0.000	4.853	
Software Development	WR	SSC Pacific:San Diego, CA	11.912	-		-		-		-	0.000	11.912	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Navy		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0204163N: *Fleet Tactical Development*	PROJECT 1083: *Shore To Ship Com System*

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Acquisition/Program Development	C/CPFF	CSA:San Diego, CA	1.506	-		-		-		-	0.000	1.506	
Technical Data	SS/CPFF	ANSOL:San Diego, CA	2.822	-		-		-		-	0.000	2.822	
Development Support	WR	SSC PAC:San Diego, CA	2.701	-		-		-		-	0.000	2.701	
LBUCS: Logistics Support	C/CPFF	TCI:Alfreda, GA	1.390	0.326	Oct 2010	-		-		-	0.000	1.716	
LBUCS: Information Assurance Support	C/CPFF	MERDAN:San Diego, CA	-	0.158	Oct 2010	-		-		-	0.000	0.158	
LBUCS: Information Assurance Support	WR	SSC PAC:San Diego, CA	-	0.229	Oct 2010	-		-		-	0.000	0.229	
LBUCS: Technical Data	C/CPFF	ANSOL:San Diego, CA	-	0.158	Oct 2010	-		-		-	0.000	0.158	
LBUCS: Acquisition/Program Development	C/CPFF	CSA:San Diego, CA	-	0.728	Oct 2010	-		-		-	0.000	0.728	
NC3LTS: Information Assurance Support	C/CPFF	MERDAN:San Diego, CA	-	0.375	Oct 2010	-		-		-	0.000	0.375	
NC3LTS: Technical Data	C/CPFF	ANSOL:San Diego, CA	-	0.884	Oct 2010	-		-		-	0.000	0.884	
NC3LTS: Acquisition/Program Development	C/CPFF	CSA:San Diego, CA	-	1.208	Oct 2010	-		-		-	0.000	1.208	
NC3LTS: Logistics Support	C/CPFF	TCI:Alfreda, GA	-	0.972	Oct 2010	-		-		-	0.000	0.972	
Shore to Ship: Software Development	WR	SSC PAC:San Diego, CA	-	0.229	Oct 2010	-		-		-	0.000	0.229	
Shore to Ship: Studies and Design	WR	SSC PAC:San Diego, CA	-	0.386	Oct 2010	-		-		-	0.000	0.386	
Shore to Ship: Acquisition/ Program Development	WR	SSC PAC:San Diego, CA	-	0.207	Oct 2010	-		-		-	0.000	0.207	
Shore to Ship: Broadcast Control Authority	C/CPFF	Predicate Logic:San Diego, CA	-	0.524	Oct 2010	-		-		-	0.000	0.524	
		Subtotal	25.184	6.384		-		-		-	0.000	31.568	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Navy		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0204163N: *Fleet Tactical Development*	PROJECT 1083: *Shore To Ship Com System*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
SCAP/CEP: Strategic OP Systems Performance Evaluation	C/CPFF	APL/JHU:Baltimore, MD	22.509	1.500	Dec 2010	-		-		-	0.000	24.009	
LBUCS: System Testing	WR	COTF:Norfolk, VA	8.855	0.177	Oct 2010	-		-		-	0.000	9.032	
LBUCS: System Testing	WR	SSC PAC:San Diego, CA	-	0.238	Oct 2010	-		-		-	0.000	0.238	
NC3LTS: System Testing	WR	COTF:Norfolk, VA	-	0.206	Oct 2010	-		-		-	0.000	0.206	
		Subtotal	31.364	2.121		-		-		-	0.000	33.485	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Contractor Engineering Support	MIPR	U.S. Army:Monmouth, NJ	1.777	-		-		-		-	0.000	1.777	
LBUCS: Program Management Support	WR	SSC PAC:San Diego, CA	4.886	0.404	Oct 2010	-		-		-	0.000	5.290	
LBUCS:Travel	WR	SSC PAC:San Diego, CA	0.250	0.016	Oct 2010	-		-		-	0.000	0.266	
NC3 LTS: Government Engineering Support	WR	SSC PAC:San Diego, CA	2.277	1.805	Oct 2010	-		-		-	0.000	4.082	
NC3: Travel	WR	SSC PAC:San Diego, CA	-	0.049	Oct 2010	-		-		-	0.000	0.049	
		Subtotal	9.190	2.274		-		-		-	0.000	11.464	

	Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	207.973	20.089		-		-		-	0.000	228.062	

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2012 Navy		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0204163N: *Fleet Tactical Development*	**PROJECT** 1083: *Shore To Ship Com System*

Exhibit R-4, RDT&E Schedule Profile: PB 2012 Navy		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0204163N: *Fleet Tactical Development*	**PROJECT** 1083: *Shore To Ship Com System*

Exhibit R-4A, RDT&E Schedule Details: PB 2012 Navy		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0204163N: *Fleet Tactical Development*	**PROJECT** 1083: *Shore To Ship Com System*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 1083				
LBUCS: Milestone-C (MS-C)	3	2012	3	2012
LBUCS: Full Rate Production Milestone (FRP) - Transmit	3	2013	3	2013
LBUCS: Initial Operational Capability (IOC) - Transmit	3	2013	3	2013
LBUCS: Production Representative Article Program Review (PRA PR) - Receive	1	2013	1	2013
LBUCS: Fielding Program Review (FPR) - Receive	2	2015	2	2015
LBUCS: Capability Production Document (CPD)	3	2010	1	2012
LBUCS: Production Design Review (PDR) - Transmit	3	2010	3	2010
LBUCS: Critical Design Review (CDR) - Transmit	1	2011	1	2011
LBUCS: Technology Readiness Review (TRR) - Transmit	1	2012	1	2012
LBUCS: Production Representative Article (PRA) - Transmit	1	2010	2	2012
LBUCS: Production Representative Article (PRA) - Receive	1	2013	4	2014
LBUCS: Production Design Review (PDR) - Receive	3	2013	3	2013
LBUCS: Critical Design Review (CDR) - Receive	1	2014	1	2014
LBUCS: Developmental Test/Operational Assesment (DT/OA) - Transmit	2	2012	2	2012
LBUCS: Developmental Test/Technical Evaluation (DT/TE) - Transmit	1	2013	1	2013
LBUCS: Operational Test (OT) - Transmit	2	2013	2	2013
LBUCS: Developmental Test (DT) - Receive	1	2015	1	2015
LBUCS: Low Rate Initial Production (LRIP) - Transmit	1	2013	1	2013
LBUCS: Full Rate Production (FRP) - Transmit	4	2013	4	2015
LBUCS: Full Rate Production (FRP) - Receive	3	2015	4	2016
NC3 LTS: Milestone-B (MS-B)	4	2011	4	2011

Exhibit R-4A, RDT&E Schedule Details: PB 2012 Navy		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0204163N: *Fleet Tactical Development*	**PROJECT** 1083: *Shore To Ship Com System*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
NC3 LTS: Production Design Review (PDR)	4	2012	4	2012
NC3 LTS: Critical Design Review (CDR)	2	2013	2	2013
NC3 LTS: Milestone-C (MS-C)	4	2014	4	2014
NC3 LTS: Full Rate Production Design Review (FRP DR)	3	2016	3	2016
NC3 LTS: Capabilities Design Document (CDD)	1	2010	1	2011
NC3 LTS: Capability Production Document (CPD)	3	2012	4	2013
NC3 LTS: Procurement Planning and Strategy Meeting (PPSM)	3	2010	3	2010
NC3 LTS: Request For Proposal (RFP)	2	2011	2	2011
NC3 LTS: Contract Award (CA)	2	2012	2	2012
NC3 LTS: Production Representative Article (PRA)	2	2012	2	2014
NC3 LTS: Test & Evaluation Master Plan (TEMP)	1	2010	3	2011
NC3 LTS: Developmental Test Pre Milestone-C (DT)	2	2014	3	2014
NC3 LTS: Integrated Testing/Operational Testing (IT/OT)	3	2014	4	2014
NC3 LTS: Developmental Test Post Milestone-C (DT)	3	2015	4	2015
NC3 LTS: Integrated Test (IT)	4	2015	1	2016
NC3 LTS: Operational Test (OT)	1	2016	2	2016
NC3 LTS: Low Rate Initial Production (LRIP)	1	2015	2	2015
NC3 LTS: Full Rate Production (FRP)	3	2016	4	2016

Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0204163N: *Fleet Tactical Development*	PROJECT 9999: *Congressional Adds*	

COST ($ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
9999: *Congressional Adds*	1.593	-	-	-	-	-	-	-	-	0.000	1.593
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

The Shipboard Automated Radio Room System researches reduced manning and training requirements to operate a radio room by using an existing, recently developed, automated integrated communications software. This program will validate that a single operator, in minutes, can replace what took several operators hours to complete, while significantly improving reliability.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2010	FY 2011
Congressional Add: Shipboard Automated Radio Room System	1.593	-
FY 2010 Accomplishments: Research the Automation, Monitoring, and Control (AM&C) functionality to be used to address the needs for a Shipboard Automated Radio Room System (currently identified for implementation as part of the Common Radio Room [CRR] initiative). Award contracts to industry with expertise in radio room automation technologies to collect data to be used in the AM&C functional requirements, design, and development. Derive AM&C system functional requirements necessary to achieve the goal of empowering a single operator to perform the activities of multiple operators in less time and with greater accuracy.		
Congressional Adds Subtotals	1.593	-

C. Other Program Funding Summary ($ in Millions)

N/A

D. Acquisition Strategy

N/A

E. Performance Metrics

N/A