Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy										DATE: February 2012	
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*				R-1 ITEM NOMENCLATURE PE 0205620N: *Surface ASW Cmbt Sys Integr*							
COST ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**Cost To Complete**	**Total Cost**
Total Program Element	29.983	29.472	27.342	-	27.342	35.064	27.573	27.516	28.034	Continuing	Continuing
1916: *Surface ASW System Improvement*	29.983	21.972	27.342	-	27.342	35.064	27.573	27.516	28.034	Continuing	Continuing
9999: *Congressional Adds*	-	7.500	-	-	-	-	-	-	-	0.000	7.500

A. Mission Description and Budget Item Justification

The 'Vision for Anti-Submarine Warfare (ASW) Superiority' provides a foundation on which to base the operational principles and force attributes needed to prevail against future adversary submarines. Fully aligned with 'A Cooperative Strategy for 21st Century Seapower', it is intended to establish a consistent sense of urgency, and guide the development of a comprehensive long-term strategy and attendant execution plans to achieve and sustain a strategic and operational advantage, and maximize the potential for tactical advantage in future operationally-relevant environments. Our nation and maritime forces face an evolving submarine threat of increasing lethality. Evolving submarine technologies offer enhanced stealth, speed, endurance, weapons and operational proficiency, trends foretelling that the adversary submarine of the future will have a significantly larger sphere of influence, while presenting less vulnerability to ASW forces. Furthermore, the effective offensive engagement range of the adversary submarine of the future will continue to match or outrange individual U.S. and multinational platform sensors and weapons in many tactical environments. ASW forces must be effective in all operating environments, ranging from the deep open ocean to the shallow coastal waters and littorals. The noisy undersea environment, coupled with stealthier submarines, challenges the ability of our sensors to detect, localize, and track threat submarines.

The objective of this Program Element (PE) is to significantly improve existing Surface Ship Undersea Warfare (USW) sonar system capabilities through quick and affordable development/integration of emergent, transformational technologies in support of Littoral ASW, Theater ASW, Mine Reconnaissance, and overall Sea Shield efforts required to pace the threat. Detection and classification play uniquely vital roles in the success of any ASW campaign. To be effective against increasingly stealthy threats in an often ambiguous undersea environment, future sensors must be environmentally adaptive, have very low false alarm rates, and exploit the full range of current and future submarine detection vulnerabilities.

Project 1916's primary mission is to improve AN/SQQ-89(V) Measures Of Performance (MOP) by enhancing detection, tracking, classification, passive, active, torpedo Detection, Classification, and Localization (DCL) and sonobuoy data processing and display capabilities, and increasing acoustic sensor frequency bandwidth (Operational Requirements Document #667-76-05 titled 'AN/SQQ-89 Improvement Program', Test and Evaluation Master Plan 801 and 802-2 (TEMP 801 & TEMP 802-2)). Improvements to system simulation, stimulation, Information Assurance (IA), software and network architectures, and safety are included. This project takes advantage of the AN/SQQ-89(V) Open System Architecture (OSA) and Acoustic Rapid Commercial-Off-The-Shelf (COTS) Insertion (ARCI) initiatives to integrate a torpedo DCL and ASW sonar combat system capability improvements. This COTS-based Surface Ship ASW combat system, the AN/SQQ-89A(V)15, is currently planned as a backfit program for both CG47 (CG59-73 Baseline 3 and 4) and DDG51 (All FLT I/II/IIA) class ships. The Open Architecture (OA) (level 3 compliant) of the AN/SQQ-89A(V)15 system drives the Advanced Capability Build (ACB) spiral development process and provides budget flexibility to make COTS/OA technology solutions and ARCI-type initiatives affordable. This will be accomplished via the incorporation of select Pre-Planned Product Improvements (P3I) and emergent, transformational ASW technologies delivered to the AN/SQQ-89(V) prime integrator every two years. ASW technology implementation will take advantage

of improvements developed under the submarine Advanced Processing Build (APB) program and will in turn share unique improvements developed under this program with the submarine and surveillance ASW communities. This project will also contribute to development of Littoral Combat Ship (LCS) ASW Mission Packages.

Project 1916 also includes funding for the Surface Ship Enhanced Measurement Program (SSEMP), which will measure the performance of existing and new Surface Ship ASW combat systems and enables data-based assessment of the capabilities and shortfalls in the performance of these systems in realistic scenarios.

Project 1916 also includes funding for the Surface ASW Synthetic Training (SAST) program (under the Surface Ship ASW Synthetic Signatures Generation and Training Acceleration Initiative), including the development of a high fidelity acoustic simulation of a surface ship sonar. This effort will accelerate the implementation and integration of the Submarine Multi-Mission Team Trainer (SMMTT) Navy Continuous Training Environment (NCTE) solution/baseline to the surface ship paradigm. The training, skills, and proficiency of all personnel supporting ASW operations must be approached in a coordinated, concentrated, and properly-resourced manner to overcome past deficiencies. The full spectrum of training must be addressed, from synthetic to the experience gained from actual and exercise operations. Technology must be exploited fully to provide assistance to operators, tacticians, and commanders, in order to improve and maintain their capability against the evolving threat. Delivery of SAST capability will be provided via the ACB spiral development process.

B. Program Change Summary ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Previous President's Budget	32.877	22.010	27.478	-	27.478
Current President's Budget	29.983	29.472	27.342	-	27.342
Total Adjustments	-2.894	7.462	-0.136	-	-0.136
• Congressional General Reductions	-	-0.038			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	7.500			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-2.000	-			
• SBIR/STTR Transfer	-0.727	-			
• Program Adjustments	-	-	-0.056	-	-0.056
• Rate/Misc Adjustments	-	-	-0.080	-	-0.080
• Congressional General Reductions Adjustments	-0.167	-	-	-	-

Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2011	FY 2012
Project: 9999: *Congressional Adds*		
Congressional Add: *Surf ASW SBIR (Cong)*	-	7.500
Congressional Add Subtotals for Project: 9999	-	7.500

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy	DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0205620N: *Surface ASW Cmbt Sys Integr*

Congressional Add Details ($ in Millions, and Includes General Reductions)

	FY 2011	FY 2012
Congressional Add Totals for all Projects	-	7.500

Change Summary Explanation

Technical: Not applicable.

Schedule: Not applicable.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0205620N: *Surface ASW Cmbt Sys Integr*	PROJECT 1916: *Surface ASW System Improvement*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
1916: *Surface ASW System Improvement*	29.983	21.972	27.342	-	27.342	35.064	27.573	27.516	28.034	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

The Surface ASW Systems Improvements Project will support essential performance enhancements to AN/SQQ-89(V) and Surface Ship Sonar Systems. This project will improve AN/SQQ-89(V) MOP by enhancing detection, tracking, classification, active, passive, torpedo DCL, and sonobuoy data processing and display capabilities, and increasing acoustic sensor frequency bandwidth (Operational Requirements Document #667-76-05 titled 'AN/SQQ-89 Improvement Program'), Test and Evaluation Master Plan 801 and 802-2 (TEMP 801 & TEMP 802-2).

This project will take advantage of the AN/SQQ-89(V) OSA and ARCI initiatives to integrate a TDCL and ASW sonar and combat system capability improvements. This COTS-based Surface Ship ASW combat system, the AN/SQQ-89A(V)15, is currently planned as a backfit program for both CG47 (CG59-73 Baseline 3 and 4) and DDG51 (All FLT I/II/IIA) class ships. This project has delivered the AN/SQQ-89A(V)15 Pre-Production Prototype, performed installation on board CG73, and conducted subsequent Developmental Test & Evaluation (DT&E) and Initial Operational Test & Evaluation (IOT&E) where the system was found 'Operationally Effective' by Command Operational Test and Evaluation Force (COMOPTEVFOR).

The OSA and high performance COTS processing hardware on ships fielded with the AN/SQQ-89A(V)15 combat system provides an opportunity to integrate select P3I as well as emergent, transformational ASW technological improvements that were previously unachievable. The Undersea Warfare (USW) suites on these ships will require periodic upgrades to remain effective well into the 21st century and to pace the threat. Software upgrades target capability increases in high interest areas as prescribed by the Fleet and captured in campaign analysis. To achieve this, this project will package and deliver incremental upgrades every two years to the AN/SQQ-89A(V)15 production program via an ACB spiral development process (ACB-11, ACB-13, etc.) by inserting maturing USW technologies, such as enhancements to improve USW performance in the littoral, reduced manning on AN/SQQ-89(V) equipped ships operator efficiency upgrades via the implementation of robust embedded data record and replay capability and active/passive sonar simulation/stimulation, DCL active/passive processing upgrades passive sonar automated detection and classification processing bell-ringers from the ASW Community-of-Interest, detect and track through maneuvers, integration of MH-60R mission systems with the AN/SQQ-89A(V)15 combat system, integration of Mid-Frequency active detection improvements, false-alarm rate reduction, clutter reduction, and integration of ASW Community-of-Interest improved acoustic intercept and small-object avoidance, ASW Multi-Sensor integration (acoustic similar-source fusion and implementation of integrated shipboard system data, and ASW combat display architecture and reduced watch-team operational concept implementation), distributed engagement management (Network Centric Enterprise Services implementation, new displays and decision aids, ASW Community-of-Interest model capabilities implementation), marine mammal detection and mitigation, Multi-Static Active ASW, Multi-Frequency Acoustic Communications (MF ACOMMS) between Surface Combatants and Submarines, new RAPTOR radar processing, and upgraded technologies such as algorithm improvements, increased Passive Narrow Band (PNB) frequency, improved Extended Echo Ranging (EER), Continuous Active Sonar (CAS), and beamformer improvements. A rigorous testing program is also required to ensure that these performance enhancements are operationally effective and suitable.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0205620N: *Surface ASW Cmbt Sys Integr*	**PROJECT** 1916: *Surface ASW System Improvement*

Project 1916 also includes funding for the Surface Ship Enhanced Measurement Program (SSEMP), which will measure the performance of existing and new Surface Ship ASW combat systems and enables data based assessment of the capabilities and shortfalls in the performance of these systems in realistic scenarios.

Project 1916 also includes funding, for the Surface ASW Synthetic Training (SAST) program (under the Surface Ship ASW Synthetic Signatures Generation and Training Acceleration Initiative), including the development of a high fidelity acoustic simulation of a surface ship sonar based on the Improved Performance Sonar (IPS) baseline. This effort will accelerate the implementation and integration of the Submarine Multi-Mission Team Trainer (SMMTT) Navy Continuous Training Environment (NCTE) solution/baseline to the surface ship paradigm for high fidelity active and passive simulation for the improvement of operator proficiency, development of a rapid acoustic reconstruction capability, and to ensure SAST interoperability via the AEGIS Combat Training System (ACTS) and Battle Force Tactical Trainer (BFTT). SAST capability will be fielded throughout the force, via ACB updates to the AN/SQQ-89A(V)15 system, while spiraling in additional ASW sensors, as well as full High Level Architecture (HLA)/NCTE interoperability.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: SQQ-89A(V)15 Surface Ship ASW Advanced Capability Build (ACB) Development	26.139	18.472	23.392
Articles:	0	0	0
Description: Develop enhancements to the AN/SQQ-89A(V)15 Open System Architecture (OSA) via the integration of transformational technologies through an ACB spiral development process. Items include hull-mounted Acoustic Intercept (ACI) sensor, ACI performance predictions and signal injection capabilities, Marine Mammal Detection and Mitigation (MMDM) capability, hull array adaptive beamformer and towed array shape compensated beamformer improvements via the Beamformer Functional Segment (BFFS), Mid-Frequency Active (MFA) Cooperative Organic Mine Defense (COMID) mine avoidance upgrades, MFA rapid replay and multi-waveform tracker, Hull Passive Processing Functional Segment (HPPFS) improvements, Sensor Performance Prediction Functional Segment (SPPFS) improvements, Low Frequency Multi-Static Functional Segment (LFMFS) improvements, Undersea Warfare Control Functional Segment (UCFS) improvements, Supportability Functional Segment (SupFS) improvements, Recording Functional Segment (RecFS) improvements, Common System Services/Mission Package Services (CSS/MPS) improvements, full bandwidth towed array passive ASW and automated torpedo DCL algorithm improvements (active/passive) within the Torpedo Recognition and Alertment Functional Segment (TRAFS) necessary to extend detection ranges and reduce false alert/alarm rates, new Data Fusion Functional Segment (DFFS) sensor to reduce the number of displays required for system operation, Multi-Frequency Acoustic Communications (MF ACOMMS) development, integration of MH-60R mission systems with the AN/SQQ-89A(V)15 combat system, Extended Echo Ranging (EER) "Distant Thunder" integration into the AN/SQQ-89A(V)15 Surface Common Airborne Undersea Sensor System (CAUSS) Functional Segment airframe sensor processing suite, explosive source integration with AN/SQQ-89A(V)15 processes, simplification of displays and active processing, incorporation of all Improved Performance Sonar (IPS) and Scaled Improved Performance Sonar (SIPS) features, and a Sonar Logger capability to significantly reduce operator data logging requirements. These items will be integrated and delivered to the CG47 and DDG51 class AN/SQQ-89A(V)15 backfit production programs via ACB updates. Import advanced development capabilities from the submarine Advanced Processing Build (APB) and Acoustic Rapid Commercial-off-the-Shelf (COTS) Insertion (ARCI) projects. Export advanced capabilities to submarine and surveillance combat system programs.			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0205620N: *Surface ASW Cmbt Sys Integr*	PROJECT 1916: *Surface ASW System Improvement*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Resolve/troubleshoot issues/deficiencies that arise from the AN/SQQ-89(V) Surface Ship ASW Test & Evaluation program. Rapidly address and correct problems/deficiencies in processing, capability or operations within the following areas within the AN/SQQ-89(V) USW combat system architecture; sensor processing, acoustics, MMDM, fire control, contact management, performance prediction, operator productivity and on-board training, MFTA, Digital Fire Control Interface (DFCI), Remote Mine-Hunting System (RMS), MFA processing, and adaptive beamforming. ***FY 2011 Accomplishments:*** Continued the development of enhancements to the AN/SQQ-89A(V)15 OSA via the integration of transformational technologies through an ACB spiral development process. Imported advanced development capabilities from the submarine Advanced Processing Build (APB) and Acoustic Rapid Commercial-off-the-Shelf (COTS) Insertion (ARCI) projects. Supported the certification of ACB-11. Initiated the development of ACB-13. Finalized development/integration and complete qualification testing of a high fidelity acoustic simulation of a surface ship sonar based on the IPS baseline under the Surface Ship ASW Synthetic Signatures Generation and Training Acceleration Initiative. ***FY 2012 Plans:*** Continue development of enhancements to the AN/SQQ-89A(V)15 for ACB-13. Conduct independent testing and initiate productionization of the ACB-13 software. ***FY 2013 Plans:*** Continue development of enhancements to the AN/SQQ-89A(V)15 for ACB-13. Deliver the ACB-13 software build to the AEGIS certification process. Initiate development of concepts and capabilities for ACB-15.			
Title: AN/SQQ-89(V) Surface Ship ASW Test & Evaluation Program	0.714	0.300	0.750
Articles:	0	0	0
FY 2011 Accomplishments: In support of ACB-11, completed Ship Qualification Test (SQT) 3Q11 and Aegis Integration Event (AIE) 4Q11. In support of ACB-13, provided AN/SQQ-89A(V)15 Surface Ship ASW test and evaluation planning support; SAT analysis, determined test ship and location, target/personnel/material requirements, and developed a test plan based on system configuration, at-sea data requirements, and ship, target, and range availabilities. ***FY 2012 Plans:***			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0205620N: *Surface ASW Cmbt Sys Integr*	PROJECT 1916: *Surface ASW System Improvement*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Continue ACB-13 AN/SQQ-89A(V)15 Surface Ship ASW test and evaluation planning support; SAT analysis, determine test ship, test location, target requirements, personnel requirements and materials required, develop a test plan based on system configuration, at-sea data requirements, and ship, target, and range availabilities. ***FY 2013 Plans:*** In support of ACB-13, complete AN/SQQ-89A(V)15 SQT 3Q13 and AIE 4Q13.			
Title: Surface Ship Enhanced Measurement Program (SSEMP) ***Articles:*** ***Description:*** Analyze the sonar employment in the operational setting and reported results for improvement of training/ employment guidance. Perform Fleet exercise data reconstruction and post-test analysis each year. Conduct selected at-sea data collection activities by providing planning support, ship riders, and analyst support. Evaluate prototype sonar employment tactics, sonar processing and automation algorithms, and communication protocols for the detection, classification, tracking, and intra-Fleet hand-off to Fleet ASW assets, and provided summary reports to document results. ***FY 2011 Accomplishments:*** Continued at-sea ACB-09 operator testing, support for training and ACB development recommendations based on operational systems analyses, and conduct of acoustic and environmental case analyses of real world data. ***FY 2012 Plans:*** Commence ACB-11 Baseline Assessment and operator testing and analysis of SSEMP cases. ***FY 2013 Plans:*** Continue ACB-11 Baseline Assessment and operator testing and analysis of SSEMP cases.	3.130 0	3.200 0	3.200 0
Accomplishments/Planned Programs Subtotals	29.983	21.972	27.342

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• OPN/2136: *AN/SQQ-89 Surface ASW Combat System*	89.157	71.771	89.201	0.000	89.201	109.260	81.746	120.892	102.277	Continuing	Continuing
• OPN/0900: *DDG Modernization*	288.118	117.522	477.772	0.000	477.772	288.134	516.908	469.812	529.385	Continuing	Continuing
• OPN/0960: *CG Modernization*	348.934	573.349	101.000	0.000	101.000	22.000	79.000	0.000	0.000	Continuing	Continuing

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0205620N: *Surface ASW Cmbt Sys Integr*	PROJECT 1916: *Surface ASW System Improvement*

D. Acquisition Strategy

- Completed AN/SQQ-89A(V)15 Surface Ship ASW Combat System Pre-Production Prototype, performed installation, conducted DT&E, and Initial IOT&E. Via an ACB spiral development process, incorporate evolutionary and transformational technologies into AN/SQQ-89A(V)15 production systems (planned for Baseline 3 and 4 CG47 Class and FLT I/II/IIA DDG51 Class hulls) at scheduled intervals to pace the threat.
- Awarded new, competitive contract for AN/SQQ-89(V) prime system integrator in FY 2007.

E. Performance Metrics

- Deliver incremental capability increases in high interest areas, as prescribed by the Fleet and captured in campaign analysis, every two years to the AN/SQQ-89A(V)15 production program via an ACB spiral development process (ACB-09, ACB-11, ACB-13, etc.) by inserting maturing USW technologies.
- Continue ACB-11 development reflecting active capability for Continuous Active Sonar (CAS) including clutter reduction, passive processing from submarine APB-09, SAST, and improvements in contact and data management. Plan for and execute ACB-11 Sea Test in FY12.
- Continue SAST system development, integration and testing.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0205620N: *Surface ASW Cmbt Sys Integr*	PROJECT 1916: *Surface ASW System Improvement*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
SQQ-89 S/W Development/ Integration	C/CPFF	AAC:NY	4.508	1.300	Jan 2012	1.850	Dec 2012	-		1.850	Continuing	Continuing	Continuing
SQQ-89 S/W Development/ Integration	C/CPFF	AM:VA	11.622	1.750	Dec 2011	2.250	Dec 2012	-		2.250	Continuing	Continuing	Continuing
SQQ-89 S/W Development/ Integration	C/CPFF	GD-AIS:VA	11.322	-		-		-		-	0.000	11.322	
SQQ-89 S/W Development/ Integration	C/CPFF	In-Depth Engineering:VA	2.100	0.875	Jan 2012	0.950	Dec 2012	-		0.950	Continuing	Continuing	Continuing
SQQ-89 S/W Development/ Integration	C/CPFF	JHU/APL:MD	8.675	3.961	Feb 2012	5.435	Dec 2012	-		5.435	Continuing	Continuing	Continuing
SQQ-89 S/W Development/ Integration	C/CPFF	Lockheed Martin:NY	8.705	1.500	Feb 2012	2.450	Dec 2012	-		2.450	Continuing	Continuing	Continuing
SQQ-89 S/W Development/ Integration	C/CPFF	Lockheed Martin:VA	1.800	1.800	Feb 2012	1.875	Dec 2012	-		1.875	Continuing	Continuing	Continuing
SQQ-89 S/W Development/ Integration	WR	NSWC/Carderock:MD	1.720	-		-		-		-	0.000	1.720	
SQQ-89 S/W Development/ Integration	WR	NSWC/Dahlgren:VA	1.336	0.104	Jan 2012	0.175	Nov 2012	-		0.175	Continuing	Continuing	Continuing
SQQ-89 S/W TDA Support	WR	NUWC/Newport:RI	5.473	1.287	Nov 2011	2.583	Nov 2012	-		2.583	Continuing	Continuing	Continuing
SQQ-89 S/W Development/ Integration	C/CPFF	SEDNA:VA	1.400	1.400	Dec 2011	1.400	Dec 2012	-		1.400	Continuing	Continuing	Continuing
SQQ-89 S/W Development/ Integration	C/CPFF	UT/ARL:TX	6.767	0.500	Dec 2011	0.950	Dec 2012	-		0.950	Continuing	Continuing	Continuing
SQQ-89 S/W Development/ Integration	C/CPFF	VAR:VAR*	4.890	3.188	Dec 2011	3.893	Dec 2012	-		3.893	Continuing	Continuing	Continuing
SAST Development/ Integration	C/CPFF	JHU/APL:MD	8.302	-		-		-		-	0.000	8.302	
SAST Development/ Integration	WR	NSWC/Carderock:MD	11.265	-		-		-		-	0.000	11.265	
SAST Development/ Integration	WR	NUWC/Newport:RI	2.950	-		-		-		-	0.000	2.950	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0205620N: *Surface ASW Cmbt Sys Integr*	PROJECT 1916: *Surface ASW System Improvement*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
SAST Development/ Integration	C/CPFF	SEDNA:VA	4.792	-		-		-		-	0.000	4.792	
SAST Development/ Integration	C/CPFF	UT/ARL:TX	1.652	-		-		-		-	0.000	1.652	
SAST Development/ Integration	C/CPFF	VAR:VAR*	0.380	-		-		-		-	0.000	0.380	
		Subtotal	99.659	17.665		23.811		-		23.811			

Remarks

*Consists of multiple performing activities with funding for each not greater than $1M per year.

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
SSEMP ConductTest/Data Evaluation	C/CPFF	JHU/APL:MD	5.760	2.050	Feb 2012	2.100	Dec 2012	-		2.100	Continuing	Continuing	Continuing
SSEMP Conduct/Test/Data Evaluation	WR	NUWC/Newport:RI	1.362	0.550	Nov 2011	0.500	Nov 2012	-		0.500	Continuing	Continuing	Continuing
SSEMP Conduct/Test/Data Evaluation	C/CPFF	UT/ARL:TX	1.878	0.600	Dec 2011	0.600	Dec 2012	-		0.600	Continuing	Continuing	Continuing
SQQ-89 IV&V/SAT/TEMP Assess./Update	WR	NUWC/Newport:RI	1.276	0.350	Nov 2011	-		-		-	0.000	1.626	
SQQ-89 DT/OT/Miscellaneous T&E	WR	VAR:VAR*	1.475	0.310	Dec 2011	-		-		-	0.000	1.785	
		Subtotal	11.751	3.860		3.200		-		3.200			

Remarks

*Consists of multiple performing activities with funding for each not greater than $1M per year.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0205620N: *Surface ASW Cmbt Sys Integr*	PROJECT 1916: *Surface ASW System Improvement*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support	C/CPAF	BAE Systems:MD	1.896	0.347	Feb 2012	0.256	Dec 2012	-		0.256	Continuing	Continuing	Continuing
Program Office Travel	Allot	NAVSEA PEO IWS5:DC	0.529	0.100	Jan 2012	0.075	Oct 2012	-		0.075	Continuing	Continuing	Continuing
		Subtotal	2.425	0.447		0.331		-		0.331			

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	113.835	21.972		27.342		-		27.342			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0205620N: *Surface ASW Cmbt Sys Integr*	PROJECT 1916: *Surface ASW System Improvement*

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0205620N: *Surface ASW Cmbt Sys Integr*	**PROJECT** 1916: *Surface ASW System Improvement*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 1916				
SQQ-89A(V)15 ACB-11 System Qualification Test (SQT)	3	2011	3	2011
SQQ-89A(V)15 ACB-11 Aegis Integration Event (AIE)	4	2011	4	2011
SQQ-89A(V)15 ACB-13 Dev./Step Eval./PRT/Integ./Cert.	1	2011	2	2013
SQQ-89A(V)15 ACB-13 SQT	3	2013	3	2013
SQQ-89A(V)15 ACB-13 AIE	4	2013	4	2013
SQQ-89A(V)15 ACB-15 Dev./Step Eval./PRT/Integ./Cert.	2	2013	2	2015
SQQ-89A(V)15 ACB-15 SQT	3	2015	3	2015
SQQ-89A(V)15 ACB-15 AIE	4	2015	4	2015
SQQ-89A(V)15 ACB-17 Dev./Step Eval./PRT/Integ./Cert.	2	2015	2	2017
SQQ-89A(V)15 ACB-17 SQT	3	2017	3	2017
SQQ-89A(V)15 ACB-17 AIE	4	2017	4	2017
Surface Ship Enhanced Measurement Program (SSEMP)	1	2011	4	2017
SQQ-89A(V)15 ACB-11 Prdtn. S/W Delivery to Integrator	4	2011	4	2011
SQQ-89A(V)15 ACB-13 Prdtn. S/W Delivery to Integrator	4	2013	4	2013
SQQ-89A(V)15 ACB-15 Prdtn. S/W Delivery to Integrator	4	2015	4	2015
SQQ-89A(V)15 ACB-17 Prdtn. S/W Delivery to Integrator	4	2017	4	2017
SQQ-89A(V)15 DDG51 Class FLT IIA Backfit Install (Adjunct Upgrade)	1	2011	4	2017
SQQ-89A(V)15 DDG51 Class FLT I/II Backfit Install (Adjunct Upgrade)	1	2012	1	2012
SQQ-89A(V)15 DDG51 Class FLT I/II Backfit Install (via DDG MOD Program)	4	2012	4	2017
SQQ-89A(V)15 CG47 Class B/L III/IV Backfit Install (via CG MOD Program)	2	2012	2	2014

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0205620N: *Surface ASW Cmbt Sys Integr*	PROJECT 9999: *Congressional Adds*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
9999: *Congressional Adds*	-	7.500	-	-	-	-	-	-	-	0.000	7.500
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 Programs ($ in Millions)	FY 2011	FY 2012
Congressional Add: Surf ASW SBIR (Cong)	-	7.500
FY 2012 Plans: Provide the DESRON Commander, performing the Anti-Submarine Warfare Commander (ASWC) role, the ability to enhance the execution of Surface ASW by enabling net-centric ASW information exchange between assigned units. Currently the ASWC's two primary sensors, Periscope Detection Radar (PDR), SPS-74, and Surface Ship Sonar, AN/SQQ-89A(V)15, only provide data to the installed ship. Sharing this sensor information will dramatically improve the successful execution of the DESRON Commanders ASW mission. This funding will be used to provide engineering services that support integration, testing, evaluation, and certification of the interfaces between the Undersea Warfare - Decision Support System (USW-DSS) Build 2 and above surface ASW sensors. This will be accomplished by executing a formal test plan that includes: formal External Interface Testing (EIT); formal lab-based software certification; and multiple at-sea testing events as part of Development Testing in preparation for Operational Testing Certification.		
Congressional Adds Subtotals	-	7.500

C. Other Program Funding Summary ($ in Millions)

N/A

D. Acquisition Strategy

N/A

E. Performance Metrics

Congressional Add.