Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy										DATE: February 2012	
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*				R-1 ITEM NOMENCLATURE PE 0604218N: *Air/Ocean Equipment Engineering*							
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	5.496	5.922	4.060	-	4.060	4.241	4.371	4.338	4.415	Continuing	Continuing
2345: *Fleet METOC Equipment*	3.987	4.436	2.615	-	2.615	2.751	2.865	2.821	2.872	Continuing	Continuing
2346: *METOC Sensor Engineering*	1.509	1.486	1.445	-	1.445	1.490	1.506	1.517	1.543	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Air/Ocean Equipment Engineering (AOEE) Program Element provides future mission capabilities to support naval combat forces. This program engineers and developmentally tests organic and remote sensors, communication interfaces, and processing and display devices. This equipment is engineered to measure, ingest, store, process, distribute and display conditions of the physical environment that are essential to the optimum employment and performance of naval warfare systems. AOEE also engineers capabilities for shipboard and shore-based tactical systems. A major thrust area for the AOEE program is to provide the engineering development of specialized equipment and measurement capabilities that are intended to monitor specific conditions of the physical environment in hostile and remote areas in response to fleet demand signals for increased sensing capability and capacity to support battlespace collections and prediction on short to intermediate time scales. With such capabilities, the war fighters' situational awareness of the operational effects of the physical environment are made more certain.

Major emphasis areas include the Meteorological and Oceanographic Future Mission Capabilities (METOC FMC) project and the Environmental Satellite Receiver Processor (ESRP) (comprised of AN/SMQ-11 (sea and shore configuration) and AN/FMQ-17 (shore configuration)) program.

B. Program Change Summary ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**
Previous President's Budget	5.735	5.922	4.141	-	4.141
Current President's Budget	5.496	5.922	4.060	-	4.060
Total Adjustments	-0.239	-	-0.081	-	-0.081
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-0.030	-			
• SBIR/STTR Transfer	-0.180	-			
• Rate/Misc Adjustments	-	-	-0.081	-	-0.081
• Congressional General Reductions Adjustments	-0.029	-	-	-	-

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy	DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604218N: *Air/Ocean Equipment Engineering*

Change Summary Explanation

Technical: The Littoral Battlespace Sensing Unmanned Undersea Vehicles (LBS-UUV) program's primary focus has shifted from the Engineering and Manufacturing Development phase to the Production phase.

Schedule: The schedule for the Littoral Battlespace Sensing Unmanned Undersea Vehicles (LBS-UUV) program is no longer included in this exhibit as the primary focus of the program has shifted from the Engineering and Manufacturing Development phase to the Production phase.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604218N: *Air/Ocean Equipment Engineering*	PROJECT 2345: *Fleet METOC Equipment*	

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
2345: *Fleet METOC Equipment*	3.987	4.436	2.615	-	2.615	2.751	2.865	2.821	2.872	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 provides for the engineering and manufacturing development of sensors, communication interfaces, processing and display meteorological and oceanographic (METOC) equipment. This equipment is designed to provide future mission capabilities for war fighters to measure, ingest, store, process, distribute and display METOC parameters and derived products.

This project also exploits new government off-the-shelf /commercial off-the-shelf technologies, tactical sensors and web enablement for the Navy's computer-based tactical shipboard and shore capability used to predict and assess the operational effects of the physical environment on the performance of platforms, weapons and sensor systems. This project includes development of warfare specific mission planning modules to support unmanned systems with integration of data from environmental and tactical sensor systems, model forecast information and Geospatial Information & Services Databases. This project also supports development of autonomous environmental sensing systems for situational awareness and tactical decision aid/mission planner support, as well as iridium and advanced satellite communication integration in METOC sensor, vehicle control and mission planning systems that will be required to achieve Chief of Naval Operation objectives for information dominance and decision superiority.

Major emphasis areas include the Meteorological and Oceanographic Future Mission Capabilities (METOC FMC) project and the Environmental Satellite Receiver Processor (ESRP) (comprised of AN/SMQ-11 (sea and shore configuration) and AN/FMQ-17 (shore configuration)) program.

Decrease in the FY 2013 request is due to the decrease in efforts required for the Littoral Battlespace Sensing Unmanned Undersea Vehicles (LBS-UUV) program's Engineering and Manufacturing Development phase.

FY 2013 request provides for the continued development of advanced tools and techniques for METOC asset allocation, METOC decision support applications and interfaces to tactical and strategic decision aids along with component and prototype efforts associated with acquiring environmental data, and the development of an end-to-end methodology to collect, fuse, and integrate these data into Navy and DoD networks and command and control nodes, and continue the development to support infrastructure for advanced global and regional prediction systems.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)		FY 2011	FY 2012	FY 2013
Title: Meteorological and Oceanographic (METOC) Future Mission Capabilities (FMC)		2.739	3.423	2.161
	Articles:	0	0	0
FY 2011 Accomplishments:				

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604218N: *Air/Ocean Equipment Engineering*	PROJECT 2345: *Fleet METOC Equipment*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Continued advanced tools and techniques development efforts for Meteorology and Oceanography (METOC) asset allocation, METOC decision support applications and interfaces to tactical and strategic decision aids along with component and prototype efforts associated with acquiring environmental data. Continued development of an end-to-end methodology to collect, fuse, and integrate these data into Navy and DoD networks and command and control nodes. ***FY 2012 Plans:*** Continue advanced tools and techniques development for Meteorology and Oceanography (METOC) asset allocation, METOC decision support applications and interfaces to tactical and strategic decision aids along with component and prototype efforts associated with acquiring environmental data. Continue development of an end-to-end methodology to collect, fuse, and integrate these data into Navy and DoD networks and command and control nodes. Begin development of support infrastructure for advanced global & regional prediction systems. ***FY 2013 Plans:*** Continue advanced tools and techniques development for METOC asset allocation, METOC decision support applications, and interfaces to tactical and strategic decision aids along with component and prototype efforts associated with acquiring environmental data. Continue development of an end-to-end methodology to collect, fuse, and integrate these data into Navy and DoD networks and command & control nodes. Continue development of support infrastructure for advanced global & regional METOC prediction systems.			
Title: Littoral Battlespace Sensors - Unmanned Undersea Vehicle (LBS-UUV)	0.850	0.737	0.168
Articles:	0	0	0
FY 2011 Accomplishments: Completed Littoral Battlespace Sensors ocean Gliders (LBS-G) Analysis of Alternatives, engineering studies, and cost estimates for the LBS-G Engineering Change Proposals (ECPs) as required. Corrected LBS-G software and hardware issues identified during Developmental Test and Evaluation (DT&E) conducted in FY10. Continued the Littoral Battlespace Sensors Autonomous Undersea Vehicles (LBS-AUV) Engineering and Manufacturing Development (EMD) Phase, including all required testing and Technical Reviews. Began development of the LBS-AUV Engineering Development Model (EDM). Began to prepare for DT&E of the LBS-AUV system. ***FY 2012 Plans:*** Continue to correct deficiencies on LBS-G systems via Engineering Change Proposals (ECPs) as appropriate. Deliver prototype LBS-AUV systems. Complete LBS-AUV Developmental Test and Evaluation (DT&E). Complete LBS-AUV EMD phase and obtain Milestone C. Correct any LBS-AUV software and/or hardware design deficiencies identified during DT&E. ***FY 2013 Plans:***			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604218N: *Air/Ocean Equipment Engineering*	PROJECT 2345: *Fleet METOC Equipment*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Conduct LBS-G and LBS-AUV engineering design studies as required. Develop system upgrades via ECPs, and correct any identified software and/or hardware deficiencies as required.			
Title: USMC Meteorological Mobile Facility (Replacement) Next Generation (METMF (R) NEXGEN) ***Articles:*** ***FY 2011 Accomplishments:*** Conducted Joint Interoperability Testing, Development Testing (DT), Independent Operational Test & Evaluation, Follow-On Operational Test and Evaluation, Operational Test Readiness Review, technical evaluations, operational assessments and ECP's, as required, on the METMF(R) NEXGEN Engineering Development Models (EDM).	0.100 0	-	-
Title: Environmental Satellite Receiver Processor (ESRP) ***Articles:*** ***FY 2011 Accomplishments:*** Completed annual software upgrade to integrate new METOC Satellite Sensors of Opportunity for the Polar Orbiting Environmental Satellite System (POES). Commenced the integration of ESRP systems in support of Joint Polar Orbiting Satellite System (JPSS) formerly National Polar Orbiting Satellite System (NPOESS) that was scheduled to replace and/or augment the Defense Meteorology Satellite Program (DMSP). ***FY 2012 Plans:*** Develop and test annual hardware and software updates to integrate new METOC Satellite Sensors of Opportunity available in the Geostationary Operational Environmental Satellite System (GOES) and the Polar Orbiting Environmental Satellite System (POES). Continue integration of ESRP systems in support of Joint Polar Orbiting Satellite System (JPSS). ***FY 2013 Plans:*** Develop and test annual hardware and software upgrades to integrate new METOC Satellite Sensors available in the Geostationary Operational Environmental Satellite System (GOES) and the Polar Orbiting Environmental Satellite System (POES). Continue integration of ESRP systems in support of Joint Polar Orbiting Satellite System (JPSS).	0.298 0	0.276 0	0.286 0
Accomplishments/Planned Programs Subtotals	3.987	4.436	2.615

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/4226: *Meteorological Equip*	25.442	30.278	18.339	0.000	18.339	20.154	20.831	20.528	20.926	Continuing	Continuing
• RDTEN/0603207N/2341: *METOC Data Acquisition*	14.719	6.073	6.702	0.000	6.702	6.724	6.886	6.845	6.958	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 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604218N: *Air/Ocean Equipment Engineering*	PROJECT 2345: *Fleet METOC Equipment*

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
• RDTEN/0603207N/2342: *METOC Data Assimilation and MOD*	14.750	10.636	11.127	0.000	11.127	9.875	9.854	9.827	9.986	Continuing	Continuing
• RDTEN/0604218N/2346: *METOC Sensor Engineering*	1.509	1.486	1.445	0.000	1.445	1.490	1.506	1.517	1.543	Continuing	Continuing

D. Acquisition Strategy

Acquisition, management and contracting strategies are to support engineering and manufacturing development by providing funds to Naval Research Laboratories and miscellaneous contractors, with management oversight by the Program Executive Officer for Command, Control, Communications, Computers and Intelligence.

E. Performance Metrics

Goal: Develop and engineer equipment to acquire meteorological and oceanographic (METOC) data in order to improve the accuracy of global and regional scale meteorological and oceanographic forecast models.

Metric: Tasks will address no less than 75% of applicable capability gaps and requirements, as identified by Resource and Requirements Sponsor(s). As tasks relate to exploitation of fleet sensors for METOC data (Through-the-Sensor), no less than 80% of approved initiatives will have a cost, schedule, performance and transition risk analysis completed within the past 12 months.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604218N: *Air/Ocean Equipment Engineering*	PROJECT 2345: *Fleet METOC Equipment*	

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
METOC Future Mission Capabilities	WR	Naval Research Laboratory:Washington, DC	16.075	3.141	Oct 2011	1.943	Oct 2012	-		1.943	Continuing	Continuing	Continuing
METOC Future Mission Capabilities	WR	SPAWAR System Centers:California, South Carolina	7.521	-		-		-		-	Continuing	Continuing	Continuing
METOC Future Mission Capabilities	C/CPFF	RAYTHEON:Massachusetts	2.559	-		-		-		-	Continuing	Continuing	Continuing
METOC Future Mission Capabilities	Various	Various:Various	18.899	-		-		-		-	Continuing	Continuing	Continuing
METOC Future Mission Capabilities	C/CPFF	University of WA:Washington	0.250	0.250	Nov 2011	0.200	Nov 2012	-		0.200	Continuing	Continuing	Continuing
Littoral Battlespace Sensing - Gliders	C/CPIF	Teledyne Brown Engineering:Alabama	0.200	-		-		-		-	Continuing	Continuing	Continuing
METOC Future Mission Capabilities	C/FP	SAIC:Virgina	0.350	0.350	Dec 2011	0.304	Nov 2012	-		0.304	Continuing	Continuing	Continuing
Littoral Battlespace Sensing - Autonomous Undersea Vehicle	C/FP	Hydroide:Pocasset, MA	-	0.395	Nov 2011	-		-		-	0.000	0.395	
		Subtotal	45.854	4.136		2.447		-		2.447			

Support ($ 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
METOC Future Mission Capabilities	C/CPFF	SSA/CSC:MISC	1.312	-		-		-		-	Continuing	Continuing	Continuing
Littoral Battlespace Sensing - Autonomous Undersea Vehicle	C/FP	SAIC:Virgina	0.350	0.300	Nov 2011	0.168	Nov 2012	-		0.168	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604218N: *Air/Ocean Equipment Engineering*	PROJECT 2345: *Fleet METOC Equipment*	

Support ($ 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
Littoral Battlespace Sensing - Autonomous Undersea Vehicle	C/FP	SPAWAR System Centers:San Diego, CA	0.150	-		-		-		-	0.000	0.150	
		Subtotal	1.812	0.300		0.168		-		0.168			

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
Test & Evaluation	WR	OPTEVFOR:Virginia	0.424	-		-		-		-	Continuing	Continuing	Continuing
Littoral Battlespace Sensing - Unmanned Undersea Vehicle	WR	NSWC Carderock:Maryland	0.150	-		-		-		-	0.000	0.150	
METMF R NEXGEN	C/FP	Smiths Detection:Rhode Island	0.090	-		-		-		-	0.000	0.090	
		Subtotal	0.664	-		-		-		-			

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
Management Services	C/CPFF	SAIC:Virginia	0.400	-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	0.400	-		-		-		-			

	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
Project Cost Totals	48.730	4.436		2.615		-		2.615			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604218N: *Air/Ocean Equipment Engineering*	PROJECT 2345: *Fleet METOC Equipment*

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604218N: *Air/Ocean Equipment Engineering*	**PROJECT** 2345: *Fleet METOC Equipment*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Meteorological and Oceanographic (METOC) Future Mission Capabilities (FMC)				
FMC Asset Allocation:	1	2011	4	2014
FMC Network Integration (Navy & DoD):	1	2013	4	2016
FMC Develop Global & Regional Support Infrastructure:	1	2012	4	2017
FMC Through-the-Sensor (TTS) Ocean Characterization Techniques:	1	2014	4	2017

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604218N: *Air/Ocean Equipment Engineering*	PROJECT 2346: *METOC Sensor Engineering*	

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
2346: *METOC Sensor Engineering*	1.509	1.486	1.445	-	1.445	1.490	1.506	1.517	1.543	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 provides for the engineering and manufacturing development of specialized, high resolution instrumentation systems and measurement capabilities for obtaining near real-time, in-situ meteorological and oceanographic (METOC) data in hostile, remote, and denied areas. The project's objectives are to engineer near-term future mission sensing capabilities that are intended to survive the harsh littoral and deep-strike environments and also to meet demanding requirements for timeliness and accuracy. Engineering is performed within this project to ensure that air and safety certification for deployment from fleet aircraft or ships is met and that the proper data formats are engineered for electronic communications transmissions, human interface displays, and inputs to predictive models.

The major area of emphasis is the METOC Future Mission Capabilities (FMC) project.

FY 2013 request provides for the continued development of advanced sensor system support technologies and techniques for sensor deployment, data processing and performance metrics to optimize sensor performance and assess the viability of sensors and subsystems on unmanned and manned aircraft systems and autonomous undersea platforms for collection of automated METOC data and information.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: Meteorological and Oceanographic (METOC) Future Mission Capabilities (FMC)	1.509	1.486	1.445
Articles:	0	0	0

FY 2011 Accomplishments:

Continued system development and demonstration of Meteorology and Oceanography (METOC) manned, unmanned and automated sensors (to include integration of environmental sensors into a larger environmental sensing strategy). Continued the development of advanced sensor system support technologies and techniques for sensor deployment, data processing and performance metrics to optimize sensor performance.

FY 2012 Plans:

Continue system development and demonstration of METOC manned, unmanned and automated sensors (to include integration of environmental sensors into a larger environmental sensing strategy). Continue the development of advanced sensor system support technologies and techniques for sensor deployment, data processing and analysis to include performance metrics to optimize sensor performance. Develop infrastructure to acquire, process and distribute METOC data and products.

FY 2013 Plans:

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604218N: *Air/Ocean Equipment Engineering*	PROJECT 2346: *METOC Sensor Engineering*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Continue system development and demonstration of METOC manned unmanned and automated sensors (to include integration of environmental sensors into a larger environmental sensing strategy). Continue the development of advanced sensor system support technologies and techniques for sensor deployment, data processing and analysis to include performance metrics to optimize sensor performance. Assess viability of sensors and subsystem sensors on unmanned and manned aircraft systems and autonomous undersea systems for collection of automated METOC data. Continue to develop infrastructure to acquire, process and distribute METOC data and products.			
Accomplishments/Planned Programs Subtotals	1.509	1.486	1.445

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
• RDTEN/0603207N/2341: *METOC DATA ACQUISITION*	14.719	6.073	6.702	0.000	6.702	6.724	6.886	6.845	6.958	Continuing	Continuing
• RDTEN/0603207N/2342: *METOC DATA ASSIMILATION AND MOD*	14.750	10.636	11.127	0.000	11.127	9.875	9.854	9.827	9.986	Continuing	Continuing
• RDTEN/0604218N/2345: *FLEET METOC EQUIPMENT*	3.987	4.436	2.615	0.000	2.615	2.751	2.865	2.821	2.872	Continuing	Continuing

D. Acquisition Strategy

Acquisition and contracting strategies are to support engineering and manufacturing development of specialized, high resolution instrumentation systems and measurement techniques for obtaining near real-time in-situ meteorological and oceanographic (METOC) data in denied or remote areas by providing funds to miscellaneous performers.

E. Performance Metrics

Goal: Develop and engineer unique sensors to acquire METOC data in order to improve the accuracy of global and regional scale meteorological and oceanographic forecast models.

Metric: Tasks will address no less than 75% of applicable capability gaps and requirements, as identified by Resource Sponsor and Type Commander(s). No less than 75% of sensor engineering initiatives will be informed by an Analysis of Alternatives or market study to assess the state of the technology.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604218N: *Air/Ocean Equipment Engineering*	PROJECT 2346: *METOC Sensor Engineering*

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
Product Development	WR	Naval Research Laboratory:Washington, DC	5.936	1.486	Oct 2011	1.445	Nov 2012	-		1.445	Continuing	Continuing	Continuing
Product Development	Various	MISC:MISC	11.750	-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	17.686	1.486		1.445		-		1.445			

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
Acquisition Workforce	C/CPFF	Not Specified:Not Specified	0.008	-		-		-		-	0.000	0.008	0.008
		Subtotal	0.008	-		-		-		-	0.000	0.008	0.008

	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
Project Cost Totals	17.694	1.486		1.445		-		1.445			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604218N: *Air/Ocean Equipment Engineering*	PROJECT 2346: *METOC Sensor Engineering*

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604218N: *Air/Ocean Equipment Engineering*	PROJECT 2346: *METOC Sensor Engineering*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Meteorology and Oceanographic (METOC) Future Mission Capabilities (FMC)				
Develop & Demonstrate METOC Automated Sensors:	1	2013	4	2015
Advanced METOC Sensor Deployment, Data Processing, & Performance Metrics:	1	2011	4	2017
AUV Sensor Deployment Efforts:	1	2013	4	2014
Assess Viability of METOC Sensors & Subsystems on Aircraft Systems and Undersea Platforms:	1	2013	4	2015
Develop Infrastructure to Acquire, Process, and Distribute METOC Data:	1	2012	4	2017