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Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Navy									DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 5: Development & Demonstration (SDD)				R-1 ITEM NOMENCLATURE PE 0604261N: Acoustic Search Sensors							
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	38.418	56.086	64.834	0.000	64.834	57.853	23.770	18.556	15.278	Continuing	Continuing
0480: ASW Sensors & Proc	38.418	40.881	31.412	0.000	31.412	25.029	12.029	15.226	15.278	Continuing	Continuing
3224: High Altitude ASW	0.000	15.205	33.422	0.000	33.422	32.824	11.741	3.330	0.000	0.000	96.522
A. Mission Description and Budget Item Justification											
Includes RDT&E funds for engineering development and operational test and evaluation of acoustic search sensors and complementary equipment for ASW aircraft.											
Excludes civilian and military manpower and their related costs and military construction costs which are included in appropriate management and support elements in this program.											
B. Program Change Summary (\$ in Millions)											
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total						
Previous President's Budget	39.345	56.369	0.000	0.000	0.000						
Current President's Budget	38.418	56.086	64.834	0.000	64.834						
Total Adjustments	-0.927	-0.283	64.834	0.000	64.834						
• Congressional General Reductions		-0.233									
• Congressional Directed Reductions		0.000									
• Congressional Rescissions	0.000	-0.050									
• Congressional Adds		0.000									
• Congressional Directed Transfers		0.000									
• Reprogrammings	-0.008	0.000									
• SBIR/STTR Transfer	-0.919	0.000									
• Program Adjustments	0.000	0.000	64.834	0.000	64.834						
Change Summary Explanation											
Technical: Not applicable.											
Schedule: Not applicable.											

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Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Navy		DATE: February 2010
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<p>Multi-Static Active Coherent. Moved MS B from 1Q/09 to 2Q/09, CDR from 4Q/09 to 1Q/10, and MS C from 4Q/10 to 1Q/11 due to a delay in completing required documentation.</p> <p>Communications at Speed and Depth (CSD) - A2RF - Air. Removed DT in 2Q/10. Removed OT in 3Q/10. Added P-3 Air Certification testing for A2RF in 2Q/10-3Q/10. Added A2RF Air Certification for P-3 in 3Q/10. Added Flight support for CSD-A2RF At-Sea test in 3Q/10-4Q/10.</p> <p>FY11 from previous President's Budget is shown as zero because no FY11-15 data was presented in President's Budget 2010.</p>		

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE				PROJECT			
1319: Research, Development, Test & Evaluation, Navy BA 5: Development & Demonstration (SDD)				PE 0604261N: Acoustic Search Sensors				0480: ASW Sensors & Proc			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
0480: ASW Sensors & Proc	38.418	40.881	31.412	0.000	31.412	25.029	12.029	15.226	15.278	Continuing	Continuing
Quantity of RDT&E Articles	0	1500	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

The ASW Sensors and Processing project provides the tools and methods necessary to maintain naval superiority by preventing threat submarines from disrupting the U.S. Navy's ability to control the sea lines of communication and completing their hostile missions. This project encompasses the Engineering & Manufacturing Development (EMD) phase and the follow on increments of sensor systems to improve the mission effectiveness of airborne Anti-Submarine Warfare (ASW) platforms in cueing, searching, localizing, tracking, and attacking subsurface targets. Smaller and quieter threat submarines drive the requirement for continued advancement in ASW sensor capabilities for both blue water and littoral environments. The littoral regions of the world create an additional ASW challenge to overcome the increase in background clutter caused by the shallow water depth, high volume of shipping, and commercial radio frequency interference. Project 0480 provides funding to the Extended Echo Ranging (EER) family of multi-static active ASW systems for the engineering development of solutions that detect, classify, and track threat submarines. Multi-static Active Coherent (MAC) and Advanced Processing Builds (APB) are efforts funded during the period identified. The MAC program, which started in FY08, encompasses the development of an active coherent (electronic) source sonobuoy, modifications to the existing Air Deployable Active Receiver (ADAR) sonobuoy, development, integration, and test of aircraft avionics software and MAC system, as well as, upgrades to the Multi-static mission planning tool, the Tactical Operational Readiness Trainer (TORT) and the Tactical Ground Replay System as well as complete system testing. MAC provides a large area search capability in all water environments and will eliminate current impulsive source safety, training, and Rules of Engagement restrictions. Project 0480 also provides funding for the Advanced Processing Builds (APB) program which provides software enhancements for signal processing improvements, clutter reduction, automation, improved displays and controls, as well as improved communication links for reduced operator workload resulting in increased target detection and classification capabilities and interoperability. APB also includes an Air ASW Engineering Measurement Program (AAEMP) that collects ASW system data and identifies areas where beneficial improvements can be made and provides common software and hardware solutions across all Air ASW platforms. The 1500 sonobuoy test articles in FY10/12 will support software and hardware integration flight tests and Technical Evaluation (TECHEVAL)/Operational Evaluation (OPEVAL) for MAC Increment I and Increment II respectively.

Also included in this project is funding to conduct testing for safe carriage and release to obtain P-3 flight certification of the Acoustic to RF (A2RF) Air variant communications buoy in support of the PMW-770 Communications at Speed and Depth (CSD) program for underwater communications with a submerged submarine.

This project unit includes \$.868M for the Defense Acquisition Workforce Development Fund.

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 5: Development & Demonstration (SDD)		R-1 ITEM NOMENCLATURE PE 0604261N: Acoustic Search Sensors		PROJECT 0480: ASW Sensors & Proc		
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Complete APB SQT/Fleet Release FY 2009 Accomplishments: APB funds for software development, integration, and test for Multi-Static ASW (MSA) sensor systems. Provided P-3C and P-8A platform integration of multi-static technology improvements allowing increased weapon system efficiency and decreased fleet operator workload in the littoral ASW mission. FY 2010 Plans: APB funds for software development, integration, and test for Multi-Static ASW (MSA) sensor systems. Provides P-3C and P-8A platform integration of multi-static technology improvements allowing increased weapon system efficiency and decreased fleet operator workload in the littoral ASW mission. FY 2011 Base Plans: APB funds for software development, integration, and test for Multi-Static ASW (MSA) sensor systems. Provides P-3C and P-8A platform integration of multi-static technology improvements allowing increased weapon system efficiency and decreased fleet operator workload in the littoral ASW mission.		0.265	8.829	1.579	0.000	1.579
MAC Increment I FY 2009 Accomplishments: Continued to develop a coherent source that will satisfy the large area search requirement in the harsh, shallow water littorals. FY 2010 Plans: Continue to develop a coherent source that will satisfy the large area search requirement in the harsh, shallow water littorals.		37.285	29.052	29.833	0.000	29.833

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy							DATE: February 2010				
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 5: <i>Development & Demonstration (SDD)</i>			R-1 ITEM NOMENCLATURE PE 0604261N: <i>Acoustic Search Sensors</i>			PROJECT 0480: <i>ASW Sensors & Proc</i>					
B. Accomplishments/Planned Program (\$ in Millions)											
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
<i>FY 2011 Base Plans:</i> Continue to develop a coherent source that will satisfy the large area search requirement in the harsh, shallow water littorals.											
Comms at Speed and Depth/At-Sea Test support <i>FY 2010 Plans:</i> P-3 flight certification for safe carriage and release of A2RF buoy.						0.000	3.000	0.000	0.000	0.000	
ACQUISITION WORKFORCE FUND <i>FY 2009 Accomplishments:</i> Funded DoD Acquisition Workforce Fund.						0.868	0.000	0.000	0.000	0.000	
Accomplishments/Planned Programs Subtotals						38.418	40.881	31.412	0.000	31.412	
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• OPN/4048: <i>Sonobuoys - All Types</i>	0.000	0.000	10.906	0.000	10.906	11.849	6.550	26.033	13.192	Continuing	Continuing
D. Acquisition Strategy											
The development and integration of Multi-Static Active Coherent (MAC) using coherent source technology into the P-3C Aircraft. Sole source contracts will be awarded for Sensor Development (ERAPSCO) and for Displays and Control and Integration on P-3C aircraft (Lockheed Martin Manassas).											
E. Performance Metrics											
Continued development of a coherent source that will satisfy the large area search requirement in the harsh, shallow water littorals.											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy											DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604261N: <i>Acoustic Search Sensors</i>				PROJECT 0480: <i>ASW Sensors & Proc</i>						
Product Development (\$ in Millions)														
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Primary Hdw Development	Various/ Various	VARIOUS VARIOUS	13.605	4.900	Oct 2009	3.350	Oct 2010	0.000		3.350	6.850	28.705	28.705	
Subtotal			13.605	4.900		3.350		0.000		3.350	6.850	28.705	28.705	
Remarks														
Support (\$ in Millions)														
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Software Development (Increment II)	WR	NAWCAD PATUXENT RIVER, MD	11.432	3.315	Oct 2009	4.457	Oct 2010	0.000		4.457	9.026	28.230	Continuing	
Software Development (Increment II)	Various/ Various	VARIOUS VARIOUS	1.000	6.302	Oct 2009	3.500	Oct 2010	0.000		3.500	4.250	15.052	15.052	
Studies & Analysis	WR	NAWCAD PATUXENT RIVER, MD	5.921	3.919	Oct 2009	2.500	Oct 2010	0.000		2.500	0.000	12.340	Continuing	
Technical Data	WR	NAWCAD PATUXENT RIVER, MD	12.559	1.000	Oct 2009	1.800	Oct 2010	0.000		1.800	5.750	21.109	Continuing	
Subtotal			30.912	14.536		12.257		0.000		12.257	19.026	76.731	15.052	

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy											DATE: February 2010		
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Support (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Remarks													
Test and Evaluation (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Dev Test & Eval	WR	NAWCAD PATUXENT RIVER, MD	9.700	5.000	Nov 2009	3.000	Nov 2010	0.000		3.000	6.300	24.000	Continuing
Subtotal			9.700	5.000		3.000		0.000		3.000	6.300	24.000	
Remarks													
Management Services (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Contractor Eng Spt (APB)	Various/ Various	VARIOUS VARIOUS	25.481	4.908	Nov 2009	4.654	Nov 2010	0.000		4.654	16.387	51.430	51.430
		VARIOUS	44.720	1.074	Nov 2009	1.059	Nov 2010	0.000		1.059	2.066	48.919	48.919

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy											DATE: February 2010		
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Management Services (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
ENG & TECH SPT SRVC (NON-FFRDC)	Various/ Various	VARIOUS											
Government Eng Spt	WR	NAWCAD PATUXENT RIVER, MD	71.452	10.363	Oct 2009	6.992	Oct 2010	0.000		6.992	16.533	105.340	Continuing
MGT & PROF SPT SRVC (FFRDC)	Various/ Various	VARIOUS VARIOUS	9.566	0.100	Nov 2009	0.100	Nov 2010	0.000		0.100	0.400	10.166	10.166
Acquisition Workforce Fund	Various/ Various	VARIOUS VARIOUS	0.868	0.000		0.000		0.000		0.000	0.000	0.868	Continuing
Subtotal			152.087	16.445		12.805		0.000		12.805	35.386	216.723	110.515
Remarks													
			Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			206.304	40.881		31.412		0.000		31.412	67.562	346.159	154.272
Remarks													

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Navy																							DATE: February 2010							
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 5: Development & Demonstration (SDD)										R-1 ITEM NOMENCLATURE PE 0604261N: Acoustic Search Sensors										PROJECT 0480: ASW Sensors & Proc										
Fiscal Year		2009				2010				2011				2012				2013				2014				2015				
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
Acquisition Milestones			MS B ▲							MS C △																				
System Development Localization						CDR (Inc 1) ▲																								
EDM Delivery							H/W EDM (Inc 1) △											H/W EDM (Inc 2) △												
Software Integration								Integration S/W Delivery (Inc 1) △										Integration S/W Delivery (Inc 2) △												
Test & Evaluation Milestones								Commence S/W and H/W Integrated Flt Test (Inc 1) △																						
Development Test																														
Operational Test										OT (Inc 1) △								Commence FOT&E (Inc 2) △												
Production Milestones										LRIP (Inc 1) △				FRP (Inc 1) △												FRP (Inc 2) △				
Note: MAC, is a spiral upgrade development effort that commenced in 1Q/08 consisting of two incremental builds. Increment 1 is to develop and produce a Coherent Source buoy to provide a multi-static active large area search capability in shallow water environments. Increment 2 will increase the source level and provide a large area search capability in all environments.																														

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Navy																							DATE: February 2010								
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 5: Development & Demonstration (SDD)										R-1 ITEM NOMENCLATURE PE 0604261N: Acoustic Search Sensors										PROJECT 0480: ASW Sensors & Proc											
Fiscal Year		2009				2010				2011				2012				2013				2014				2015					
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		
Acquisition Milestones				▲	APB (1) Fleet Release					△	APB (2) Fleet Release															△	APB (3) Fleet Release				
Prototype Phase																															
System Development																															
EDM Delivery																															
Software Development/Integration		APB (1) S/W release								APB (2) S/W RELEASE																△	APB (3) S/W RELEASE				
			▲							△																	△				
Test & Evaluation Milestones																															
Development Test										△	APB (2) SQT															△	APB (3) SQT				
Operational Test																															
Production Milestones																															
Deliveries																															
Note: Software released without IEER Development or SQT in FY09 due to Program Growth reduction (Issue 74056). PR-11 offset reductions results in no APB Development, test or releases in FY12 or FY13.																															

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R-1 ITEM NOMENCLATURE

PE 0604261N: *Acoustic Search Sensors*

0480: ASW Sensors & Proc

[illegible]

Note: A2RF-Air Variant flight certification and support during At-Sea test.

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Navy			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604261N: <i>Acoustic Search Sensors</i>	PROJECT 0480: <i>ASW Sensors & Proc</i>	

Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
0480 Schedule 1	1	2010	1	2010
- Milestone B	2	2009	2	2009
- Critical Design Review (CDR) Increment 1	1	2010	1	2010
- Eng Dev Model (H/W EDM) Increment 1	2	2010	2	2010
- Eng Dev Model (H/W EDM) Increment 2	2	2013	2	2013
- Integration Software Delivery Increment 1	3	2010	3	2010
- Development Test Increment 1	3	2010	3	2010
- Operational Test Increment 1	2	2011	2	2011
- Milestone C (MS C)	1	2011	1	2011
- Low Rate Initial Production (LRIP) Inc 1	1	2011	1	2011
- Full Rate Production (FRP) Increment 1	1	2012	1	2012
- Integration Software Delivery Increment 2	3	2013	3	2013
- Follow On Operational Test Increment 2	4	2013	4	2013
- Full Rate Production (FRP) Increment 2	1	2015	1	2015
0480 Schedule 2	1	2009	1	2009
- APB (1) Fleet Release	3	2009	3	2009
- APB (2) Fleet Release	1	2011	1	2011
- APB (3) Fleet Release	1	2015	1	2015

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Navy			DATE: February 2010
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Event	Start		End	
	Quarter	Year	Quarter	Year
- Software Delivery APB (1)	2	2009	2	2009
- Software Delivery APB (2)	4	2010	4	2010
- Software Delivery APB (3)	4	2014	4	2014
- Software Qualification Test (SQT) APB (2)	2	2010	2	2010
- Software Qualification Test (SQT) APB (3)	2	2014	2	2014
0480 Schedule 3	1	2010	1	2010
- Air Certification Testing	2	2010	3	2010
- Air Certification	3	2010	3	2010
- At-Sea Test support	3	2010	4	2010

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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
3224: <i>High Altitude ASW</i>	0.000	15.205	33.422	0.000	33.422	32.824	11.741	3.330	0.000	0.000	96.522
Quantity of RDT&E Articles	0	0	200	0	200	0	0	0	0		
A. Mission Description and Budget Item Justification <p>The P-8A High Altitude ASW (HAASW) program objective is to ensure greater ASW aircraft operational flexibility and effectiveness at high altitudes. FY10-FY14 R&D monies fund necessary engineering changes to ASW sonobuoys, in addition to developing and integrating a meteorological sensing device (Dropsonde). Sonobuoys will be modified with a Global Positioning System (GPS) and a NATO standard Digital Uplink. GPS integration will provide precise sonobuoy location regardless of aircraft altitude/location to enhance wide area ASW search, localization, tracking, and targeting. The Digital Uplink will improve sonobuoy communications performance in high Radio Frequency Interference (RFI) littoral environments, increase ADAR channel availability, and provide NATO compatibility. The Dropsonde provides the capability to conduct in-situ meteorological (temperature, pressure, humidity, and winds) data measurement. The P-8A will use this real time data to update tactical decision aids, refine sonobuoy "release points", and for in-flight mission planning for optimization of Radar, Electro-Optical, Infra-Red, and other non-acoustic sensors. The FY11 test article quantities reflect 200 sonobuoys/dropsondes. Reduced test article quantities to reflect a more realistic schedule.</p>											
B. Accomplishments/Planned Program (\$ in Millions)											
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
Provide precision delivery of sonobuoys						0.000	15.205	33.422	0.000	33.422	
<i>FY 2010 Plans:</i> HAASW is an FY10 new start. The program will support engineering changes to sonobuoys employed during all stages of the ASW kill chain, from wide area search to attack. Efforts also include Dropsonde development/integration and the GPS and Dropsonde in-situ meteorological data for tactical decision aids and mission planning. FY10/11 is for HAASW Requirements Development, technology development and prototyping. Reduced test articles to reflect a more realistic schedule. The test schedule and test article deliveries are aligned with Integrated Test.											

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B. Accomplishments/Planned Program (\$ in Millions)											
				FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total			
<i>FY 2011 Base Plans:</i> HAASW is an FY10 new start. The program will support engineering changes to sonobuoys employed during all stages of the ASW kill chain, from wide area search to attack. Efforts also include Dropsonde development/integration and the GPS and Dropsonde in-situ meteorological data for tactical decision aids and mission planning. FY10/11 is for HAASW Requirements Development, technology development and prototyping. Reduced test articles to reflect a more realistic schedule. The test schedule and test article deliveries are aligned with Integrated Test.											
Accomplishments/Planned Programs Subtotals				0.000	15.205	33.422	0.000	33.422			
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• OPN/4048: <i>Sonobuoys - All Types</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.734	3.304	2.700	Continuing	Continuing
D. Acquisition Strategy											
HAASW acquisition strategy includes three varied contract approaches. A sole source contract will be awarded for sonobuoy GPS and Digital Uplink engineering changes. Dropsonde meteorological sensing device development and integration will be open competition. The P-8A software development for the GPS and Digital Uplink signal processing and for the Dropsonde meta data in the tactical decision aids and the in-flight mission planning tools will be performed by the P-8A prime integrator.											
E. Performance Metrics											
Support engineering changes to sonobuoys during all stages of the ASW kill chain, from wide area search to attack.											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy											DATE: February 2010																																																																																														
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Product Development (\$ in Millions) <table border="1" style="width:100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th rowspan="2">Cost Category Item</th> <th rowspan="2">Contract Method & Type</th> <th rowspan="2">Performing Activity & Location</th> <th rowspan="2">Total Prior Years Cost</th> <th colspan="2">FY 2010</th> <th colspan="2">FY 2011 Base</th> <th colspan="2">FY 2011 OCO</th> <th>FY 2011 Total</th> <th rowspan="2">Cost To Complete</th> <th rowspan="2">Total Cost</th> <th rowspan="2">Target Value of Contract</th> </tr> <tr> <th>Cost</th> <th>Award Date</th> <th>Cost</th> <th>Award Date</th> <th>Cost</th> <th>Award Date</th> <th>Cost</th> </tr> </thead> <tbody> <tr> <td>Primary Hdw Development</td> <td>Various/ Various</td> <td>VARIOUS VARIOUS</td> <td align="right">0.000</td> <td align="right">9.035</td> <td>Mar 2010</td> <td align="right">19.009</td> <td>Nov 2010</td> <td align="right">0.000</td> <td></td> <td align="right">19.009</td> <td align="right">22.299</td> <td align="right">50.343</td> <td align="right">50.343</td> </tr> <tr> <td align="right" colspan="3">Subtotal</td> <td align="right">0.000</td> <td align="right">9.035</td> <td></td> <td align="right">19.009</td> <td></td> <td align="right">0.000</td> <td></td> <td align="right">19.009</td> <td align="right">22.299</td> <td align="right">50.343</td> <td align="right">50.343</td> </tr> </tbody> </table>															Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Primary Hdw Development	Various/ Various	VARIOUS VARIOUS	0.000	9.035	Mar 2010	19.009	Nov 2010	0.000		19.009	22.299	50.343	50.343	Subtotal			0.000	9.035		19.009		0.000		19.009	22.299	50.343	50.343																																										
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Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract																																																																																												
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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy											DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604261N: <i>Acoustic Search Sensors</i>				PROJECT 3224: <i>High Altitude ASW</i>						
Test and Evaluation (\$ in Millions)														
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Dev Test & Eval	Various/ Various	VARIOUS VARIOUS	0.000	0.100	Mar 2010	0.350	Nov 2010	0.000		0.350	6.700	7.150	7.150	
Subtotal			0.000	0.100		0.350		0.000		0.350	6.700	7.150	7.150	
Remarks														
Management Services (\$ in Millions)														
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Contractor Eng Spt	Various/ Various	VARIOUS VARIOUS	0.000	0.500	Jan 2010	0.500	Oct 2010	0.000		0.500	1.100	2.100	2.100	
ENG & TECH SVCS (NON-FFRDC)	Various/ Various	VARIOUS VARIOUS	0.000	0.140	Jan 2010	0.140	Oct 2010	0.000		0.140	0.390	0.670	0.670	
Government Eng Spt	WR	NAWCAD PATUXENT RIVER, MD	0.000	0.755	Jan 2010	1.144	Oct 2010	0.000		1.144	2.618	4.517	Continuing	
Travel	TM	VARIOUS VARIOUS	0.000	0.230	Jan 2010	0.410	Oct 2010	0.000		0.410	1.025	1.665	Continuing	
Subtotal			0.000	1.625		2.194		0.000		2.194	5.133	8.952	2.770	
Remarks														

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy							DATE: February 2010				
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	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	15.205		33.422		0.000		33.422	47.895	96.522	89.790
Remarks											

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Navy																							DATE: February 2010															
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Fiscal Year		2009				2010				2011				2012				2013				2014				2015												
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4									
Acquisition Milestones Sonobuoy GPS/Digital Uplink Mods								△ MS-B														△ MS-C																
System Development Sonobuoy GPS/Digital Uplink Mods								Hardware System Development																														
								△ GPS/Uplink Sonobuoy Modification Contract																														
Test Article Delivery Sonobuoy GPS/Digital Uplink Mods												△ 100			△ 400			△ 400																				
Software Development/Integration Sonobuoy GPS/Digital Uplink Mods								A/C Software Development/Integration																														
								△ GPS/Uplink Sonobuoy Modification Contract																														
Test & Evaluation Sonobuoy GPS/Digital Uplink Mods												Developmental Testing																										
Production Sonobuoy GPS/Digital Uplink Mods																																						
Deliveries Sonobuoy GPS/Digital Uplink Mods																																						
																					</																	

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

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

1319: Research, Development, Test & Evaluation, Navy







BA 5: Development & Demonstration (SDD)

R-1 ITEM NOMENCLATURE

PE 0604261N: Acoustic Search Sensors

PROJECT

3224: High Altitude ASW

Fiscal Year		2009				2010				2011				2012				2013				2014				2015				
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
Acquisition Milestones Dropsonde and MPT																														
								MS-B																MS-C						
System Development Dropsonde and MPT										Dropsonde Hardware System Development																				
								Dropsonde H/W Contract																						
Test Article Delivery Dropsonde and MPT																														
												100		50			50													
Software Development/Integration Dropsonde and MPT										A/C Software Development & Integration (MPT SAW + A/C Integration)																				
Test & Evaluation Dropsonde and MPT																														
Production Contract Award Dropsonde and MPT																														
																									</					

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

Event	Start		End	
	Quarter	Year	Quarter	Year
3224 Schedule 1	1	2010	1	2010
- Milestone B	3	2010	3	2010
- Development Contract Award	3	2010	3	2010
- Hardware System Development	3	2010	1	2014
- Test Article Delivery (100)	3	2011	3	2011
- Test Article Delivery (400)	2	2012	2	2012
-- Test Article Delivery (400) 2	1	2013	1	2013
-- GPS/Uplink Sonobuoy Modification Contract	3	2010	3	2010
- Software Development/Integration	3	2010	4	2013
- Developmental Testing	3	2011	4	2013
- Begin P-8A FOT&E	4	2013	2	2014
- Milestone C	2	2014	2	2014
- Production Contract Award	3	2014	3	2014
- Begin Delivery of Modified Sonobuoys	2	2015	4	2015
3224 Schedule 2	1	2009	1	2009
- Milestone B (2)	3	2010	3	2010
- Hardware System Development (2)	4	2010	3	2013
- Hardware Contract Award	3	2010	3	2010

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Navy			DATE: February 2010
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Event	Start		End	
	Quarter	Year	Quarter	Year
- Test Article Delivery (100) (2)	4	2011	4	2011
- Test Article Delivery (50) (2)	2	2012	2	2012
- Test Article Delivery (50) (2.1)	1	2013	1	2013
- Software Development/Integration (2)	1	2011	1	2014
- Integrated Testing	1	2012	1	2014
- LRIP Decision	2	2013	2	2013
- Begin P-8A FOT&E (2)	2	2014	3	2014
- Milestone C (2)	4	2014	4	2014
- Production Contract Award (2)	4	2014	4	2014
- Operational Assessment	2	2013	2	2013
- Begin Delivery of production Dropsonde	4	2015	4	2015

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