EXHIBIT R-2, RDT&E Budget Item Justification							DATE: February 2008
APPROPRIATION/BUDGET ACTIVITY RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-4						R-1 ITEM NOMENCLATURE 0603254N, ASW SYSTEMS DEVELOPMENT	
COST ($ in Millions)	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Total PE Cost	24.840	20.378	28.799	13.761	12.523	12.793	13.181
0490 PROJECT BEARTRAP	3.828	3.582	3.782	3.590	2.310	2.340	2.467
1292 ADV ASW SENSORS & PROC	2.850	3.217	10.320	10.171	10.213	10.453	10.714
9177 EPAS	7.144	6.623	9.697				
9347 CLAYMORE MARINE	1.600	2.981	5.000				
9999 CONGRESSIONAL ADD	9.418	3.975					

(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

0490. The mission of Project BEARTRAP (CNO Project K-0416) is to provide Sound Pressure Level (SPL) quality recordings of targets of interest and an associated new technology, rapid prototyping mechanism for the application of state-of-the-art collection sensors. The program will develop and rapidly deploy new technology concepts in hardware and software to effectively address emerging littoral threats and to improve the present Undersea Warfare capability in support of Sea Shield/Sea Trial Initiatives. BEARTRAP also provides a measurement analysis capability to reconstruct, analyze, and develop active and target strength measurement validation. The BEARTRAP data collection program provides passive and active acoustic and non-acoustic data essential for the design and development of environmental models, sensors, weapons, software algorithms, and tactical decision aids. BEARTRAP employs developmental and prototypical hardware installed in uniquely configured ASW aircraft to collect data of interest, and specially configured ground support facilities to conduct reconstruction and analysis of this data. BEARTRAP includes calibrated recording systems, advanced detection and tracking systems, special sensors, advanced processing systems and techniques and specially derived operational tactics.

1292. This program provides Anti-submarine Warfare (ASW) platform effectiveness through development of advanced hardware and software associated with airborne acoustic systems. This includes sensors, processing, post-processing, data recording and display capabilities to address regional threat scenarios against conventionally and nuclear powered submarines. Key objectives are platform accommodations of advanced active and passive sensors, improved detection, classification, localization, tracking, and increased capacity and flexibility to handle multi-sensor data loads. Programs being funded during the FYDP will investigate technologies such as: the exploitation of forward scatter, transient signals, and source and receiver improvement technologies that will enhance passive and Multi-Static Active Sensor Systems capabilities. Other programs being funded during the FYDP will provide for the development of technologies that will allow transition from the cued search phase to the localization and attack phase in the harsh shallow water areas. In addition, the program will provide for the development and subsequent experimentation of Multi-Static Active (MSA) sources and receivers with the associated USQ-78B processor.

9177. The objective of this program is to 1) demonstrate the concept that an integrated suite of non-acoustic sensors will provide an effective real time, day and night air ASW detection, localization and tracking capability in acoustically challenged shallow regions and deep water areas of uncertainty (AOU). 2) develop and demonstrate a cross platform non-acoustic system for fixed wing, helicopter, aerostat, and unmanned aerial vehicle ASW platforms. Planned Navy funding for FY07-09 will provide the development, integration, and demonstration testing of four (4) second generation prototype Electro-optic Passive ASW Sensor (EPAS) systems (EPAS/Joint Multi-Mission Electro-optic System (JMMES)) with algorithm based integrated sensor operation and ASW automatic target recognition/operator cueing software modules. The EPAS technology and ASW mission module software has been leveraged to develop multi-mission capability for other targets of Naval interest including maritime and overland surface warfare, maritime interdiction operations, mine counter measures in a FY07 new start Joint Capability Technology Demonstration (JCTD) sponsored by the Deputy Undersecretary of Defense for Acquisition, Technology and Logistics.

9347. Funding for FY07-09 will support development of a blue laser brass board Lidar ASW system, data collections and data reductions to validate the Claymore Marine phenomonology.

9999. Congressional Adds.

B. PROGRAM CHANGE SUMMARY

Funding:	FY 2007	FY 2008	FY 2009
FY2008 President's Budget:	25.337	16.706	29.104
FY2009 President's Budget:	24.840	20.378	28.799
Total Adjustments	-0.497	3.672	-0.305
Summary of Adjustments			
Congressional Reductions			
Congressional Rescissions			
Congressional Undistributed Reductions	-0.336		
Congressional Increases		4.000	
Economic Assumptions		-0.132	-0.079
Miscellaneous Adjustments	-0.161	-0.196	-0.226
Subtotal	-0.497	3.672	-0.305

EXHIBIT R-2, RDT&E Budget Item Justification	DATE: February 2008
APPROPRIATION/BUDGET ACTIVITY RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-4	R-1 ITEM NOMENCLATURE 0603254N, ASW SYSTEMS DEVELOPMENT

Schedule:
0490. N/A.

1292. Schedule updated to reflect timelines versus events.

9177. EPAS System not ready for POM08. Issue sheets submitted for POM10. EPAS System Field Development Testing increased to 3Q/09 to support system target data collections for JCTD mission algorithm development in seven additional mission areas. EPAS System Fleet Aircraft Testing delayed from 4Q/07 to 4Q/08 for second generation, EPAS/JMMES certification. Development of four (4) Second Generation EPAS/JMMES systems versus build of eight (8) EPAS ASW systems as a result of RDT&E FY07-09 $11M budget reduction and JMMES JCTD Award: EPAS/JMMES deliveres: two (2) 1Q/FY08, one (1) 1Q/09, and one (1) 3Q/09.

9347. Schedule added to reflect OPNAV N885 CFT redirection of funds to the Claymore Marine program.

Technical:
0490. Defined Active Measurement Validation as a separate cost category for improved programmatic tracking. Active Measurement Validation is an output product of the Active Target Strength (T.S.) project.

9177. Technical complexity of increasing sensor payload in the second generation EPAS/JMMES prototype resulted in increased non-recurring engineering redesign costs associated with the development.

EXHIBIT R-2a, RDT&E Project Justification			DATE: February 2008
APPROPRIATION/BUDGET ACTIVITY RDT&E,N / BA-4	PROGRAM ELEMENT NUMBER AND NAME 0603254N, ASW SYSTEMS DEVELOPMENT	PROJECT NUMBER AND NAME 0490, PROJECT BEARTRAP	

COST ($ in Millions)	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
0490 PROJECT BEARTRAP	3.828	3.582	3.782	3.590	2.310	2.340	2.467
RDT&E Articles Qty	10	3	2	4	3	3	3

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

0490. The mission of Project BEARTRAP (CNO Project K-0416) is to provide SPL quality recordings of targets of interest and an associated new technology, rapid prototyping mechanism for the application of state-of-the-art collection sensors. The program will develop and rapidly deploy new technology concepts in hardware and software to effectively address emerging littoral threats and to improve the present Undersea Warfare capability in support of Sea Shield/Sea Trial Initiatives. BEARTRAP also provides a measurement analysis capability to reconstruct, analyze, and develop active target strength measurement validation. The BEARTRAP data collection program provides passive and active acoustic and non-acoustic data essential for the design and development of environmental models, sensors, weapons, software algorithms, and tactical decision aids. BEARTRAP employs developmental and prototypical hardware installed in uniquely configured ASW aircraft to collect data of interest, and specially configured ground support facilities to conduct reconstruction and analysis of this data. BEARTRAP includes calibrated recording systems, advanced detection and tracking systems, special sensors, advanced processing systems and techniques and specially derived operational tactics. The 28 RDT&E articles consist of aircraft calibration units, SPL collection suites, and post mission processors that will support the collection mission.

B. ACCOMPLISHMENTS / PLANNED PROGRAM:

Systems Engineering / Aircraft Mods

Commence Active Acoustic program

	FY 2007	FY 2008	FY 2009
Accomplishments / Effort / Sub-total Cost	3.103	2.812	2.632
RDT&E Articles Qty	10	3	2

Integration of SPL Suite (Digital Recording), Post mission processor upgrade, and aircraft calibration unit enhancements for active target strength. Engineering development of Target Strength processing and prototype processor.

Data Collection and Analysis

	FY 2007	FY 2008	FY 2009
Accomplishments / Effort / Sub-total Cost	.725	.770	.750
RDT&E Articles Qty			

Data collection support at Operational Wings. Ongoing collection of high interest acoustic and non-acoustic data in support of Measurement/Measuring and Signature Intelligence (MASINT)/Office of Naval Intelligence (ONI) threat assessment requirements. Reduction, Analysis and Fleet Rapid Feedback. Conduct airborne special operations support. Essential performance modeling and evaluation for advanced technology sensor systems design and Fleet tactics development.

Active Measurement Validation

	FY 2007	FY 2008	FY 2009
Accomplishments / Effort / Sub-total Cost			.400
RDT&E Articles Qty			

Active Measurement Validation of targets of interest. Provides the acoustic analysis of echo characterization (which includes: signal excess (SE) measurements, peak frequency (PF), trend analysis and pulse duration measurements) and target strength.

C. OTHER PROGRAM FUNDING SUMMARY:

	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Complete	Total Cost
Not Applicable									

D. ACQUISITION STRATEGY:

BEARTRAP is a CNO Special Project. The included technology developments are primarily in-house with contractor participation through existing vehicles.

Exhibit R-3 Cost Analysis (page 1)									DATE: February 2008			
APPROPRIATION/BUDGET ACTIVITY RDT&E,N / BA-4		PROGRAM ELEMENT 0603254N, ASW SYSTEMS DEVELOPMENT				PROJECT NUMBER AND NAME 0490, PROJECT BEARTRAP						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
PRODUCT DEVELOPMENT												
Active Measurement Validation	WX	NAWCAD, PATUXENT RIVER MD						.400	10/08		.400	
Ancillary Hdw Development	VARIOUS	VARIOUS	2.599	.700	10/06	.770	10/07	.750	10/08	1.957	6.776	6.776
Systems Engineering	WX	NAWCAD, PATUXENT RIVER MD	62.473	3.103	10/06	2.812	10/07	2.632	10/08	8.750	79.770	
SUBTOTAL PRODUCT DEVELOPMENT			65.072	3.803		3.582		3.782		10.707	86.946	

Remarks:

SUPPORT												
SUBTOTAL SUPPORT												

Remarks:

TEST & EVALUATION												
SUBTOTAL TEST & EVALUATION												

Remarks:

MANAGEMENT												
Travel	TO	NAVAIR, PAXTUXENT RIVER MD	.070	.025	10/06						.095	
SUBTOTAL MANAGEMENT			.070	.025							.095	

Remarks:

Total Cost			65.142	3.828		3.582		3.782		10.707	87.041	

Remarks:

EXHIBIT R4, Schedule Profile
Data Collection and Analysis/ Prototype & Installation

DATE: February 2008

APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E,N / BA-4	0603254N, ASW SYSTEMS DEVELOPMENT	0490, PROJECT BEARTRAP

Fiscal Year	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
	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																												
Systems Engineering P-3 Avionics Suite		(4)	△	(4) ▽								△		(1) ▽				(1)				(1)				(1)		▽
Tactical Acoustic Processor(TAPS)		(1)				(1)				(1)				(1)				(1)				(1)				(1)		
T.S Processor Development/Prototype	△			(1)				(2)			(1)				(2)				(1)				(1)				(1)	▽
Test & Evaluation Milestones **Production Milestones**																												
Product Development Data Collection/Analysis																												
Deliveries																												
P-3 Avionics		(4)		(4)											(1)				(1)				(1)				(1)	
Tactical Acoustic Processor		(1)				(1)				(1)				(1)				(1)				(1)				(1)		
T.S. Processor				(1)				(2)			(1)				(2)				(1)				(1)				(1)	

Exhibit R-4a, Schedule Detail Data Collection and Analysis/ Prototype & Installation					DATE: February 2008		
APPROPRIATION/BUDGET ACTIVITY RDT&E,N / BA-4	PROGRAM ELEMENT 0603254N, ASW SYSTEMS DEVELOPMENT				PROJECT NUMBER AND NAME 0490, PROJECT BEARTRAP		
Schedule Profile	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Sys. Eng. Avionics Suite	1Q-4Q			1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q
Sys. Eng. Tactical Acoustic Processor	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q
Target Strength Processor Development	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q
Data Collection and Analysis	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q
Deliveries							
P-3 Avionics	2Q and 4Q			3Q	3Q	3Q	3Q
Tactical Acoustic Processor	2Q	2Q	2Q	2Q	2Q	2Q	2Q
T.S. Processor	4Q	4Q	3Q	3Q	3Q	3Q	3Q

EXHIBIT R-2a, RDT&E Project Justification			DATE: February 2008
APPROPRIATION/BUDGET ACTIVITY RDT&E,N / BA-4	PROGRAM ELEMENT NUMBER AND NAME 0603254N, ASW SYSTEMS DEVELOPMENT	PROJECT NUMBER AND NAME 1292, ADV ASW SENSORS & PROC	

COST ($ in Millions)	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
1292 ADV ASW SENSORS & PROC	2.850	3.217	10.320	10.171	10.213	10.453	10.714
RDT&E Articles Qty		100	350	350	350	350	350

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

This program provides Anti-submarine Warfare (ASW) platform effectiveness through development of advanced hardware and software associated with airborne acoustic systems. This includes sensors, processing, post-processing, data recording and display capabilities to address regional threat scenarios against conventional and nuclear powered submarines. Key objectives are platform accommodations of advanced active and passive sensors, improved detection, classification, localization, tracking, and increased capacity and accommodations to handle multi-sensor data loads. Programs being funded during the FYDP will investigate technologies such as: the exploitation of forward scatter, transient signals, and source and receiver improvement technologies that will enhance passive and Multi-Static Active Sensor Systems capabilities. Other programs being funded during the FYDP will provide for the development of technologies that will allow transition from the cued search phase to the localization and attack phase in the harsh shallow water areas, will allow for automation of concurrent active and passive processing, and make improvements in battery technology. In addition, the program will provide for the development and subsequent experimentation of Multi-Static Active (MSA) sources and receivers with the associated USQ-78B processor. The 1850 test articles, which consist of passive/active sensors and associated processors, will support sea trials and experiments.

B. ACCOMPLISHMENTS / PLANNED PROGRAM:

Reassess loc/attack capability in shallow water	FY 2007	FY 2008	FY 2009
Accomplishments / Effort / Sub-total Cost	2.850	3.217	10.320
RDT&E Articles Qty		100	350

Reassessing localization and attack capabilities in shallow water areas. System performance assessments for multi-static ASW algorithms and system enhancements. Field test assessment for forward scatter. System performance assessment for multi-static active source and receivers technologies.

C. OTHER PROGRAM FUNDING SUMMARY:

	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Complete	Total Cost
Not Applicable									

D. ACQUISITION STRATEGY:

The included technology developments are primarily in-house with contractor participation through existing vehicles.

Exhibit R-3 Cost Analysis (page 1)									DATE: February 2008			
APPROPRIATION/BUDGET ACTIVITY RDT&E,N / BA-4		PROGRAM ELEMENT 0603254N, ASW SYSTEMS DEVELOPMENT				PROJECT NUMBER AND NAME 1292, ADV ASW SENSORS & PROC						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
PRODUCT DEVELOPMENT												
Primary Hardware Development	TBD	TBD						.500	10/08	1.450	1.950	1.950
SUBTOTAL PRODUCT DEVELOPMENT								.500		1.450	1.950	

Remarks:

SUPPORT												
Software Development	WX	NAWCAD, PATUXENT RIVER MD		.500	11/06	.500	01/08	2.000	10/08	9.806	12.806	
Studies & Analyses	WX	NAWCAD, PATUXENT RIVER MD						4.582	10/08	17.405	21.987	
Studies & Analyses	VARIOUS	VARIOUS	.500								.500	.500
SUBTOTAL SUPPORT			.500	.500		.500		6.582		27.211	35.293	

Remarks:

TEST & EVALUATION												
Dev Test & Eval	VARIOUS	VARIOUS	13.481	.500	11/06	.450	10/07	1.000	10/08	3.250	18.681	18.681
SUBTOTAL TEST & EVALUATION			13.481	.500		.450		1.000		3.250	18.681	

Remarks:

MANAGEMENT												
Contractor Engineering Support	VARIOUS	VARIOUS	5.276	.401	12/06						5.677	5.677
Gov Eng Support	WX	NAWCAD, PATUXENT RIVER MD	40.760	1.199	11/06	1.883	01/08	1.203	10/08	5.059	50.104	
Program Management Support (Cont)	VARIOUS	VARIOUS	2.072			.100	01/08	.232	10/08	1.278	3.682	3.682
Program Management Support (Govt)	WX	NAWCAD, PATUXENT RIVER MD	7.191	.230	11/06	.234	01/08	.728	10/08	2.983	11.366	
Travel	TO	NAVAIR, PAXTUXENT RIVER MD	.020	.020	10/06	.050	01/08	.075	10/08	.320	.485	
SUBTOTAL MANAGEMENT			55.319	1.850		2.267		2.238		9.640	71.314	

Remarks:

Total Cost			69.300	2.850		3.217		10.320		41.551	127.238	

Remarks:

EXHIBIT R4, Schedule Profile
ADVANCED DICASS

DATE: February 2008

APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E,N / BA-4	0603254N, ASW SYSTEMS DEVELOPMENT	1292, ADV ASW SENSORS & PROC

Fiscal Year	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
	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																												
Performance Assessment		Coherent sound processing								Multi-Static Target Recognition								Concurrent Processing								Battery Technology		
System Development																												
Transition Decision								△	Coherent sound processing							△	Multi-Static Target Recognition							△	Concurrent Processing			
Software Experiment/Exercise Participation																												
Test & Evaluation Milestones Development Test Operational Test																												
Production Milestones LRIP I LRIPII FRP																												
Deliveries																												

Exhibit R-4a, Schedule Detail ADVANCED DICASS					DATE: February 2008		
APPROPRIATION/BUDGET ACTIVITY RDT&E,N / BA-4	PROGRAM ELEMENT 0603254N, ASW SYSTEMS DEVELOPMENT				PROJECT NUMBER AND NAME 1292, ADV ASW SENSORS & PROC		
Schedule Profile	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Performance Assessment	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
Transition Decision		4Q		4Q		4Q	
Experiment/Exercise Participation			1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q

EXHIBIT R-2a, RDT&E Project Justification							DATE: February 2008
APPROPRIATION/BUDGET ACTIVITY RDT&E,N / BA-4	PROGRAM ELEMENT NUMBER AND NAME 0603254N, ASW SYSTEMS DEVELOPMENT			PROJECT NUMBER AND NAME 9177, EPAS			
COST ($ in Millions)	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
9177 EPAS	7.144	6.623	9.697				
RDT&E Articles Qty		2	2				

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

The objective of this program is to 1) demonstrate the concept that an integrated suite of non-acoustic sensors will provide an effective real time, day and night air ASW detection, localization and tracking capability in acoustically challenged shallow regions and deep water areas of uncertainty (AOU). 2) develop and demonstrate a cross platform non-acoustic system for fixed wing, helicopter, aerostat, and unmanned aerial vehicle ASW platforms. Planned Navy funding for FY07-09 will provide the development, integration and demonstration testing of four (4) second generation prototype Electro-Optic Passive ASW Sensor (EPAS) systems (EPAS/Joint Multi-Mission Electro-optic system (JMMES)) with algorithm based integrated sensor operation and ASW automatic target recognition/operator cueing software modules. The EPAS technology and ASW mission module software has been leveraged to develop multi-mission capability for other targets of Naval interest including maritime and overland surface warfare, maritime interdiction operations, mine counter measures in a FY07 new start Joint Capability Technology Demonstration (JCTD) sponsored by the Deputy Undersecretary of Defense for Acquisition, Technology and Logistics.

B. ACCOMPLISHMENTS / PLANNED PROGRAM:

Complete dev./demo of EPAS turret	FY 2007	FY 2008	FY 2009
Accomplishments / Effort / Sub-total Cost	7.144	6.623	9.697
RDT&E Articles Qty		2	2

This effort supports improvement in AIR ASW capability and Naval Multi-Mission Electro-Optic intelligence, surveillance and reconnaissance capability.

C. OTHER PROGRAM FUNDING SUMMARY:	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Complete	Total Cost
Line item No. and Name									
Related RDT&E									
(U) PE 0603648D8Z	4.000	4.000	4.000						12.000

D. ACQUISITION STRATEGY:
Sole source modification to the existing contract with BAE to add Navy funded system. Issued new sole source contract for EPAS/JMMES development and demonstration.

Exhibit R-3 Cost Analysis (page 1)									DATE: February 2008			
APPROPRIATION/BUDGET ACTIVITY RDT&E,N / BA-4		PROGRAM ELEMENT 0603254N, ASW SYSTEMS DEVELOPMENT				PROJECT NUMBER AND NAME 9177, EPAS						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
PRODUCT DEVELOPMENT												
Primary Hdw Development	C-CPFF	BAE SYSTEMS CONTROLS INC., JOHNSON	3.300	5.886	12/06	4.500	01/08	4.500	12/08		18.186	18.186
SUBTOTAL PRODUCT DEVELOPMENT			3.300	5.886		4.500		4.500			18.186	

Remarks:

SUPPORT												
SUBTOTAL SUPPORT												

Remarks:

TEST & EVALUATION												
Dev Test & Eval	VARIOUS	VARIOUS		.200	03/07	1.382	01/08	4.193	11/08		5.775	
SUBTOTAL TEST & EVALUATION				.200		1.382		4.193			5.775	

Remarks:

MANAGEMENT												
Government Engineering Support	WX	NAWCAD, PATUXENT RIVER MD	.616	1.058	10/06	.475	01/08	.732	11/08		2.881	
Program Management Support (Cont)	VARIOUS	VARIOUS	3.615			.206	01/08	.208	11/08		4.029	4.029
Travel	TO	NAVAIR, PAXTUXENT RIVER MD				.060	01/08	.064	10/08		.124	
SUBTOTAL MANAGEMENT			4.231	1.058		.741		1.004			7.034	

Remarks:

Total Cost			7.531	7.144		6.623		9.697			30.995	

EXHIBIT R4, Schedule Profile
EPAS

DATE: February 2008

APPROPRIATION/BUDGET A	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-4	**0603254N, EPAS ASW SYSTEMS DEVELOPMENT**	9177, EPAS ASW

Fiscal Year	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
	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					**EPAS is a Technology Development Non-ACAT Program**																							
Program Decisions									△ **Navy POM10 Decision**																			
EPAS / JMMES System Test & Evaluation EPAS System Field Testing (Development)					**Flight Testing on Commercial (Bell Ranger/Aerostar/King Air/Piper Navajo) and Research Test Aircraft**																							
EPAS/JMMES Fieldable Prototype Flight Testing													**Flight Testing on P-3C amd SH-60B Fleet Aircraft**													
EPAS/JMMES Fieldable Prototype Procurements	△ Procurement of 2 EPAS/JMMES Systems				△ Procurement of 1 EPAS/JMMES System				△ Procurement of 1 EPAS/JMMES System																			
EPAS/JMMES Fieldable Prototype Deliveries					△ EPAS/JMMES-1 △ EPAS/JMMES-2				△ EPAS/JMMES-3								△ EPAS/JMMES-4											

Exhibit R-4a, Schedule Detail EPAS					DATE: February 2008		
APPROPRIATION/BUDGET ACTIVITY RDT&E,N / BA-4	PROGRAM ELEMENT 0603254N, ASW SYSTEMS DEVELOPMENT				PROJECT NUMBER AND NAME 9177, EPAS		
Schedule Profile	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
POM Decision			1Q				
Field Testing (Development)	1Q - 4Q	1Q-4Q	1Q-3Q				
Fieldable Prototype Flight Testing		4Q	1Q - 4Q				
Fieldable Prototype Procurement	1Q	1Q	1Q				
Fieldable Prototype Deliveries		1Q	1Q-3Q				

EXHIBIT R-2a, RDT&E Project Justification							DATE: February 2008
APPROPRIATION/BUDGET ACTIVITY RDT&E,N / BA-4	PROGRAM ELEMENT NUMBER AND NAME 0603254N, ASW SYSTEMS DEVELOPMENT			PROJECT NUMBER AND NAME 9347, CLAYMORE MARINE			
COST ($ in Millions)	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
9347 CLAYMORE MARINE	1.600	2.981	5.000				
RDT&E Articles Qty		1					

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:
Funding for FY07-09 will support development of one blue laser brassboard Lidar ASW system for data collections and data reductions to validate phenomena of the environmental detection concept or Claymore Marine signatures

B. ACCOMPLISHMENTS / PLANNED PROGRAM:

Develop Brassboard	FY 2007	FY 2008	FY 2009
Accomplishments / Effort / Sub-total Cost	1.600	2.981	5.000
RDT&E Articles Qty		1	

Develop blue laser brassboard Lidar ASW system.

C. OTHER PROGRAM FUNDING SUMMARY:

	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	To Complete	Total Cost
Not Applicable							

D. ACQUISITION STRATEGY:
BAE, Nashua, NH, is the prime contractor for building the real time processor and implementing the data collection system. BAE is the historical incumbent from previous CM work. NAVAIR is building the LIDAR system that will feed data to the BAE data collection system. Johns Hopkins APL is developing the detection algorithms that will be supported on the BAE system.

Exhibit R-3 Cost Analysis (page 1)									DATE: February 2008			
APPROPRIATION/BUDGET ACTIVITY RDT&E,N / BA-4		PROGRAM ELEMENT 0603254N, ASW SYSTEMS DEVELOPMENT				PROJECT NUMBER AND NAME 9347, CLAYMORE MARINE						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
PRODUCT DEVELOPMENT	C-CPFF	BAE SYSTEMS CONTROLS INC., Nashua, NH				.750	01/08	1.200	10/08		1.950	1.950
H/W Development & Integration	WX	NAWCAD, PATUXENT RIVER MD				.800	01/08	1.264	10/08		2.064	
SUBTOTAL PRODUCT DEVELOPMENT						1.550		2.464			4.014	

Remarks:

SUPPORT												
Software Development	C-CPFF	Johns Hopkins/ APL				.740	01/08	1.250	10/08		1.990	1.990
SUBTOTAL SUPPORT						.740		1.250			1.990	

Remarks:

TEST & EVALUATION												
SUBTOTAL TEST & EVALUATION												

Remarks:

MANAGEMENT												
Contractor Eng Sup	VARIOUS	VARIOUS		.800	01/07	.550	01/08	1.086	10/08		2.436	2.436
Government Engineering Support	WX	NAWCAD, PATUXENT RIVER MD	2.498	.800	02/07	.141	01/08	.200	10/08		3.639	
SUBTOTAL MANAGEMENT			2.498	1.600		.691		1.286			6.075	

Remarks:

Total Cost			2.498	1.600		2.981		5.000			12.079	

Remarks:

EXHIBIT R4, Schedule Profile | DATE: February 2008

APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E,N / BA-4	0603254N, ASW SYSTEMS DEVELOPMENT	9347, CLAYMORE MARINE

Fiscal Year	FY 2007				FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 2013			
	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																												
Fabricate P3 Brassboard System	△			△																								
Test & Evaluation Milestones																												
Install/Test Fixed Wing System						△			△																			
Data Collection						△					△																	
Algorithm Development/ System Integration					△						△																	
Real Time Processing												△																
Production Milestones																												
Deliveries																												

EXHIBIT R-2a, RDT&E Project Justification			DATE: February 2008
APPROPRIATION/BUDGET ACTIVITY RDT&E,N / BA-4	PROGRAM ELEMENT NUMBER AND NAME 0603254N, ASW SYSTEMS DEVELOPMENT	PROJECT NUMBER AND NAME 9999, Congressional Adds	

COST ($ in Millions)	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY2013
9999 Congressional Adds	9.418	3.975					
RDT&E Articles Qty							

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

9999. Congressional Adds.

B. ACCOMPLISHMENTS / PLANNED PROGRAM:

Develop, Demonstrate & Evaluate EPAS technology

9177C	FY 2007	FY 2008	FY 2009
Accomplishments / Effort / Sub-total Cost	6.675		
RDT&E Articles Qty			

Electro-optic Passive ASW (EPAS). Continue development, demonstration, and evaluation of EPAS technology for ASW applications. This effort supports improvement in Air ASW capability.

Develop & Test E-Field signal

9512C	FY 2007	FY 2008	FY 2009
Accomplishments / Effort / Sub-total Cost	2.743		
RDT&E Articles Qty			

Tactical E-Field Buoy Development. Continue development and testing of an air deployable tactical electric field buoy system to detect the electric field (E-Field) signal produced by a submarine.

Develop & Test E-Field signal, Reduce marine mammal risk

9999 (TBD)	FY 2007	FY 2008	FY 2009
Accomplishments / Effort / Sub-total Cost		3.975	
RDT&E Articles Qty			

$1.600M for Tactical E-Field Buoy Development. Continue development and testing of an air deployable tactical electric field buoy system to detect the electric field (E-Field) signal produced by a submarine.

$2.375M for Marine Mammal Awareness & Alert Response System (MMAARS). Provide decision support to reduce the risk that a selected exercise or test area has marine mammals within the range of harm from active airborne ASW systems.

Exhibit R-4a, Schedule Detail						DATE: February 2008	
APPROPRIATION/BUDGET ACTIVITY RDT&E,N / BA-4	PROGRAM ELEMENT 0603254N, ASW SYSTEMS DEVELOPMENT				PROJECT NUMBER AND NAME 9347, CLAYMORE MARINE		
Schedule Profile	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Fabricate P3 Brassboard System	1Q-4Q						
Install/Test Fixed Wing system		2Q-4Q	1Q				
Data Collection		2Q-4Q	1Q-3Q				
Algorithm Development/System Integration		1Q-4Q	1Q-3Q				
Real Time Processing Demonstration			4Q				