

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2, RDT&E Budget Item Justification	DATE: May 2009
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APPROPRIATION/BUDGET ACTIVITY RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-5	R-1 ITEM NOMENCLATURE 0604270N, EW DEVELOPMENT
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COST (\$ in Millions)	FY 2008	FY 2009	FY 2010					
Total PE Cost	50.900	90.476	97.635					
0556 / EW COUNTER RESPONSE	31.563	68.971	26.486					
1742/ EW TECHNICAL DEVELOPMENT & T&E	7.661	5.426	4.991					
2175 / TACTICAL AIR ELECTRONIC WARFARE	8.008	10.419	65.465					
2260/ SPECIFIC EMITTER ID	0.744	0.674	0.693					
9999 / CONGRESSIONAL ADD	2.924	4.986						

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

This element includes development of Electronic Warfare (EW) systems for United States Navy (USN), United States Marine Corps (USMC), and United States Army tactical aircraft, USMC helicopters, surface combatants, data link vulnerability assessments, precision targeting, USN and USMC radio frequency jammers, and development and testing of electronic warfare devices for emerging threats and emergency contingencies.

R-1 SHOPPING LIST - Item No. 94

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EXHIBIT R-2, RDT&E Budget Item Justification		DATE: May 2009	
APPROPRIATION/BUDGET ACTIVITY RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-5		R-1 ITEM NOMENCLATURE 0604270N, EW DEVELOPMENT	
B. PROGRAM CHANGE SUMMARY:			
Funding:	FY08	FY09	FY10
Previous President's Budget:	43.179	106.932	193.770
Current President's Budget:	50.900	90.476	97.635
Total Adjustments	7.721	-16.456	-96.135
Summary of Adjustments			
Congressional Rescissions			
Congressional Adjustments	7.995	-16.210	
SBIR/STTR/FTT Assessments	-0.274		
Program Adjustments			-96.169
Rate/Misc Adjustments		-0.246	0.034
Subtotal	7.721	-16.456	-96.135
Schedule:			
Project Unit 0556 / EW COUNTER RESPONSE: The ICAP II schedule change is based on actual execution and testing adjustments that more accurately reflects current testing status, and accounts for future test planning requirements. The delay in the ICAP III Block 3 DT test schedule was a result of software deficiencies not easily replicated in the lab, which required corrections prior to continuing test. Other follow-on software corrections were made to the test configuration and limited T&E resources were managed. This resulted in a shift in the OT schedule as well as a related OT delay due to conflicts with T&E resources. ICAP III Blocks 4 and 5 were realigned to more accurately capture the impacts of the Block 3 delays, as well as the funding and warfighter upgrades aligned with the Blocks. The resulting Fleet Releases were realigned and the titles (fleet release vs. IOC) more accurately reflects the nature of the Block products. LBT program has been in the Low Rate Initial Program (LRIP) phase since second quarter FY05, operating without RDT&E funding. LBT MS III/FRP/IOC information has been shown in recent RDT&E budget schedules for historical purposes and subsequently removed after the successful completion of MS III in April 2008 as well as FRP and IOC in third quarter FY08.			
Project Unit 1742 / EW TECHNICAL DEVELOPMENT & T&E: Funding realigned to appropriate PE in FY10 and FY11 in support of on-going Offensive Information Operations Compute Network Operations efforts.			
Project Unit 2175 / TACTICAL AIR ELECTRONIC WARFARE: Integrated Defensive Electronic Countermeasures (IDECM) Block 3: Shortly after IDECM Block 3 entered Integrated Developmental and Operational Testing (DT/OT), significant anomalies were reported by the operational test squadron. The program de-certified from OT in order to address the reported anomalies. The anomaly investigation was completed February 2008. The identified corrective actions was incorporated and verified through development lab and flight test. The program has re-certified and re-entered OT. The program schedule has been changed to reflect the impact of the reported anomalies on completion of OT and associated program milestones. IDECM Block 4: The Digital Radio Frequency Memory (DRFM) schedule has been adjusted to reflect the results of the Analysis of Alternatives (AoA) briefed to N88 in January 2008 and N88 action memo provided in March 2008. The direction provided by N88 requires that an IDECM Block 4 solution provide a common On-Board Jammer (OBJ) for the F/A-18C/D and E/F aircraft with an Initial Operational Capability (IOC) of 2014 and Full Operational Capability (FOC) of 2018. The BOL schedule was deleted as a result of the same AoA			
Technical:			
Project Unit 0556 / EW COUNTER RESPONSE: Not Applicable			
Project Unit 1742 / EW TECHNICAL DEVELOPMENT & T&E: DECM Block 3: Corrective actions, developed to address anomalies reported during OT, have been incorporated and successfully demonstrated in development lab and flight testing. The program has re-certified and re-entered OT. IDECM Block4: The performance requirement for an ALQ-126B replacement originally contemplated for DRFM has been replaced with the requirement for a common On-Board Jammer (OBJ) for both the F/A-18C/D and E/F aircraft. The common jammer must meet the requirements of the OBJ Block 2 Operational Requirements Document (ORD) and remain backwards compatible with IDECM Block 2 and 3 when installed in an F/A-18E/F.			
Project Unit 2175 / TACTICAL AIR ELECTRONIC WARFARE: Not Applicable			
Project Unit 2260 / SPECIFIC EMITTER ID: Not Applicable			
Project Unit 9999 / CONGRESSIONAL ADD: Not Applicable			

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EXHIBIT R-2a, RDT&E Project Justification							DATE: May 2009	
APPROPRIATION/BUDGET ACTIVITY RDT&E, N /BA-5			PROGRAM ELEMENT NUMBER AND NAME 0604270N, EW DEVELOPMENT			PROJECT NUMBER AND NAME 0556, EW COUNTER RESPONSE		
COST (\$ in Millions)			FY 2008	FY 2009	FY 2010			
Project Cost			31.563	68.971	26.486			
RDT&E Articles Qty								

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

(U) This project develops upgrades to cope with the increasingly complex and dense Electronic Warfare (EW) threat environment. The required improvements in airborne electronic attack (EA) will be achieved by applying state-of-the-art signal exploitation/processing/display techniques, improved tactics and jamming capabilities.

These efforts include the continued development of Force Protection/Overseas Contingency Operations (OCO) (classified discussion upon request) Navigation (NAV) and Information Operations (I/O) applications and enhanced communications jamming. The efforts under this project provide for the electronic countermeasures response to advanced threat weapon systems and C3 networks that are expanding in density and technical complexity. This project funds the continuing development and integration of all EW and EA systems for the US Navy electronic attack aircraft including improvements within precision Direction of Arrival (DOA), geo-location, Specific Emitter Identification (SEI), auto-Electronic Support Measures (ESM), and selective reactive jamming.

The ICAP III test articles begun in FY 1999 were two EA-6B aircraft modified to support the Improved Capability (ICAP) III program and Low Band Transmitter (LBT) Engineering Development Models (EDMs). An EA-6B ICAP III aircraft will continue to be used as a test article during government test and evaluation of MIDS/Link-16, LBT and other EW improvements. A requirement exists to allow the EA-6B to participate in various coordinated targeting scenarios such as Network Centric Warfare, Force Net, Improved Suppression of Enemy Air Defenses/Destruction of Enemy Air Defenses, and other strategic-and theatre-based DOD networks and strategies. Likewise, the ICAP III system shall be matured to enable the fusion and correlation of both organic and non-organic threat information to better present sensor and targeting information to the theatre commander via coordinated efforts with other airborne, ground and ship-based operations. A method of implementing this requirement is to include the EA-6B on the Link-16 EW Network. Incorporation of the full EW Link-16 message set into the EA 6B and participation of the ICAP III within the Network Centric Warfare arena will greatly improve the Strike Group Commander's situational awareness. All efforts and system upgrades include the conversion of and transition from the Tactical EA-6B Mission Planning System (TEAMS) to the Joint Mission Planning System (JMPS), including development of EA-6B Unique Planning Modules.

The ALQ-99 Low Band Transmitter (LBT) system provides an expanded war fighting capability against the early warning/acquisition radars and communication links of modern integrated air defense systems. The LBT entered Engineering and Manufacturing Development (E&MD) in September 1996, followed by Low Rate Initial Production (LRIP) in FY 2005 and Full Rate Production (FRP Milestone III) was approved in FY 2008.

Electronic Attack Jammer Techniques Optimization (JATO) and test support is required to address and counter new and evolving radar and communications threats in support of existing and emerging systems such as the EA-6B and EA-18G. JATO will continue to generate techniques, tactics, and procedures that will help to optimize the capabilities of existing weapon systems, and to assist in requirements definitions of emerging AEA systems.

A Next Generation Jammer (NGJ) capability to replace the ALQ-99 system is required to keep pace with advances in threat weapons systems and continual expansion of AEA systems. NGJ capabilities will address AEA capability gaps, AEA sufficiency gaps and ALQ-99 availability gaps.

Beginning in FY10, Airborne Electronic Attack (AEA) efforts are budgeted in PE 0604274N Project 0557 Next Generation Jammer. Prior to FY10 AEA was budgeted for in PE 0604270N 0556 EW Counter Response.

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EXHIBIT R-2a, RDT&E Project Justification		DATE: May 2009		
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA5	PROGRAM ELEMENT NUMBER AND NAME 0604270N, EW DEVELOPMENT	PROJECT NUMBER AND NAME 0556, EW COUNTER RESPONSE		
B. Accomplishments/Planned Program				
ICAP III UPDATE	FY 08	FY 09	FY 10	
Accomplishments/Effort/Subtotal Cost	7.833	7.888	8.420	
RDT&E Articles Quantity				
(U) Efforts will concentrate on completing the integration and enhancement of LINK-16 and ALQ-218 capabilities into the ICAP III aircraft as well as resolving the OPEVAL/Verification of Correction of FOT&E related deficiencies. ICAP III Block 3 includes the integration of Low Band Transmitter (LBT) and correction of software deficiencies. Block 3 is currently in operational testing with Fleet release scheduled for FY09-Q1. ICAP III Block 4 weapon system includes integration of ALE-47 hardware and USQ-113 software improvements with a fleet release scheduled for FY09-Q4. ICAP III Block 5 includes navigation and communication upgrades to include the integration of Control Display Navigation Unit (CDNU) 7000; development will begin in FY09 and continue until fielded.				
MISSION PLANNING	FY 08	FY 09	FY 10	
Accomplishments/Effort/Subtotal Cost	3.905	4.094	4.270	
RDT&E Articles Quantity				
(U) Joint Mission Planning Systems (JMPS) and associated EA-6B Unique Planning Components (UPC's) supports ICAP III Block upgrades. These efforts will continue development of the JMPS components in direct support of the ICAP III system.				
LINK 16 MESSAGE SETS AND DATA LINKS	FY 08	FY 09	FY 10	
Accomplishments/Effort/Subtotal Cost	1.300	1.278	1.200	
RDT&E Articles Quantity				
(U) Complete testing and continued development of the Link-16 modification. These data link enhancements will enable the EA-6B ICAP III continued participation within Force Net and facilitate the EA contributions to the greater situational awareness allowed by Network Centric Warfare efforts.				

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APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA5	PROGRAM ELEMENT NUMBER AND NAME 0604270N, EW DEVELOPMENT	PROJECT NUMBER AND NAME 0556, EW COUNTER RESPONSE																
B. Accomplishments/Planned Program (Cont.)																		
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:30%;">JAMMER TECHNIQUES OPTIMIZATION (JATO)</td> <td style="width:15%;">FY 08</td> <td style="width:15%;">FY 09</td> <td style="width:15%;">FY 10</td> <td style="width:25%;"></td> </tr> <tr> <td>Accomplishments/Effort/Subtotal Cost</td> <td>11.570</td> <td>11.905</td> <td>12.596</td> <td></td> </tr> <tr> <td>RDT&E Articles Quantity</td> <td></td> <td></td> <td></td> <td></td> </tr> </table>				JAMMER TECHNIQUES OPTIMIZATION (JATO)	FY 08	FY 09	FY 10		Accomplishments/Effort/Subtotal Cost	11.570	11.905	12.596		RDT&E Articles Quantity				
JAMMER TECHNIQUES OPTIMIZATION (JATO)	FY 08	FY 09	FY 10															
Accomplishments/Effort/Subtotal Cost	11.570	11.905	12.596															
RDT&E Articles Quantity																		
(U) Continue engineering development and test support required to address and counter new and evolving radar and communications threats in support of existing and emerging systems such as the EA-6B and EA-18G. JATO will continue to generate techniques, tactics, and procedures to optimize the capabilities of ALQ-99 and ALQ-218 systems, and to assist in requirements definitions of emerging AEA systems. JATO also continues to lead efforts in support of OCO and Force Protection issues. (Classified discussion available upon request.)																		
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:30%;">AIRBORNE ELECTRONIC ATTACK (AEA)</td> <td style="width:15%;">FY 08</td> <td style="width:15%;">FY 09</td> <td style="width:15%;">FY 10</td> <td style="width:25%;"></td> </tr> <tr> <td>Accomplishments/Effort/Subtotal Cost</td> <td></td> <td>43.806</td> <td></td> <td></td> </tr> <tr> <td>RDT&E Articles Quantity</td> <td></td> <td></td> <td></td> <td></td> </tr> </table>				AIRBORNE ELECTRONIC ATTACK (AEA)	FY 08	FY 09	FY 10		Accomplishments/Effort/Subtotal Cost		43.806			RDT&E Articles Quantity				
AIRBORNE ELECTRONIC ATTACK (AEA)	FY 08	FY 09	FY 10															
Accomplishments/Effort/Subtotal Cost		43.806																
RDT&E Articles Quantity																		
(U) Conduct Next Generation Jammer (NGJ) technical maturation analysis/studies and complete concept refinement phase activities needed to support a Milestone A decision. Initiate NGJ technology development activities to reduce technological risk and determine appropriate set of technologies for use in NGJ. For FY2010 PE 0604274N has been established.																		
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:30%;">Intrepid Tiger Pod FA-18 E/F outfitting</td> <td style="width:15%;">FY 08</td> <td style="width:15%;">FY 09</td> <td style="width:15%;">FY 10</td> <td style="width:25%;"></td> </tr> <tr> <td>Accomplishments/Effort/Subtotal Cost</td> <td>6.955</td> <td></td> <td></td> <td></td> </tr> <tr> <td>RDT&E Articles Quantity</td> <td></td> <td></td> <td></td> <td></td> </tr> </table>				Intrepid Tiger Pod FA-18 E/F outfitting	FY 08	FY 09	FY 10		Accomplishments/Effort/Subtotal Cost	6.955				RDT&E Articles Quantity				
Intrepid Tiger Pod FA-18 E/F outfitting	FY 08	FY 09	FY 10															
Accomplishments/Effort/Subtotal Cost	6.955																	
RDT&E Articles Quantity																		
(U) GWOT funding provided for the engineering development and test support required for flight certification of the AN/ALQ-288(V)1 communication jammer pod for aircraft carrier flight operations. GWOT funding also provided for the continued development and test support to address and counter new and evolving communication threats in support of existing and emerging systems such as the AN/ALQ-228(V)-1 and Corporal.																		

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EXHIBIT R-2a, RDT&E Project Justification			DATE: May 2009		
APPROPRIATION/BUDGET ACTIVITY RDT&E, N /BA-5	PROGRAM ELEMENT NUMBER AND NAME 0604270N, EW DEVELOPMENT	PROJECT NUMBER AND NAME 0556, EW COUNTER RESPONSE			
C. OTHER PROGRAM FUNDING SUMMARY:					
<u>Line Item No. & Name</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2010 OCO</u>	<u>FY 2010 Total</u>
P-1 Line #28, EA-6 SERIES	206.021	33.337	39.977	45.000	84.977
D. ACQUISITION STRATEGY:					
<p>The ICAP III contract, an E&MD Cost Plus Incentive Fee/Award Fee basic contract with two Fixed Price Incentive (FPI) production options, was awarded to a Northrop Grumman team in March 1998 following Milestone II and a full and open competition. The contract was changed to a Cost Plus Award Fee contract in FY 1999. LRIP contract award was completed in FY 2003. A Milestone III Navy Program Decision Meeting was held on 23 September 2005. The Acquisition Decision Memorandum was signed by ASN RDA on 21 November 2005. A Firm Fixed Price Full Rate Production (FRP) contract for Lot 2, 4 ALQ-218 systems, was awarded in March 2006. The FRP Lot 3 contract for 7 ALQ-218 systems was awarded 11 April 2008. Contract for Lot 4, ALQ-218 systems was awarded 15 September 2008.</p>					

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Exhibit R-3 Cost Analysis (page 1)							DATE: May 2009				
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME					
RDT&E, N / BA-5			0604270N, EW DEVELOPMENT			0556, EW COUNTER RESPONSE					
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 09 Cost	FY 09 Award Date	FY 10 Cost	FY 10 Award Date				
PRODUCT DEVELOPMENT											
Engineering & Tech Svc	Various	Various	5.173								
ESAD (SUPP) Systems Eng	Various	Various	0.900								
Mgt & Prof Suppt Svc	Various	Various	0.122								
PHD - ICAP III Bk Updates /MIDS	C-BOA	NGC, Bethpage, NY	4.456								
Primary HDW Develop - ICAP III	C-BOA	Various	252.271	3.888	10/08	7.449	10/09				
Systems Engineering	C-BOA	NGC, PRB Systems	2.722								
Primary HDW Develop	Various	NGC, Bethpage, NY	0.202								
Studies & Analysis (Non FFRDC) NGJ	FFP	Various	1.043	23.554	11/08						
Systems Engineering	WX	Naval Research Lab, MD		1.608	11/08	1.512	11/09				
Systems Engineering	WX	NAWCAD, PAX River, MD	11.993	3.475	10/08	2.709	10/09				
Systems Eng/BLK Update	WX	NAWCWD, Pt Mugu, CA	41.573	6.156	10/08	5.321	10/09				
Systems Engineering	WX	NSWC Det, Crane, IN	6.371	2.177	10/08	0.975	10/09				
Systems Engineering	WX	Various	7.903	2.086	10/08	1.108	10/09				
Sub-System Prototypes - NGJ	Various	Various		15.980	11/08						
Subtotal Product Development			334.729	58.924		19.074					
Remarks: Beginning in FY10, Airborne Electronic Attack (AEA) efforts are budgeted in PE 0604274N Project 0557 Next Generation Jammer. Prior to FY10 AEA was budgeted for in PE 0604270N 0556 EW Counter Response.											
SUPPORT											
Development Support - JATO	SS/FP	Johns Hopkins Unv, MD	12.555	4.419	11/08	3.799	11/09				
Eng & Tech Svc (Non FFRDC)	Various	Various	0.964	3.539	10/08	2.145	10/09				
Eng & Tech Svc (Non FFRDC)	FFP	L3 TITAN, Mt Laurel, NJ	0.535								
DFCS Installs	Various	Various		1.238	10/08	0.559	10/09				
ILS Pubs - ICAP III	WX	FRC, Jacksonville, FL		0.751	10/08	0.809	10/09				
Subtotal Support			14.054	9.947		7.312					
Remarks: Beginning in FY10, Airborne Electronic Attack (AEA) efforts are budgeted in PE 0604274N Project 0557 Next Generation Jammer. Prior to FY10 AEA was budgeted for in PE 0604270N 0556 EW Counter Response.											

CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 2)							DATE: May 2009				
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME					
RDT&E, N / BA-5			0604270N, EW DEVELOPMENT			0556, EW COUNTER RESPONSE					
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 09 Cost	FY 09 Award Date	FY 10 Cost	FY 10 Award Date				
TEST & EVALUATION											
Oper Test & Eval - ICAP III	WX	Oper T&E FOR CD 30, VA	0.957								
Dev Test & Eval - ICAP III Update	WX	NAWCAD Pax River, MD	13.565								
Developmental Testing - MP	WX	Various	1.928								
Oper Test & Eval - ICAP III Update	WX	Oper T&E FOR CD 30, VA	3.285								
Oper Test & Eval - MP	WX	Oper T&E FOR CD 30, VA	0.600								
Subtotal T&E			20.335	0.000		0.000					
Remarks:											
MANAGEMENT											
Program Mgmt Supt - AEA	WX	TBD									
Travel - AEA	TO	TBD									
Travel - PMA-234	TO	Travel Vendor, Lex Park, MD	0.530	0.100	10/08	0.100	10/09				
Travel - NATEC	TO	NATEC, San Diego, CA	0.071								
Gov Engineer Supt - MP	WX	NAWCWD, Pt Mugu, CA	2.885								
Subtotal Management			3.486	0.100		0.100					
Remarks:											
Total Cost			372.604	68.971		26.486					
Remarks: Beginning in FY10, Airborne Electronic Attack (AEA) efforts are budgeted in PE 0604274N Project 0557 Next Generation Jammer. Prior to FY10 AEA was budgeted for in PE 0604270N 0556 EW Counter Response.											

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EXHIBIT R4, Schedule Profile																	DATE: May 2009																			
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5					PROGRAM ELEMENT NUMBER AND NAME 0604270N, EW DEVELOPMENT										PROJECT NUMBER AND NAME 0556, EW COUNTER RESPONSE																					
Fiscal Year	FY 2008				FY 2009				FY 2010				FY 2011				FY 2012				FY 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	1	2	3	4				
Acquisition Milestones																																				
ICAP III					★ Fleet Release ICAP III Block 3				☆ Fleet Release ICAP III Block 4																											
Test & Evaluation Milestones																																				
ICAP III Development Test/ Operational Test					[Redacted] ICAP III Block 3 DT/OT				[Redacted] ICAP III Block 4 DT/OT				[Redacted] ICAP III Blo																							
Production Milestones																																				
ICAP III FRP Contract Awards					★ Lot 3				★ Lot 4																											
FRP Aircraft Deliveries					[Redacted] Lot 2 Deliveries (Qty 4 Aircraft)								[Redacted] Lot 3 Deliveries (Qty 7 Aircraft)																							

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Exhibit R-4a, Schedule Detail						DATE: May 2009			
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA 5		PROGRAM ELEMENT 0604270N, EW DEVELOPMENT			PROJECT NUMBER AND NAME 0556, EW COUNTER RESPONSE				
Schedule Profile	FY 2008	FY 2009	FY 2010	FY 2011	FY2012	FY2013	FY 2014	FY 2015	
ICAP III									
Fleet Release - ICAP III BLOCK 3		1Q							
Fleet Release - ICAP III BLOCK 4		4Q							
Fleet Release - ICAP III BLOCK 5									
Block 3 DT- IIIC/OT-III B	1Q-4Q								
Block 4 DT- IIID/OT-III C		2Q-3Q							
Block 5 DT- IIID/OT-III C			3Q-4Q						
Block 6 DT- IIID/OT-III C									
ICAP III FRP Deliveries (Lot 2)	1Q-4Q								
ICAP III - Lot 3 Contract Award FRP (Qty 7)			2Q-4Q						
ICAP III - Lot 4 Contract Award FRP (Qty 9)									

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EXHIBIT R-2a, RDT&E Project Justification							DATE: May 2009	
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5		PROGRAM ELEMENT NUMBER AND NAME 0604270N Electronic Warfare Development			PROJECT NUMBER AND NAME 1742 EW Technical Development			
COST (\$ in Millions)		FY 2008	FY 2009	FY 2010				
Project Cost		7.661	5.426	4.991				
RDT&E Articles Qty		1	1	1				

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

This element includes development of Electronic Warfare (EW) systems for the United States Navy (USN), United States Marine Corps (USMC), and United States Army tactical aircraft, USMC helicopters, surface combatants, data link vulnerability assessments, precision targeting, USN and USMC communications and non-communications jammers, and development and testing of electronic warfare devices for emerging threats and emergency contingencies.

Project Unit A. 1742 EW Technical Development and T & E. Funds efforts that focus on the quick reaction prototyping of tactical information and electronic warfare systems. This program directly addresses various fleet requirements across multiple platforms (airborne, surface and subsurface), airborne and surface cryptologic operational requirements documents and the joint oversight council missions needs statement for information warfare and electronic warfare systems and capabilities. These systems/capabilities provide information dominance to friendly forces during conflict, which is necessary for successful mission accomplishment.

EXHIBIT R-2a, RDT&E Project Justification		DATE: May 2009
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APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA5	PROGRAM ELEMENT NUMBER AND NAME 0604270N Electronic Warfare Development	PROJECT NUMBER AND NAME 1742 EW Technical Development
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B. Accomplishments/Planned Program

Test and Evaluation Equipment	FY 08	FY 09	FY 10	
Accomplishments/Effort/Subtotal Cost	0.755	0.662	0.701	
RDT&E Articles Quantity		1	1	

(U) Continue airborne Information Warfare jammer development, test and evaluation to include ancillary equipment, cabling, hardware, antennas and installation on prototype aircraft.

Studies & Analysis	FY 08	FY 09	FY 10	
Accomplishments/Effort/Subtotal Cost	2.060	2.747	2.665	
RDT&E Articles Quantity				

(U) Conduct studies and vulnerability analysis on emerging threats/targets for Electronic Warfare (EW) programs.

Software and Hardware Integration and Installation	FY 08	FY 09	FY 10	
Accomplishments/Effort/Subtotal Cost	2.993			
RDT&E Articles Quantity	1			

(U) Provide software integration, hardware installation and refurbishment of fixed site EW asset.

EXHIBIT R-2a, RDT&E Project Justification		DATE: May 2009
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5	PROGRAM ELEMENT NUMBER AND NAME 0604270N Electronic Warfare Development	PROJECT NUMBER AND NAME 1742 EW Technical Development

B. Accomplishments/Planned Program (Cont.)

Develop and Integrate Systems	FY 08	FY 09	FY 10	
Accomplishments/Effort/Subtotal Cost	1.388	1.381	1.116	
RDT&E Articles Quantity				

(U) Develops and fields EW capabilities in accordance with Fleet Forces Command prioritized signals first to be integrated into existing MCS-21 EW systems and deployed on air and surface platforms.

Computer Network Operations	FY 08	FY 09	FY 10	
Accomplishments/Effort/Subtotal Cost	0.000	0.000	0.000	
RDT&E Articles Quantity		0		

(U) Funds CNO directed efforts towards computer network attack initiatives. Details held at a higher classification level.

Program Management Support	FY 08	FY 09	FY 10	
Accomplishments/Effort/Subtotal Cost	0.465	0.636	0.509	
RDT&E Articles Quantity				

(U) Funds official travel expenses and required training to support Research & Development projects as well as consumable/simplified acquisitions expenses in support of the program management office.

EXHIBIT R-2a, RDT&E Project Justification			DATE:	May 2009
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME		
RDT&E, N / BA-5	0604270N Electronic Warfare Development	1742 EW Technical Development		
C. OTHER PROGRAM FUNDING SUMMARY:				
<u>Line Item No. & Name</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	
Not Applicable				
D. ACQUISITION STRATEGY:				
Not Applicable				

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Exhibit R-3 Cost Analysis (page 1)							DATE: May 2009					
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
RDT&E, N / BA-5			0604270N Electronic Warfare Development			1742 EW Technical Development						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 09 Cost	FY 09 Award Date	FY 10 Cost	FY 10 Award Date					
Primary Hardware Development	Various	Various	2.347	0.302	Various	0.311	Various					
Ancillary Hardware Development												
Aircraft Integration	Various	Various	0.645	0.360	Various	0.390	Various					
Ship Integration												
Ship Suitability												
Systems Engineering												
Training Development												
Licenses												
Tooling												
GFE												
Award Fees												
Subtotal Product Development			2.992	0.662		0.701						
<p>Remarks:</p> <p>Continue airborne Information Warfare jammer development, test and evaluation to include ancillary equipment, cabling, hardware, antennas and installation on aircraft.</p>												
Development Support	Various	Various	0.130	0.631	Various	0.507	Various					
Software Development	Various	Various	1.388	1.381	Various	1.116	Various					
Integrated Logistics Support												
Configuration Management												
Technical Data												
Studies & Analyses	Various	Various	1.931	2.116	1Q FY09	2.158	1Q FY10					
GFE												
Award Fees												
Subtotal Support			3.449	4.128		3.781						
<p>Remarks:</p> <p>Conduct studies and vulnerability analysis on emerging threats/targets for Electronic Warfare (EW) programs.</p>												

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Exhibit R-3 Cost Analysis (page 2)							DATE: May 2009					
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
RDT&E, N / BA-5			0604270N Electronic Warfare Development			1742 EW Technical Development						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 09 Cost	FY 09 Award Date	FY 10 Cost	FY 10 Award Date					
Developmental Test & Evaluation	Various	Various	0.755	0.000		0.000						
Operational Test & Evaluation												
Live Fire Test & Evaluation												
Test Assets												
Tooling												
GFE												
Award Fees												
Subtotal T&E			0.755	0.000		0.000						
<p>Remarks:</p> <p>Supports the development of technical test plans and techniques for developed capabilities at various test facilities for multiple navy platforms.</p>												
Contractor Engineering Support												
Government Engineering Support												
Program Management Support	Various	Various	0.315	0.170	Various	0.207	Various					
Travel	Various	Various	0.150	0.466	Various	0.302	Various					
Transportation												
SBIR Assessment												
Subtotal Management			0.465	0.636		0.509						
<p>Remarks:</p> <p>Provides for official travel and training expenses and miscellaneous consumables for the program management office.</p>												
Total Cost			7.661	5.426		4.991						
<p>Remarks:</p>												

EXHIBIT R4, Schedule Profile													DATE: May 2009	
APPROPRIATION/BUDGET ACTIVITY					PROGRAM ELEMENT NUMBER AND NAME					PROJECT NUMBER AND NAME				
RDT&E, N / BA-5					0604270N Electronic Warfare Development					1742 EW Technical Development				
Fiscal Year	2008				2009				2010					
	1	2	3	4	1	2	3	4	1	2	3	4		
Electronic Warfare														
Airborne Sys Development	[Bar]													
Airbrone Testing			AC5 △	AC6 △					AC4 △					
Test Support (NRL)	[Bar]													
Fixed Site Delivery			MCS-21 Ground Component (V2) Site Acceptance Test △						MCS-21 Ground Com (V1) Site Acceptance △					
Countermeasure Test Date			FOT&E (Incr. E) △ Red Flash Tests △△△		FAT (Incr. F) △		DT (Incr. F) △		FAT (Incr. F) D △					
Computer Network Ops S/W Sprial Capability Delivery												△		

EXHIBIT R-2a, RDT&E Project Justification							DATE: May 2009	
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5		PROGRAM ELEMENT NUMBER AND NAME 0604270N, EW DEVELOPMENT			PROJECT NUMBER AND NAME 2175, TACTICAL AIR ELECTRONIC WARFARE			
COST (\$ in Millions)		FY 2008	FY 2009	FY 2010				
2175 TACTICAL AIR ELECTRONIC WARFARE		8.008	10.419	65.465				
RDT&E Articles Qty				6				
<p>A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:</p> <p>IDECM Block 3 (IB-3) introduces the new Fiber Optic Towed Decoy (FOTD) capability to the IDECM Block 2 Electronic Warfare (EW) Suite as a replacement for the ALE-50 decoy. The FOTD, when integrated with the rest of the F/A-18E/F EW suite (i.e., ALQ-214, ALR-67(V)3, ALE-47 and ALE-50), the associated cockpit controls, displays and other avionics significantly improves the survivability of the host aircraft in a Radio Frequency (RF) threat environment. IOT&E found IB-3 effective, not suitable. Verification of correction to deficiencies (VCD) identified during IOT&E is required. VCD activities are underway and are planned to conclude in FY10.</p> <p>IDECM Block 4 (IB-4) is an ECP to the ALQ-214 to render it suitable for operation on F/A-18C/D aircraft (replacing the ALQ-126B and significantly improving F/A-18C/D survivability) while retaining all IDECM suite functionality when installed on F/A-18E/F aircraft. The IB-4 acquisition and contract strategy includes development of the Common On-Board-Jammer for the F/A-18 C/DE/F aircraft through sole source contract awards for modifications to the ALQ-214. IB-4, ALQ-214 ECP, efforts include hardware and software design, development and test, delivery of Engineering Development Models (EDMs), integration and testing on the host aircraft. The F/A-18C/D EW Suite includes the ALR-67(V)2 Radar Warning Receiver (RWR) the ALE-47 Countermeasures Dispensing Set (CMDS), the mission computer and other avionics. In addition to performing the RWR function, the ALR-67(V)2 is the EW Bus Controller. The EW Bus is the primary interface between the EW Systems (Jammer, RWR, and CMDS). The mission computer is the Avionics Bus controller, the interface between the EW suite and other avionics.</p>								

EXHIBIT R-2a, RDT&E Project Justification	DATE: May 2009
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APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5	PROGRAM ELEMENT NUMBER AND NAME 0604270N, EW DEVELOPMENT	PROJECT NUMBER AND NAME 2175, TACTICAL AIR ELECTRONIC WARFARE
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B. Accomplishments/Planned Program

IDECM Block 3	FY 08	FY 09	FY 10
Accomplishments/Effort/Subtotal Cost	3.926		
RDT&E Articles Quantity			

Funded Integrated Defensive Electronics Countermeasures (IDECM) Block 3 Fiber Optic Towed Decoy (FOTD). Efforts included completion of IB-3 FOTD Development, Integration and Combined Developmental and Operational Testing (DT/OT).

IDECM Block 4	FY 08	FY 09	FY 10
Accomplishments/Effort/Subtotal Cost	4.082	10.419	65.465
RDT&E Articles Quantity			6

Fund IDECM Block 4, ALQ-214 ECP efforts, to include but not limited to: hardware and software design, development and test; delivery of Engineering Development Models (EDMs); integration and test on the host aircraft. The F/A-18C/D Electronic Warfare (EW) Suite includes the ALR-67(V)2 Radar Warning Receiver, the ALE-47 Countermeasures Dispensing Set, the mission computer and other avionics. The F/A-18E/F EW Suite includes the ALQ-214, ALR-67(V)3, ALE-47, ALE-50, ALE-55, the mission computer and other avionics.

EXHIBIT R-2a, RDT&E Project Justification		DATE:
		May 2009
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-5	0604270N, EW DEVELOPMENT	2175, TACTICAL AIR ELECTRONIC WARFARE

C. OTHER PROGRAM FUNDING SUMMARY:

<u>Line Item No. & Name</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
#52, Common ECM, OSIP-007-03 APN	39.085	40.495	40.344
#7, Airborne Expendable CM PANMC	19.332	18.662	25.839

D. ACQUISITION STRATEGY:

IB-3 sole source award of VCD and LRIP efforts in FY 2009 and FY 2010. In April 2009 ASN(RD&A) approved the requested restructure of IB-4 to reflect the ECP strategy, replacing Milestones with In-Process Reviews (IPRs) in the program schedule. IB-4 sole source award of ALQ-214 ECP efforts in FY2010.

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Exhibit R-3 Cost Analysis (page 2)							DATE: May 2009				
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME					
RDT&E, N / BA-5			0604270N, EW DEVELOPMENT			2175, TACTICAL AIR ELECTRONIC WARFARE					
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 09 Cost	FY 09 Award Date	FY 10 Cost	FY 10 Award Date				
DEVELOPMENTAL TEST& EVAL											
Dev Test & Eval Spt AAR-47	WX	NRL, Washington, DC	0.270								
Eng Spt - IDECM	WX	NAWCWD, China Lake, CA	9.547								
Eng Spt - IDECM	WX	Various	32.505								
Eng/Log Spt - DRFM (CONG)	WX	Various	0.524								
Eng/Log Spt - DRFM (CONG)	WX	NAWCAD, PAX, River, MD	0.713								
Eng/Log Spt - DRFM (CONG)	MP	DTIC	0.067								
Eng/Log Spt - DRFM	WX	NAWCAD, PAX, River, MD	0.120								
Eng/Log Spt - DRFM	WX	Various	0.420								
Eng/Log Spt - IDECM	WX	NAWCAD, PAX, River, MD		0.050	Nov 2008	1.401	Dec 2009				
Eng/Log Spt - IDECM	WX	Various		0.840	Nov 2008	0.819	Dec 2009				
IDECM Test Spt (OPTEVFOR)	WX	Oper T&E For CD 30, VA	4.030								
IDECM Test Spt (Non-FFRDC)	CPFF	Various	1.486								
Live Fire Test & Eval AAR-47	WX	NRL, Washington, DC	0.508								
Operational Test & Eval AAR-47	WX	NRL, Washington, DC	0.100								
Studies & Analysis (Non-FFRDC) (CONG)	CPFF	John Hopkins Un, Laurel, MD	0.774								
Eng/Log Spt- DRFM (CONG)	WX	NRL, Washington, DC	0.375								
Eng/Log Spt- DRFM (CONG)	WX	FRC-SE, Jacksonville, FL	0.050								
Eng/Log Spt - IDECM	WX	FRC-SE, Jacksonville, FL				0.201	Dec 2009				
Eng & Tech Svcs (Non-FFRDC)	CPFF	L-3 Titan, MD	0.448								
Flight Test - IDECM	WX	NAWCWD, China Lake, CA				0.819	Jan 2010				
Subtotal T&E			51.937	0.890		3.240					
Remarks:											
MANAGEMENT											
AAR-47 Travel	TO	NAVAIR, PAX River, MD	0.050								
Prog Mgmt (DRFM)	WX	NAWCAD, PAX River, MD	0.002								
PM Spt DRFM (Non-FFRDC)	TBD	TBD	0.146								
Prog Mgmt Spt DRFM (CONG)	WX	NAWCAD, PAX River, MD	0.234								
Mgt & Prof Suppt Svc (Non-FFRDC)	CPFF	Amelex, MD	0.210								
Mgt & Prof Suppt Svc (Non-FFRDC) IDECM	CPFF	NRL, Washington, DC				0.305	Dec 2009				
Mgt & Prof Suppt Svc (Non-FFRDC)	CPRR	Tekla, Arlington, VA	0.160								
Prog Mgmt Spt IDECM	WX	Various	19.386								
Prog Mgmt (Non-FFRDC)	CPFF	DPA Inc., Arlington, VA	0.077								
Travel IDECM	TO	Various	0.104								
Travel IDECM	TO	NAWCAD, PAX River, MD	0.224								
Travel	TO	NAWCAD, PAX River, MD	0.005								
Travel	TO	NAWCAD, PAX River, MD				0.100	Oct 2009				
Impact Fees	WX	NAWCAD, PAX River, MD	0.032								
Subtotal Management			20.630	0.000		0.405					
Remarks:											
Total Cost			251.456	10.419		65.465					
Remarks:											

EXHIBIT R4, Schedule Profile																	DATE: May 2009															
APPROPRIATION/BUDGET ACTIVITY								PROGRAM ELEMENT NUMBER AND NAME								PROJECT NUMBER AND NAME																
RDT&E, N / BA-5								0604270N, EW DEVELOPMENT								2175, TACTICAL AIR ELECTRONIC WARFARE																
Fiscal Year	2008				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	1	2	3	4
Acquisition Milestones																																
IDECM Block 3																																
IDECM Block 4																																
IDECM Block 4 PDR																																
IDECM Block 4 CDR																																
IDECM Block 4 Development																																
IDECM Block 4 Delivery																																
Test & Evaluation Milestones																																
IDECM B-3 Integrated DT/OT																																
IDECM Block 4 Testing																																
Production Milestones																																
IDECM Block 3																																
IDECM Block 4																																
Production Deliveries																																
IDECM Block 3																																
IDECM Block 4																																

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Exhibit R-4a, Schedule Detail				DATE: May 2009			
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5		PROGRAM ELEMENT 0604270N, EW DEVELOPMENT			PROJECT NUMBER AND NAME 2175, TACTICAL AIR ELECTRONIC WARFARE		
Schedule Profile	FY 2008	FY 2009	FY 2010				
IDECM Block 4 ENG & MFG Development (EMD) Award			1Q				
IDECM Block 4 Preliminary Design Review (PDR)		3Q					
IDECM Block 4 Critical Design Review (CDR)			3Q				
IDECM Block 4 Development			2Q-4Q				
IDECM Block 3 Integrated DT/OT	1Q-4Q						
IDECM Block 4 Testing			4Q				
IDECM Block 3 Low Rate Initial Production (LRIP) 4	3Q						
IDECM Block 3 Low Rate Initial Production (LRIP) 5		3Q					
IDECM Block 3 Low Rate Initial Production (LRIP) 6			2Q				
IDECM Block 3 LRIP 4 Deliveries (150)		4Q	1Q-4Q				
IDECM Block 3 LRIP 4 Deliveries (251)			4Q				

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EXHIBIT R-2a, RDT&E Project Justification							DATE: May 2009	
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5		PROGRAM ELEMENT NUMBER AND NAME 0604270N, EW Development			PROJECT NUMBER AND NAME 2260 SPECIFIC EMITTER			
COST (\$ in Millions)		FY 2008	FY 2009	FY 2010				
Project Cost		0.744	0.674	0.693				
RDT&E Articles Qty								

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

This project supports systems development and collection of Specific Emitter Identification (SEI) information from National Technical Means (NTM) to track commercial ships over 200 gross registered tons world-wide. Research and development will cover improvements and enhancements to Electronic Intelligence technology. This will include improved/next generation SEI technology for miniaturization and automation of hardware, national collection systems, signal processing and analysis, and de-interleaving of signals. Propagation in a multi-path signal environment will also be assessed. All work on this project will be undertaken in pursuit of goals stated by the Office of Naval Intelligence and the National Security Agency in support of the Worldwide Ship Tracking Program.

EXHIBIT R-2a, RDT&E Project Justification		DATE: May 2009
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5	PROGRAM ELEMENT NUMBER AND NAME 0604270N, EW Development	PROJECT NUMBER AND NAME 2260 SPECIFIC EMITTER

B. Accomplishments/Planned Program

SENSOR FUSION	FY 08	FY 09	FY 10	
Accomplishments/Effort/Subtotal Cost	0.253	0.175	0.199	
RDT&E Articles Quantity				

This effort supports systems development and information fusion of improved SEI technology for automation of hardware, national collection systems, signal processing and analysis, and de-interleaving of signals. Changes reflect addition of FY10 funding and changes in level of effort due to hardware automation and outside adjustments in program controls. FY 2008 Accomplishments: Continued task to fuse additional sources of data with SEI data for automation of hardware, national collection systems, signal processing and analysis, and de-interleaving of signals. Work toward increasing sensor fusion, collection and reporting automation helped reduce staffing and support remote access and control capability. FY 2009 Plans: Continue all efforts of FY08. FY 2010 Plans: Continue all efforts of FY09.

SYSTEM AUTOMATION	FY 08	FY 09	FY 10	
Accomplishments/Effort/Subtotal Cost	0.200	0.229	0.246	
RDT&E Articles Quantity				

This effort supports development of an autonomous surveillance system capable of providing emitter signal information to a central location. FY 2008 Accomplishments: Continued task to develop an unmanned, autonomous, remote collection and surveillance system. Continued task to automate fusion of other sensor information with SEI data collection. FY 2009 Plans: Continue all efforts of FY08. FY 2010 Plans: Continue all efforts of FY09.

TECHNOLOGY REFRESH & COMMUNICATION ENHANCEMENT	FY 08	FY 09	FY 10	
Accomplishments/Effort/Subtotal Cost	0.291	0.270	0.248	
RDT&E Articles Quantity				

This effort improves SEI system performance, real-time communication and tactical use of SEI which will be expanded with next generation SEI technology. FY 2008 Accomplishments: Continued task to incorporate other SEI algorithms into deployed processing software. Continued task on integrating advanced SEI hardware with WINSEI software to support improved SEI system performance and capabilities for tactical and technical use, and which can be expanded with next generation SEI algorithms. (NRL) Continued task to incorporate further message reporting formats for dissemination of SEI data and improve SEI interoperability. (NRL) Initiated task to expand collection capability to support additional radar types. FY 2009 Plans: Continue all efforts of FY08. FY 2010 Plans: Continue all efforts of FY09.

EXHIBIT R-2a, RDT&E Project Justification		DATE: May 2009	
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5	PROGRAM ELEMENT NUMBER AND NAME 0604270N, EW Development	PROJECT NUMBER AND NAME 2260 SPECIFIC EMITTER	
C. OTHER PROGRAM FUNDING SUMMARY:			
<u>Line Item No. & Name</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
Not applicable			
D. ACQUISITION STRATEGY:			
Not Applicable.			

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CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE: May 2009	
APPROPRIATION/BUDGET ACTIVITY RDT&E, N /BA-5		PROGRAM ELEMENT NUMBER AND NAME 0604270N, EW DEVELOPMENT			PROJECT NUMBER AND NAME 9999 Congressional Adds			
COST (\$ in Millions)		FY 2008	FY 2009	FY 2010				
Project Cost		2.924	4.986	0.000				
RDT&E Articles Qty								
<p>A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:</p> <p>Congressional Adds.</p>								

R-1 SHOPPING LIST - Item No.94

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CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification	DATE: May 2009
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APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA5	PROGRAM ELEMENT NUMBER AND NAME 0604270N, EW DEVELOPMENT	PROJECT NUMBER AND NAME 9999, CONGRESSIONAL ADD
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B. Accomplishments/Planned Program

9C09A EA 8B ALQ-99 BAND 5/6 TWT	FY 08	FY 09	FY 10	
Accomplishments/Effort/Subtotal Cost	0.966			
RDT&E Articles Quantity				

The FY 2008 Congressional Add is for the Band 4 traveling wave tube (TWT) replacement development program.

9C10A PT MUGU EW LAB UPGRADE	FY 08	FY 09	FY 10	
Accomplishments/Effort/Subtotal Cost	1.958	1.596		
RDT&E Articles Quantity				

The FY 2008 and FY 2009 Congressional Adds are for research and lab equipment necessary to develop a Point Mugu laboratory facility modernization.

9D69A INTEGRATED NAVAL ELECTRONIC WARFA	FY 08	FY 09	FY 10	
Accomplishments/Effort/Subtotal Cost		0.997		
RDT&E Articles Quantity				

The FY 2009 Congressional Add is for Integrated Naval Electronic Warfare.

9D70A USMC ELECTRONIC WARFARE (EW) TRAIN	FY 08	FY 09	FY 10	
Accomplishments/Effort/Subtotal Cost		2.393		
RDT&E Articles Quantity				

The FY 2009 Congressional Add is for the USMC Electronic Warfare Training Program.