

EXHIBIT R-2, RDT&E Budget Item Justification							DATE: February 2007		
APPROPRIATION/BUDGET ACTIVITY RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-5							R-1 ITEM NOMENCLATURE 0604270N, EW DEVELOPMENT		
COST (\$ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	
Total PE Cost	41.184	60.688	41.064	63.221	63.454	43.349	37.207	34.879	
0556 EW COUNTER RESPONSE	30.630	33.018	24.176	25.638	26.336	26.981	27.384	27.861	
1742 EW TECHNICAL DEVELOPMENT & T&E	.920	.650	7.890	4.951	5.064	5.180	5.277	5.376	
2175 TACTICAL AIR ELECTRONIC WARFARE	7.715	25.344	8.249	31.951	31.355	10.477	3.823	.906	
2260 SPECIFIC EMITTER ID	.716	.680	.749	.681	.699	.711	.723	.736	
9999 CONGRESSIONAL ADD	1.203	.996							

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

This element includes development of electronic warfare systems for the United States Navy (USN), United States Marine Corps (USMC), and United States Army (USA) 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.

B. PROGRAM CHANGE SUMMARY

Funding:	FY 2006	FY 2007	FY 2008	FY 2009
Previous President's Budget:	43.276	39.842	25.855	26.854
Current President's Budget:	41.184	60.688	41.064	63.221
Total Adjustments	-2.092	20.846	15.209	36.367

Summary of Adjustments

Congressional Increases	0.911	21.000	0.000	0.000
Congressional Reductions	0.000	0.000	0.000	0.000
Congressional Undistributed Reductions	-0.620	-0.154	0.000	0.000
Economic Assumptions	0.000	0.000	0.125	0.743
Miscellaneous Adjustments	-2.383	0.000	15.084	35.624
Subtotal	-2.092	20.846	15.209	36.367

Schedule:

Project Unit 0556, EW Counter Response. ICAP III Full Rate Production (FRP) awarded in March 2006. The schedule slip was due to extended software development and lack of available test assets. The ICAP III program completed operational testing (OPEVAL) on 3 Sept 2004. On 26 July 2005, COMOPTEVFOR released a favorable "Verification of Correction of Deficiencies" with regards to deficiencies documented during OPEVAL stating ICAP III is Operationally Effective and Operationally Suitable, and is recommended for full fleet release. A Milestone III Navy Program Decision Meeting, chaired by DASN (AIR) and DASN (M&B), was held on 23 September 2005. The Acquisition Decision Memorandum was signed by ASN RDA on 21 November 2005. The EA-6B ICAP III reached its Initial Operational Capability (IOC) in September 2005 and has deployed with VAQ-139 on its maiden operational deployment in January 2006. The FRP contract was awarded in March 2006. ICAP III Block 2 was certified ready for follow-on operational Test and Evaluation (FOT&E) in April 2006. The FOT&E period will support a deployment decision for ICAP III Block 2 which adds the increased Situation awareness of the MIDS Link-16 system.

Schedule:

Project Unit 2175, Tactical Air Electronic Warfare. During Developmental Testing (DT) the program experienced delays due to aircraft unavailability. Deficiencies noted during DT required additional changes to Integrated Defensive Electronic Countermeasures (IDECM) Block 3 software prior to entry into Operational Testing (OT). Shortly after IDECM BLOCK 3 entered Integrated Developmental and Operational Testing (DT/OT), significant anomalies were reported by the operational test squadron. The critical nature of the reported anomalies and ensuing lengthy failure analysis prompted the Program Office to decertify from Operational Testing (OT) and post-pone planned Low Rate initial Production (LRIP) award. Once the program office is satisfied that the root cause of the anomalies has been corrected, via development flight testing to demonstrate the effectiveness of incorporated corrective actions, the program office will notify Assistant Secretary of the Navy (ASN) of any proposed/necessary changes to the program baseline and request recertification for OT. As a result of these events, the schedule for IDECM has changed. Production Milestones and Production Deliveries for IDECM have been removed from the schedule because they are not RDT&E funded.

Digital Radio Frequency Memory (DRFM) Jammer and BOL Dispenser Engineering Development Model has been added to the schedule for funding beginning in FY 2008.

AAR-47B9(V)2 events have been added to the schedule as a result of FY 2007 Title IX funding.

Project Unit 1742, EW Technical Development. Not Applicable.

Project Unit 2260, Specific Emmitter ID. Not Applicable.

Project Unit 9999, Congressional Add. Not Applicable.

Technical:

Project Unit 2175, Tactical Air Electronic Warfare. During Integrated Developmental/Operational Testing VX-9 observed and reported several anomalies to include inconsistent decoy Built-In-Test Indications, decoy failure to deploy properly and decoy failure to properly sever. Corrective action plans are in development.

EXHIBIT R-2a, RDT&E Project Justification							DATE:							
APPROPRIATION/BUDGET ACTIVITY							PROGRAM ELEMENT NUMBER AND NAME			PROJECT NUMBER AND NAME				
RDT&E,N / BA-5							0604270N, EW DEVELOPMENT			0556, EW COUNTER RESPONSE				
COST (\$ in Millions)							FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
0556 EW COUNTER RESPONSE							30.630	33.018	24.176	25.638	26.336	26.981	27.384	27.861
RDT&E Articles Qty														

## A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

(U) This Program Element (PE) develops upgrades to cope with the increasingly complex and dense threat environment. The required improvements in EA-6B Electronic Attack (EA) will be achieved by applying state-of-the-art signal exploitation/processing/display techniques, improved tactics and jamming capabilities. Tactical communications connectivity improvements include Joint Tactical Terminal and Tactical Receive Equipment (TRE) Related Applications (TRAP), Tactical Digital Information Exchange System-B, Tactical Digital Information Link-J, Tactical Information Broadcast Services (TIBS), Tactical Reconnaissance Information Exchange System (TRIXS), USN/USAF Advisory Support Network (ASN) Intelnet, Demand Assigned Multiple Access-capabilities within ForceNet. The EA-6B weapon system is ultimately designed for precision targeting, jamming and destruction of enemy land based, ship borne and airborne command, control and communications (C3), and radars associated with early warning, target acquisition surveillance, anti-aircraft artillery, air-to-surface, surface-to-surface, and surface-to-air missiles. In this capacity, the EA-6B will support both carrier based tactical aircraft strike group operations, and joint forces, in dense radar controlled environments. This PE is directly supporting emerging asymmetric threats currently being addressed by the United States Navy (USN) and the Department of Defense (DOD). These efforts include the continued development of Force Protection/Glodal War on Terror (GWOT) (classified discussion upon request), Navigation (NAV) and Information Operations (I/O) applications, increased night vision and tracking capabilities, and enhanced communications jamming. The efforts under this PE provide for the electronic countermeasures response to these advanced threat weapon systems and C3 networks which are expanding in density and technical complexity. This PE funds the continuing development and integration of all EW and EA systems for the EA-6B 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 test articles begun in FY 1999 are; two EA-6B aircraft modified to support the Improved Capability (ICAP) III program and Low Band Transmitter (LBT) Engineering Development Models (EDMs). The two EA-6B ICAP III aircraft will be used as test articles during government test and evaluation of MIDS/Link-16 and other EW improvements. The LBT EDMs are broken out as LBT Antenna Set EDMs and Amplifier Set EDMs. The ALQ-99 LBT Antenna Group will provide 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) approval (Milestone III) anticipated in FY 2007. All efforts and system upgrades include the conversion of and transition from the Tactical EA-6B Mission System (TEAMS) mission planner software to the Joint Mission Planning System (JMPS), including development of EA-6B Unique Planning Modules.

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.

EXHIBIT R-2a, RDT&E Project Justification			DATE:
			February 2007
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME	
RDT&E,N / BA-5	0604270N, EW DEVELOPMENT	0556, EW COUNTER RESPONSE	

B. ACCOMPLISHMENTS / PLANNED PROGRAM:

ICAP III	FY 2006	FY 2007	FY 2008	FY 2009
Accomplishments / Effort / Sub-total Cost	3.893	1.826	1.266	1.176
RDT&E Articles Qty				

(U) Continue development of ICAP III system. 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 related OPEVAL/Verification and Correction of Deficiencies issues associated with the integration of Link-16 Reactive Assignments (RAs), and enhance the reactive assignment capability for supporting the EA-6B/EA-18G development.

ICAP III UPDATE	FY 2006	FY 2007	FY 2008	FY 2009
Accomplishments / Effort / Sub-total Cost	13.390	14.483	6.678	6.781
RDT&E Articles Qty				

(U) Continue optimizing the ICAP III weapon system performance to include integration of both software upgrades and avionics items which include the second Embedded Global Positioning System/Inertial Navigation System (EGI), HARM, ALE-47, Low Band Transmitter, Band 7/8, Night Vision Devices (NVDs), USQ-113 software improvements and data fusion with national assets. The course of maturing ICAP III to full potential in the ForceNet environment will consist of 4 Block upgrades to deliver approximately 15 months apart.

MISSION PLANNING	FY 2006	FY 2007	FY 2008	FY 2009
Accomplishments / Effort / Sub-total Cost	1.704	2.823	3.985	4.139
RDT&E Articles Qty				

(U) Replacement of the TEAMS with the JMPS and associated EA-6B Unique Planning Components (UPCs).

LINK-16 MESSAGE SETS AND DATA LINKS	FY 2006	FY 2007	FY 2008	FY 2009
Accomplishments / Effort / Sub-total Cost	1.091	2.403	1.290	1.293
RDT&E Articles Qty				

(U) Complete testing and correction of deficiencies of the Link-16 modification. Mature the ICAP III weapon system and Link 16 network participation to its full potential by incorporating additional Electronic Warfare message sets enabling full integration with other EW national assets. These data link enhancements will enable the EA-6B ICAP III participation within Force Net and facilitate the EA contributions to the

JAMMER TECHNIQUES OPTIMIZATION (JATO)	FY 2006	FY 2007	FY 2008	FY 2009
Accomplishments / Effort / Sub-total Cost	10.553	11.483	10.956	12.248
RDT&E Articles Qty				

(U) Continue software development and test support required to address and counter new threat development for both the ICAP II and ICAP III EA configurations. JATO will continue to optimize and generate tactics and techniques as the full potential of the ALQ-218's selective reactive jamming capabilities are developed and employed. JATO will optimize the fusion and correlation of the ALQ-218 tracks with other national asset contacts. JATO also continues to lead our efforts in Force Protection/GWOT (classified discussion upon request) and Next Generation Jammer.

Note: Totals may not add due to rounding

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EXHIBIT R-2a, RDT&E Project Justification										DATE:	
APPROPRIATION/BUDGET ACTIVITY										February 2007	
RDT&E,N / BA-5											
PROGRAM ELEMENT NUMBER AND NAME					PROJECT NUMBER AND NAME						
0604270N, EW DEVELOPMENT					0556, EW COUNTER RESPONSE						
C. OTHER PROGRAM FUNDING SUMMARY:											
	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Complete	Total Cost	
P-1 # 28 EA-6 Series	127.682	48.786	30.602	33.685	32.818	33.323	37.509	38.104	449.300	3,424.131	

**D. ACQUISITION STRATEGY:**

The LBT development contract occurred following a full and open competition and was awarded to BAE Systems (formerly MARCONI). Following development and successful DT/OA, sole source LRIP contracts were awarded in FY05 and FY06. Following successful OT, a sole source production contract will be awarded in FY 2007.

The ICAP III contract, an E&MD Cost Plus Incentive Fee (CPIF)/Award Fee (AF) 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 (CPAF) 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. The FRP contract was awarded in March 2006.

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Exhibit R-3 Cost Analysis (page 1)										DATE: February 2007		
APPROPRIATION/BUDGET ACTIVITY RDT&E,N / BA-5		PROGRAM ELEMENT 0604270N, EW DEVELOPMENT				PROJECT NUMBER AND NAME 0556, EW COUNTER RESPONSE						
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												
ENGINEERING & TECH SRVC (NON-FFRDC)	VARIOUS	VARIOUS	2.941	2.538	Oct 2006	2.502	Oct 2007	2.552	Oct 2008	12.760	23.293	23.293
ESAD (SUPP) SYSTEMS ENG	VARIOUS	VARIOUS	.900								.900	.900
MGT & PROF SUPPT SRVC (NON-FFRDC)	VARIOUS	VARIOUS	.060	.061	Oct 2006	.062	Oct 2007	.062	Oct 2008	.310	.555	.555
PHD - ICAP III Blk Updates/MIDS	C-BOA	NORTHROP GRUMMAN SYS, NY	4.671	5.006	Oct 2006	.670	Oct 2007	.481	Oct 2008	10.080	20.908	20.908
PRIMARY HDW DEVELOP-ICAP III	C-CPAF	NORTHROP GRUMMAN SYS, NY	249.913	1.642	Oct 2006	.800	Oct 2007	.500	Oct 2008	2.000	254.855	254.855
STUDIES & ANALYSIS (NON FFRDC)	VARIOUS	VARIOUS	.539	.523	Oct 2006	.504	Oct 2007	.504	Oct 2008	2.520	4.590	4.590
SYSTEMS ENGINEERING	WX	NAWCAD, PATUXENT RIVER MD	8.132	5.022	Oct 2006	1.273	Oct 2007	2.012	Oct 2008	Continuing	Continuing	
SYSTEMS ENGINEERING	WX	NAWCWD, PT MUGU CA	15.732	5.542	Oct 2006	7.992	Oct 2007	9.013	Oct 2008	Continuing	Continuing	
SYSTEMS ENGINEERING	WX	NRL, WASHINGTON DC	.800	1.000	Oct 2006	.432	Oct 2007	.371	Oct 2008	Continuing	Continuing	
SYSTEMS ENGINEERING	WX	VARIOUS	2.415	1.335	Oct 2006	1.290	Oct 2007	1.893	Oct 2008	Continuing	Continuing	
SYSTEMS ENGINEERING	WX	NSWC DET, CRANE IN	3.084	1.020	Oct 2006	.600	Oct 2007	.600	Oct 2008	Continuing	Continuing	
SUBTOTAL PRODUCT DEVELOPMENT			289.187	23.689		16.126		17.988		Continuing	Continuing	

Remarks: FY06 and prior award fee earned is 80% (ICAP III). Received \$900K in FY06 GWOT Supplemental funding.

SUPPORT												
DEVELOPMENT SUPPORT -JATO	SS/FFP	JOHNS HOPKINS UNIV, COLUMBIA, MD	4.665	2.304	Jan 2007	4.100	Jan 2008	4.100	Jan 2009	16.400	31.569	31.569
SUBTOTAL SUPPORT			4.665	2.304		4.100		4.100		16.400	31.569	

Remarks:

TEST & EVALUATION												
DEV TEST & EVAL - ICAP III UPDATE	WX	NAWCAD, PATUXENT RIVER MD	8.143	2.650	Oct 2006	1.000	Oct 2007	1.200	Oct 2008	Continuing	Continuing	
DEVELOPMENTAL TESTING - MP	WX	VARIOUS	.484	.850	Oct 2006	1.550	Oct 2007	.950	Oct 2008	Continuing	Continuing	
OPER TEST & EVAL - ICAP III UPDATE	WX	OPER T & E FOR CD 30, NORFOLK VA	2.785	2.850	Oct 2006	.500	Oct 2007	.500	Oct 2008	Continuing	Continuing	
OPERATIONAL TEST & EVAL- MP	WX	OPER T & E FOR CD 30, NORFOLK VA	.200	.200	Oct 2006	.400	Oct 2007	.400	Oct 2008	Continuing	Continuing	
SUBTOTAL TEST & EVALUATION			11.612	6.550		3.450		3.050		Continuing	Continuing	

Remarks: Funding is required to conduct ICAP III and LBT developmental/operational test planning, execution and reporting.

MANAGEMENT												
GOV ENGINEERING SUPT-MP	WX	NAWCWD, PT MUGU CA	2.385	.475	Oct 2006	.500	Oct 2007	.500	Oct 2008	Continuing	Continuing	
SUBTOTAL MANAGEMENT			2.385	.475		.500		.500		Continuing	Continuing	

Remarks:

Total Cost			307.849	33.018		24.176		25.638		Continuing	Continuing	
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CLASSIFICATION: UNCLASSIFIED																																
EXHIBIT R4, Schedule Profile																								DATE: <b>February 2007</b>								
APPROPRIATION/BUDGET ACTIVITY				PROGRAM ELEMENT NUMBER AND NAME												PROJECT NUMBER AND NAME																
<b>RDT&amp;E, N / BA-5</b>				0604270N, EW DEVELOPMENT												0556, EW COUNTER RESPONSE																
Fiscal Year	FY 2006				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	1	2	3	4
<b>Acquisition Milestones</b>																																
LBT																																
ICAP III																																
<b>Test &amp; Evaluation Milestones</b>																																
ICAP III Development Test/ Operational Test																																
<b>Production Milestones</b>																																
LBT LRIP Start - FY05 FRP Start - FY07																																
ICAP III FRP Award - FY06																																
<b>Deliveries</b>																																



CLASSIFICATION: UNCLASSIFIED

EXHIBIT R-2a, RDT&E Project Justification							DATE: <b>February 2007</b>	
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-5</b>	PROGRAM ELEMENT NUMBER AND NAME 0604270N Electronic Warfare Development				PROJECT NUMBER AND NAME 1742 EW Technical Development & T&E			
COST (\$ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Z1742 EW Technical Development	0.920	0.650	7.890	4.951	5.064	5.180	5.277	5.376
RDT&E Articles Qty	1	1	1	2				
<p><b>A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:</b></p> <p>Skunkworks is a CNO N614 funded effort that focuses on the quick reaction prototyping of tactical information warfare systems. This program directly addresses various fleet requirements, airborne and surface cryptologic operational requirements documents and the joint requirements oversight council mission needs statement for information warfare systems and capabilities across the spectrum of conflict. The projects developed under this program are designed to deny, degrade, disrupt or destroy enemy command and control communications. These systems provide information dominance to friendly forces during conflict, which is necessary for successful mission accomplishment.</p>								

CLASSIFICATION: UNCLASSIFIED

EXHIBIT R-2a, RDT&E Project Justification		DATE: <b>February 2007</b>		
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-5</b>	PROGRAM ELEMENT NUMBER AND NAME 0604270N Electronic Warfare Development	PROJECT NUMBER AND NAME 1742 EW Technical Development & T&E		
<b>B. Accomplishments/Planned Program</b>				
Test and Evaluation Equipment	FY 06	FY 07	FY 08	FY 09
Accomplishments/Effort/Subtotal Cost	0.920	0.650	0.766	0.797
RDT&E Articles Quantity	1	1	1	1
-(U) Continue airborne Information Warfare jammer development, test and evaluation to include ancillary equipment, cabling, hardware, antennas and installation on prototype aircraft.				
Vulnerability Analysis Contractor Support	FY 06	FY 07	FY 08	FY 09
Accomplishments/Effort/Subtotal Cost			2.075	2.116
RDT&E Articles Quantity			N/A	N/A
-(U) Provide contractor support for vulnerability analysis for Electronic Warfare (EW) programs.				
Software and Hardware Integration and Installation	FY 06	FY 07	FY 08	FY 09
Accomplishments/Effort/Subtotal Cost			3.000	
RDT&E Articles Quantity			1	
-(U) Provide software integration, hardware installation and refurbishment of fixed site EW asset.				

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EXHIBIT R-2a, RDT&E Project Justification		DATE: <b>February 2007</b>		
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-5</b>	PROGRAM ELEMENT NUMBER AND NAME 0604270N Electronic Warfare Development	PROJECT NUMBER AND NAME 1742 EW Technical Development & T&E		
<b>B. Accomplishments/Planned Program (Cont.)</b>				
Develop and Integrate Systems	FY 06	FY 07	FY 08	FY 09
Accomplishments/Effort/Subtotal Cost			2.049	2.038
RDT&E Articles Quantity			N/A	N/A
<div style="border: 1px solid black; min-height: 60px; margin-top: 10px;"> <p>-(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.</p> </div>				
<b>C. OTHER PROGRAM FUNDING SUMMARY: Not Applicable</b>				
<b>D. ACQUISITION STRATEGY: Not Applicable</b>				

CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 1)										DATE: February 2007		
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT				PROJECT NUMBER AND NAME					
RDT&E, N / BA-5			0604570N Electronic Warfare Development				1742 EW Technical Development & T&E					
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 07 Cost	FY 07 Award Date	FY 08 Cost	FY 08 Award Date	FY 09 Cost	FY 09 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Primary Hardware Development	Various	Various	2.447	0.200	Various	1.200	Various	0.200	Various		4.047	4.047
Ancillary Hardware Development											0.000	
Aircraft Integration	Various	Various		0.300	Various	0.300	Various	0.310	Various		0.910	
Ship Integration											0.000	
Ship Suitability											0.000	
Systems Engineering											0.000	
Training Development											0.000	
Licenses											0.000	
Tooling											0.000	
GFE											0.000	
Award Fees											0.000	
Subtotal Product Development			2.447	0.500		1.500		0.510		0.000	4.957	
Remarks:												
Development Support	Various	Various	0.806			2.075	Various	2.116	Various		4.997	
Software Development	Various	Various				3.091	Various	2.103	Various		5.194	
Integrated Logistics Support											0.000	
Configuration Management											0.000	
Technical Data											0.000	
Studies & Analyses											0.000	
GFE											0.000	
Award Fees											0.000	
Subtotal Support			0.806	0.000		5.166		4.219		0.000	10.191	
Remarks:												

CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 2)										DATE: <b>February 2007</b>		
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT				PROJECT NUMBER AND NAME					
<b>RDT&amp;E, N / BA-5</b>			0604270N Electronic Warfare Development				1742 EW Technical Development & T&E					
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 07 Cost	FY 07 Award Date	FY 08 Cost	FY 08 Award Date	FY 09 Cost	FY 09 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	Various	Various	1.490	0.150	Various	1.024	Various	0.222	Various			2.886
Operational Test & Evaluation												0.000
Live Fire Test & Evaluation												0.000
Test Assets												0.000
Tooling												0.000
GFE												0.000
Award Fees												0.000
Subtotal T&E			1.490	0.150		1.024		0.222		0.000		2.886
Remarks:												
Contractor Engineering Support												0.000
Government Engineering Support												0.000
Program Management Support												0.000
Travel	Various	Various	0.000	0.000		0.200	Various	0.000				0.200
Transportation												0.000
SBIR Assessment												0.000
Subtotal Management			0.000	0.000		0.200		0.000		0.000		0.200
Remarks:												
Total Cost			4.743	0.650		7.890		4.951		0.000		18.234
Remarks:												

CLASSIFICATION: UNCLASSIFIED

EXHIBIT R4, Schedule Profile																								DATE: <b>February 2007</b>									
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-5</b>								PROGRAM ELEMENT NUMBER AND NAME 0604270N Electronic Warfare Development								PROJECT NUMBER AND NAME 1742 EW Technical Development & T&E																	
Fiscal Year	2006				2007				2008				2009				2010				2011				2012				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	1	2	3	4	
<b>Electronic Warfare</b>																																	
Airborne Sys Development																																	
Airborne Integration				AC1 ▲			AC2 △	AC3 △			AC4 △			AC5 △			AC6 △																
Vulnerability Analysis																																	
Fixed Site Development Fixed Site Delivery																△																	
Countermeasure Dev Countermeasure Delivery															△			△			△			△			△			△			△



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EXHIBIT R-2a, RDT&E Project Justification							DATE:							
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 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
2175 TACTICAL AIR ELECTRONIC WARFARE							7.715	25.344	8.249	31.951	31.355	10.477	3.823	.906
RDT&E Articles Qty								8						

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

This project developed the new Fiber Optic Towed Decoy (FOTD) capability and integrated this new capability with the rest of the Electronic Warfare (EW) suite (i.e., Technique Generator (ALQ-214), Radar Warning Receiver (ALR-67(V)3) and Countermeasures Dispensing Set (ALE-47), the associated cockpit controls, displays and other avionics for the lead aircraft (F/A-18E/F). FY 2007, Title IX funding is for the AAR-47(V)2 Missile Warning System, a passive, non-imaging missile detection system to protect helicopters and transports from Surface-to-Air Missiles (SAMs) infrared (IR) homing missiles and laser-aided laser-guided threats. Over 2500 systems are currently fielded on United States Navy (USN), United States Marine Corps (USMC), United States Air Force (USAF), United States Army (USA) and coalition Foreign Military Sales (FMS) uses. Current AAR-47A(V)2 UltraViolet (UV) Missile Warning Sensors require upgrade to provide improved warning of fielded SAMs in the current theaters of operation. Funds will complete engineering development effort of new AAR-47B(V)2 sensors for installation into USN,USMC, USAF, USA and Coalition FMS assault support aircraft. Redesign will be a form-fit replacement at the organizational (o-level) and be compatible with existing aircraft wiring (A-Kit). FY 2008 begins development of a Digital Radio Frequency Memory (DRFM) Jammer for the F/A-18A+/C/D aircraft. Effort includes hardware and software development, integration, and testing to qualify the DRFM Jammer in the aircraft. In addition, this project will include development and qualification of the BOL Countermeasures Dispenser for the F/A-18A+/C/D aircraft. Project satisfies requirements contained within the Air Dominance Interface Control Document and is critical to ensure aircraft survivability and viability as a strike asset in threat environments for the next twenty years.

B. ACCOMPLISHMENTS / PLANNED PROGRAM:

Block 3 Fiber Optic Towed Decoy	FY 2006	FY 2007	FY 2008	FY 2009
Accomplishments / Effort / Sub-total Cost	7.715	5.364		
RDT&E Articles Qty				

Fund IDECM Block 3 FOTD. Efforts include Completion of Block 3 FOTD Development, Integration, Combined Developmental Testing and Operational Testing, and Milestone III decision.

Integrate DRFM & BOL	FY 2006	FY 2007	FY 2008	FY 2009
Accomplishments / Effort / Sub-total Cost			8.249	31.951
RDT&E Articles Qty				

Fund development and engineering efforts to produce the DRFM Jammer Engineering Development Models to conduct laboratory and flight testing to support incorporation into the F/A-18A+/C/D. Fund hardware and software development and integration. In addition, fund development and engineering efforts to produce BOL Dispenser Engineering Development Model units to conduct flight testing to support integration into the FA-18A+/C/D. Fund BOL development and integration effort in the F/A-18A+/C/D to include aircraft compatibility and effectiveness testing.

Engineering Development Effort, AAR-47(V)2	FY 2006	FY 2007	FY 2008	FY 2009
Accomplishments / Effort / Sub-total Cost		19.980		
RDT&E Articles Qty		8		

Complete engineering development effort of new AAR-47B(V)2 sensors for installation into USN, USMC, USAF, USA and Coalition FMS assault support aircraft. Eight (8) PDX Upgrade B Kits will be purchased as engineering articles for Contractor use in laboratory and environmental stress screening, (required for avionic systems).

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EXHIBIT R-2a, RDT&E Project Justification			DATE:
			February 2007
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:	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Complete	Total Cost
APN-5, Line 53, Common ECM, OSIP 007-03, 057600	42.151	35.067	36.113	36.545	37.324	38.791	39.955	41.153	99.106	406.205
APN-5, Line 53, Common ECM, OSIP 003-09, 057600					4.850	31.643	68.794	59.422	208.993	373.702
APN-5, Line 53, Common ECM, OSIP 006-00, 057600	1.540			4.500	4.550	3.957	6.505	6.777	6.326	34.155
PANMC, Line 8, Airborne Expendable CM, 018200	3.963	18.960	24.978	25.276	25.839	26.041	26.857	27.712	446.252	625.878
(QA120 and allocated support under QA830 and QA800)										

D. ACQUISITION STRATEGY:

IDECM Fiber Optic Towed Decoy sole source Full Rate Production (FRP) in FY 2008. DRFM Jammer will be a competitive System Development and Demonstration award in 3Q FY 2008, a Low Rate Initial Production award in FY 2011 and FRP award in FY 2012. DRFM Jammer Engineering Development Model units will be procured as part of the development effort for use in laboratory and flight testing. BOL Countermeasures Dispenser will be sole source to BAE, Austin, TX. A FRP contract is planned for FY 2010.

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Exhibit R-3 Cost Analysis (page 1)										DATE: February 2007		
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 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												
Aircraft Integration - DRFM	TBD	TBD				.100	02/08	1.410	02/09	5.507	7.017	7.017
Aircraft Integration IDECM	VARIOUS	VARIOUS	70.761	.500	VARIOUS						71.261	71.261
Aircraft Integration - AAR-47	WX	NAWCAD, PATUXTENT RIVER MD		.200	04/07						.200	
Primary Hdw Dev - BOL	TBD	TBD				1.640	02/08	3.600	12/08		5.240	5.240
Primary Hdw Dev - DRFM	TBD	TBD				4.630	02/08	18.531	12/08	20.543	43.704	43.704
Primary Hdw Dev - AAR-47	CPFF	ATK, CLEARWATER FL		8.952	02/07						8.952	8.952
Ancillary Hard Dev - AAR-47	CPFF	ATK, CLEARWATER FL		.800	04/07						.800	.800
Systems Eng - AAR-47	WX	NAWCAD, PATUXTENT RIVER MD		.750	04/07						.750	
Systems Eng - IDECM	VARIOUS	VARIOUS	71.333	.500	VARIOUS						71.833	71.833
Ship Suitability, AAR-47	WX	NAWCAD, PATUXTENT RIVER MD		.200	04/07						.200	
Training Dev, AAR-47	WX	NADEP, JACKSONVILLE		.200	04/07						.200	
SUBTOTAL PRODUCT DEVELOPMENT			142.094	12.102		6.370		23.541		26.050	210.157	

Remarks:

SUPPORT												
Development Spt, AAR-47	WX	NAWCAD, PATUXTENT RIVER MD		.500	02/07						.500	
Integrated Log Spt - BOL	WX	NAWCAD, PATUXTENT RIVER MD				.200	11/07	.250	11/08		.450	
Integrated Log Spt - AAR-47	FFP	ATK, CLEARWATER FL		.200	02/07						.200	.200
Software Development	WX	TBD	6.843			.300	11/07	5.300	11/08	7.100	19.543	
Software Dev, AAR-47	WX	NAWCWD, PT MUGU CA		.200	02/07						.200	
Configuration Mgt, AAR-47	FFP	ATK, CLEARWATER FL		.100	02/07						.100	.100
Technical Data, AAR-47	FFP	ATK, CLEARWATER FL		1.000	03/07						1.000	1.000
SUBTOTAL SUPPORT			6.843	2.000		.500		5.550		7.100	21.993	

Remarks:

TEST & EVALUATION												
Developmental T&E, AAR-47	VARIOUS	VARIOUS		1.500	04/07						1.500	
Operational T&E, AAR-47	VARIOUS	VARIOUS		.778	04/07						.778	
Live Fire T&E, AAR-47	WX	Eglin AFB CA		2.500	VARIOUS						2.500	
Test Assets AAR-47	VARIOUS	VARIOUS		1.500	VARIOUS						1.500	
Eng/Log Spt - BOL	WX	TBD				.250	11/07	.750	11/08		1.000	
Eng/Log Spt - DRFM	WX	TBD				.574	11/07	1.258	11/08	12.397	14.229	
Eng/Log Spt - IDECM	WX	NAWCWD, CHINA LAKE CA	7.025	1.200	11/06						8.225	
Eng/Log Spt - IDECM	VARIOUS	VARIOUS	30.857	1.064	VARIOUS						31.921	
Engr/Log Spt DRFM	TBD	TBD				.375	11/07	.680	11/08	.332	1.387	
IDECM Test Spt	VARIOUS	VARIOUS	0.712	.362	11/06						1.074	
IDECM Test Spt	WX	OPER T & E FOR CD 30, NORFOLK VA	2.974	1.520	11/06						4.494	
SUBTOTAL TEST & EVALUATION			41.568	10.424		1.199		2.688		12.729	68.608	

Remarks:

MANAGEMENT												
Prog Mgmt Spt, AAR-47	WX	NAWCAD, PATUXTENT RIVER MD		.400	02/07						.400	
Prog Mgmt Spt (DRFM)	WX	NAWCAD, PATUXTENT RIVER MD				.080	11/07	.072	11/08	.332	.484	
Prog Mgmt Spt (IDECM)	WX	VARIOUS	19.261	.168	11/06						19.429	
Travel (DRFM)	TO	NAVAIR, PAXTUXTENT RIVER MD				.100	10/07	.100	10/08	.350	.550	
Travel, AAR-47	TO	NAVAIR, PAXTUXTENT RIVER MD		.200	02/07						.200	
Travel (IDECM)	TO	NAVAIR, PAXTUXTENT RIVER MD		.256	10/06						.306	
SUBTOTAL MANAGEMENT			19.517	.818		.180		.172		.682	21.369	

Remarks:

Total Cost			210.022	25.344		8.249		31.951		46.561	322.127	
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CLASSIFICATION:

Exhibit R-4a, Schedule Detail						DATE: February 2007			
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT				PROJECT NUMBER AND NAME				
<b>RDT&amp;E, N / BA-5</b>	0604270N, EW DEVELOPMENT				2175, TACTICAL AIR ELECTRONIC WARFARE				
Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	
IDECM Milestone III IB-3		3Q							
IDECM IOC IB-3			4Q						
AAR-47B(V)2 IOC				1Q					
DRFM/BOL MS B			2Q						
DRFM/BOL System Design Development (SDD) Award			3Q						
DRFM/BOL MS C						1Q			
DRFM/BOL FRP Decision Review							2Q		
DRFM/BOL IOC								3Q	
IDECM IB-3 COMBINED DT/OT	1Q-4Q	1Q-3Q							
Preliminary Design Review (PDR) Jammer				1Q					
Critical Design Review (CDR) - Jammer				3Q					
DRFM Development			3Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q		
Eng Dev Model (EDM) DRFM Jammer Delivery					1Q-2Q				
IDECM Software IB-2/IB-3 Updates	1Q-4Q	1Q-4Q							
DRFM/BOL Software				1Q-4Q	1Q-4Q	1Q-4Q	1Q		
AAR-47B(V)2 Sensor Development PDR		4Q							
AAR-47B(V)2 Sensor Development CDR			2Q						
AAR-47B(V)2 Prototypes Delivery		4Q	2Q						
AAR-47B(V)2 Software Changes to 30.X OFP Delivery		3Q-4Q	1Q-3Q						
IDECM IB-3 Dev Navy Only Req FOTD DT	1Q-3Q								
IDECM IB-3 Integrated DT/OT	3Q-4Q	1Q-3Q							
AAR-47B(V)2 Developmental Test, Aircraft Certification			3Q						
AAR_47B(V)2 Op Test (Live Fire)			3Q-4Q	1Q					
DRFM Testing DT					1Q-4Q	1Q			
DRFM Testing IDT/OT						2Q-4Q			
BOL Testing DT				2Q					
BOL Testing OT				4Q					

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EXHIBIT R4, Schedule Profile		DATE: February 2007																																						
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	FY 2006				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	1	2	3	4								
<b>Acquisition Milestones</b>																																								
IDECM Block 3								△								☆																								
AAR-47B(V)2																☆																								
DRFM / BOL												△				△																								☆
IDECM IB-3 Development Envelope Expansion	Combined DT/OT							△																																
DRFM PDR												△																												
DRFM CDR																△																								
DRFM Development												△																												
EDM DRFM Jammer Delivery																																								
Software - IDECM IB-2 / IB-3 UPDATES	█							△																																
Software - DRFM/BOL																△																								
AAR-47B(V)2 Sensor Development								△				△																												
AAR-47B(V)2 Prototypes Delivery								△				△																												
AAR-47B(V)2 Software Changes to 30.X OFP Delivery								△				△																												
<b>Test &amp; Evaluation Milestones</b>																																								
IDECM IB-3 Development Navy Only Requirement FOTD	DT █																																							
IDECM IB-3 Integrated DT/OT								△																																
AAR-47B(V)2 Development Test (Aircraft Certification PAX River)												△																												
AAR-47B(V)2 OP Test (Live Fire)												△																												
DRFM Testing																																								
BOL Testing																△																								

CLASSIFICATION: UNCLASSIFIED

EXHIBIT R-2a, RDT&E Project Justification							DATE: <b>February 2007</b>	
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-5</b>		PROGRAM ELEMENT NUMBER AND NAME 0604270N, EW Development			PROJECT NUMBER AND NAME R2260 SPECIFIC EMITTER			
COST (\$ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
R2260 SPECIFIC EMITTER	0.716	0.680	0.749	0.681	0.699	0.711	0.723	0.736
RDT&E Articles Qty								
<p><b>A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:</b>                  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.</p>								

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EXHIBIT R-2a, RDT&E Project Justification			DATE: <b>February 2007</b>	
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-5</b>	PROGRAM ELEMENT NUMBER AND NAME 0604270N, EW Development	PROJECT NUMBER AND NAME R2260 SPECIFIC EMITTER		
<b>B. Accomplishments/Planned Program</b>				
<b>SENSOR FUSION.</b>				
	FY 06	FY 07	FY 08	FY 09
Accomplishments/Effort/Subtotal Cost	0.197	0.278	0.253	0.175
RDT&E Articles Quantity				
<p>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. FY06: Initiated 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. Continued task to fuse AIS and SEI data. Fused Automatic Identification System (AIS) information with SEI both within WINSEI (Windows SEI) operational display and within the SEI database. This has provided a robust source of data intelligence on collected signals. FY07: Continue all efforts of FY06 less those noted a completed above. Complete task to fuse AIS data SEI data within WINSEI and the SEI database. FY08: Continue all efforts of FY07 less those noted as completed above. FY09: Continue all efforts of FY08 less those noted as completed above.</p>				
<b>SYSTEM AUTOMATION.</b>				
	FY 06	FY 07	FY 08	FY 09
Accomplishments/Effort/Subtotal Cost	0.222	0.200	0.200	0.227
RDT&E Articles Quantity				
<p>This effort supports development of a autonomous surveillance system capable of providing emitter signal information to a central location. FY06: Completed update of existing SEI database within WINSEI to increase performance and content within the database. Database structured to be dynamic and have the capability to hold different forms of data to aid in signal identification and tracking. Initiated task to develop an unmanned, autonomous, remote collection and surveillance system. Continued task to automate fusion of AIS and other sensor information with SEI data collection. FY07: Continue all efforts of FY 2006 less those noted as completed above. FY08: Continue all efforts of FY 2007 less those noted as completed above. FY09: Continue all efforts of FY 2008 less those noted as completed above.</p>				
<b>TECHNOLOGY REFRESH &amp; COMMUNICATION ENHANCEMENT</b>				
	FY 06	FY 07	FY 08	FY 09
Accomplishments/Effort/Subtotal Cost	0.297	0.202	0.296	0.279
RDT&E Articles Quantity				
<p>This effort improves SEI system performance, real-time communication and tactical use of SEI which will be expanded with next generation SEI technology. FY06: Initiated 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. Continued task to incorporate further message reporting formats for dissemination of SEI data and improve SEI interoperability. FY07: Continue all efforts of FY 2006 less those noted as completed above. Complete task to incorporate other SEI algorithms into deployed processing software. FY08: Continue all efforts of FY 2007 less those noted as completed above. Initiate task to expand collection capability to support additional radar types. FY09: Continue all efforts of FY 2008 less those noted as completed above.</p>				

CLASSIFICATION: UNCLASSIFIED

EXHIBIT R-2a, RDT&E Project Justification								DATE:		<b>February 2007</b>
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT NUMBER AND NAME			PROJECT NUMBER AND NAME				
<b>RDT&amp;E, N / BA-5</b>			0604270N, EW Development			R2260 SPECIFIC EMITTER				
<b>C. OTHER PROGRAM FUNDING SUMMARY:</b>										
<u>Line Item No. &amp; Name</u>	<u>FY 2006</u>	<u>0.749</u>	<u>0.673</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>To Complete</u>	<u>Total Cost</u>
Not applicable										
<b>D. ACQUISITION STRATEGY:</b>										
Not applicable.										

EXHIBIT R-2a, RDT&E Project Justification							DATE:		
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT NUMBER AND NAME			PROJECT NUMBER AND NAME				
RDT&E,N / BA-5		0604270N, EW DEVELOPMENT			9999, CONGRESSIONAL ADD				
COST (\$ in Millions)		FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
9999, CONGRESSIONAL ADD		1.203	.996						
RDT&E Articles Qty Not Applicable									

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

B. ACCOMPLISHMENTS / PLANNED PROGRAM:

9499 IR Signature Reduction	FY 2006	FY 2007	FY 2008	FY 2009
Accomplishments / Effort / Sub-total Cost	1.203	.996		
RDT&E Articles Qty				

The proliferation of fourth generation shoulder-launched infrared sensing missiles provides one of the greatest challenges to national security at the present time. The Navy is looking for ways to reduce the threat IR missiles to aircraft from sources such as Man Portable Air Defense Weapon Systems especially against those slow climbing aircraft that contribute to the transportation of armed forces around the world. The resulting product of this research could give the military a more sure and dependable capability to guard against this threat.

This funding will be used to focus on research and lab equipment necessary to develop a laboratory for working with IR signature reduction. Crane Naval Surface Warfare Center along with Purdue University will provide the technology evaluation and testing for the reserach carried out to counteract these threats. Research will include candidate design assessments against various current and incoming-in-service IR missiles, including the effect of various atmospheric condition and clutter background.