

CLASSIFICATION:

UNCLASSIFIED

EXHIBIT R-2, RDT&E Budget Item Justification							DATE:	
							February 2003	
APPROPRIATION/BUDGET ACTIVITY					R-1 ITEM NOMENCLATURE			
RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-7					0204152N, E-2 SQUADRONS			
COST (\$ in Millions)	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Total PE Cost	36.264	18.553	9.083	6.229	2.334	1.762	1.767	1.785
E0463 - (E-2C Improvements)	6.971	7.773	9.083	6.229	2.334	1.762	1.767	1.785
E2321 - (E-2 Radar Modernization)	12.973	10.780						
R3007 - (UHF) Electronically Scannable Antenna)	16.320							
<p>A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:</p> <p>E-2C Improvements provides pre-planned product improvements for the evolution of E-2C airborne warning system capabilities in support of naval warfare command and control requirements. It has previously funded developments for the modification/replacement of selected weapon replaceable assemblies of current installed subsystems. This has resulted in a new capability configuration referred to as Group II aircraft. The program has developed a Mission Computer Upgrade (MCU), applying on-going developments in data processing and target detection, which will relieve current bottlenecks in signal and data processing. The MCU will permit incorporation of additional functional capabilities to satisfy evolving operational requirements, e.g., Cooperative Engagement Capability (CEC), Satellite Communications (SATCOM), and permits the evolutionary growth of a Combat Identification and Theater Air and Missile Defense (TAMD) Capability.</p> <p>FY2002-2009: Funding provides for evaluation of technology for new emergent systems and subsystems. This initiative allows for data collection and the evaluation of new technologies in the context of emerging missions and requirements including Theater Air and Missile Defense, Ballistic Missile Defense, littoral warfare, combat identification including specific emitter identification, multi-source integration, Airborne Battlefield Command and Control (ABC2), and Single Integrated Air Picture (SIAP) as well as parts and system obsolescence. Emphasis will be upon the following areas: participation in exercises to assess capabilities against emerging threats; identify deficiencies, identification of candidate solutions; and ground/airborne demonstrations of the identified technologies.</p>								

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Exhibit R-2, RDTEN Budget Item Justification
(Exhibit R-2, page 1 of 23)

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EXHIBIT R-2, RDT&E Budget Item Justification		DATE: February 2003
APPROPRIATION/BUDGET ACTIVITY RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY /BA-7	R-1 ITEM NOMENCLATURE 0204152N, E-2 SQUADRONS	
<p>The Radar Modernization Program (RMP) is a ground and flight prototype test demonstration and risk mitigation of multiple technologies. It initiates the application of new radar technologies to modernize the primary sensor of the E-2C Weapon system to provide a definitive littoral surveillance capability integral to the Navy's Theater Air Missile Defense (TAMD) Integrated Warfare Architecture. Key technologies to be integrated are space-time adaptive processing (STAP), electronically scanning array (ESA), solid state transmitter, and high dynamic range digital receivers. The resulting detection system will provide a substantially improved overland performance, enhancing all current required mission areas while simultaneously contributing to the emerging TAMD mission requirements. The impact of the dominant battlefield awareness provided by this improved airborne early warning system will substantially contribute to the development of a Single Integrated Air Picture (SIAP). These technologies and resultant equipment demonstrated in ground environment in FY1999 are being flight tested in FY2001 through FY2003. The P.E. is being utilized for RMP pre-system development and demonstration (Pre-SD&D) FY2001 - FY2002 followed by development and demonstration (SD&D) for RMP. This funding is included in P.E. 0604234N, E-2C Radar Modernization Program.</p> <p>FY2002-2003: Funding provides for the integration of RMP advanced development hardware into the NC-130H test bed aircraft and for flight test and data analysis of the advanced development system. Emphasis will be on flying qualities testing, NC-130H processing suite design and fabrication, Integration and Check (IACO) of the processing suite, RMP flight testing and tracking analysis. Additional follow-on modification and flight testing of the NC-130H will be conducted under P.E. 0604234N, RMP, for risk reduction in the core RMP Program.</p> <p>Project Unit R3007 supports the UHF Electronically Scannable Antenna which was realigned from RMP Littoral Surveillance for the E-2C. FY2002 last year of funding for this effort.</p>		

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APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-7		PROGRAM ELEMENT NUMBER AND NAME 0204152N, E-2 SQUADRONS			PROJECT NUMBER AND NAME E0463, E-2C IMPROVEMENTS			
COST (\$ in Millions)	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Project Cost	6.971	7.773	9.083	6.229	2.334	1.762	1.767	1.785
RDT&E Articles Qty								

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

E-2C Improvements provides pre-planned product improvements for the evolution of E-2C airborne weapon system capabilities in support of naval warfare command and control requirements. It has previously funded developments for the modification/replacement of selected weapon replaceable assemblies of current installed subsystems. This has resulted in a new baseline capability configuration referred to as Group II aircraft. The program has developed a Mission Computer Upgrade (MCU), applying on-going developments in data processing and target detection, which will relieve current bottlenecks in signal and data processing. The MCU will permit incorporation of additional functional capabilities to satisfy evolving operational requirements, e.g., Cooperative Engagement Capability (CEC), Satellite Communications (SATCOM), and permits the evolutionary growth of a Combat Identification and Theater Air and Missile Defense (TAMD) Capability.

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Exhibit R-2a, RDTEN Project Justification
(Exhibit R-2a, page 3 of 23)

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EXHIBIT R-2a, RDT&E Project Justification			DATE: February 2003																
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-7	PROGRAM ELEMENT NUMBER AND NAME 0204152N, E-2 SQUADRONS	PROJECT NUMBER AND NAME E0463, E-2C IMPROVEMENTS																	
B. Accomplishments/Planned Program																			
<table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 25%;"></th><th style="width: 15%;">FY 02</th><th style="width: 15%;">FY 03</th><th style="width: 15%;">FY 04</th><th style="width: 15%;">FY 05</th></tr></thead><tbody><tr><td>Accomplishments/Effort/Subtotal Cost</td><td style="text-align: center;">0.800</td><td></td><td></td><td></td></tr><tr><td>RDT&E Articles Quantity</td><td></td><td></td><td></td><td></td></tr></tbody></table>						FY 02	FY 03	FY 04	FY 05	Accomplishments/Effort/Subtotal Cost	0.800				RDT&E Articles Quantity				
	FY 02	FY 03	FY 04	FY 05															
Accomplishments/Effort/Subtotal Cost	0.800																		
RDT&E Articles Quantity																			
<div>Developed electronic order of battle mission planning tool for generating airborne mission data loads for E-2C's electronic support system.</div>																			
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	FY 02	FY 03	FY 04	FY 05															
Accomplishments/Effort/Subtotal Cost	2.089	2.500	2.300																
RDT&E Articles Quantity																			
<div>Multi-Source Integration (MSI) Phase I FY02 - Performed Human Machine Interface (HMI) development to support demonstration of MSI Phase I remote data fusion. FY03 - Conduct MSI Test and Evaluation in conjunction with CEC follow-on Test and Evaluation (FOT&E) for E-2C. FY04 - Fund MSI Phase I productionization and final test and evaluation for fielding in the E-2C.</div>																			
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Accomplishments/Effort/Subtotal Cost	1.707	1.444																	
RDT&E Articles Quantity																			
<div>Theater Air and Missile Defense (TAMD) Requirements FY02 - Performed analysis of future technologies and conducted requirements generation to support the TAMD mission area. FY03 - Conduct avionics system trade study to support new architectures. Support organic sensor/resource management.</div>																			

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Accomplishments/Effort/Subtotal Cost	2.375	2.046	1.100	0.950															
RDT&E Articles Quantity																			
<div style="border: 1px solid black; padding: 5px;"><p>MSI Phase II</p><p>Developed software applications to facilitate incorporation of new technologies such as MSI in existing E-2C Operational Flight Program (OFP). Performed data collection to support MSI efforts and participated in Fleet Battle Experiment Juliet. Fund requirements analysis for development of integrated communication system architecture to support advanced sensor networking. Fund Fleet Battle Group interoperability testing and evaluation for the E-2C.</p></div>																			
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Accomplishments/Effort/Subtotal Cost		1.000	1.200																
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<div style="border: 1px solid black; padding: 5px;"><p>Integrated Processor Architecture Development</p><p>Perform integrated processor architecture development to support programs computer resources roadmap to improve computer performance and incorporate new technologies.</p></div>																			
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Accomplishments/Effort/Subtotal Cost		0.783	2.100	0.200															
RDT&E Articles Quantity																			
<div style="border: 1px solid black; padding: 5px;"><p>Single Integrated Air Picture (SIAP) Block 0</p><p>Fund MSI Development to support SIAP and add correlation/decorrelation to support MSI..</p></div>																			

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	FY 02	FY 03	FY 04	FY 05															
Accomplishments/Effort/Subtotal Cost			2.383	3.850															
RDT&E Articles Quantity																			
Fund Airborne Battlefield Command and Control (ABC2). Develop ABC2 Software and Automated Decision Aides.																			
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	FY 02	FY 03	FY 04	FY 05															
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Air Operations Decision Support (AODS) Conduct AODS productionization and final test and evaluation for fielding in the E-2C.																			
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EXHIBIT R-2a, RDT&E Project Justification			DATE: February 2003	
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-7	PROGRAM ELEMENT NUMBER AND NAME 0204152N, E-2 SQUADRONS	PROJECT NUMBER AND NAME E0463, E-2C IMPROVEMENTS		

C. PROGRAM CHANGE SUMMARY:

Funding:	FY 2002	FY 2003	FY 2004	FY 2005
Previous President's Budget:	6.990	7.965	9.321	6.480
Current BES/President's Budget	6.971	7.773	9.083	6.229
Total Adjustments	-0.019	-0.192	-0.238	-0.251
Summary of Adjustments				
Congressional program reductions		-0.047		
Congressional undistributed reductions				
Congressional rescissions				
SBIR/STTR Transfer	-0.015			
Economic Assumptions	-0.019	-0.145	-0.274	-0.168
Reprogrammings	0.015			
Other Navy/OSD Adjustments			0.036	-0.083
Congressional increases				
Subtotal	-0.019	-0.192	-0.238	-0.251

Schedule:

Schedule change from President's budget reflects E-2C program realignment of schedule to gain synergy among other programs in producing a common software update for the fleet.

Technical:

Not Applicable.

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APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-7			PROGRAM ELEMENT NUMBER AND NAME 0204152N, E-2 SQUADRONS			PROJECT NUMBER AND NAME E0463, E-2C IMPROVEMENTS			

D. OTHER PROGRAM FUNDING SUMMARY:

Line Item No. & Name	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To Complete	Total Cost
APN-1/E-2C (LI# 13 & 14)	273.668	287.959	228.506	246.098	254.582	221.169	176.684	732.518	8,276.303	10,697.487
APN-5/E-2C (LI# 38)	55.519	23.638	43.139	13.689	12.647	8.265	8.416	8.568	514.343	688.224
APN-6/E-2C (LI# 55)	43.123	20.97	3.675	1.880	7.716	11.739	0.000	17.073	240.729	346.905
<u>Related RDT&E</u> (U) 0603658N (Ship Self Defense, CEC) (U) 0604234N (E-2C Radar Modernization Program)										

E. ACQUISITION STRATEGY:

Not Applicable.

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Exhibit R-3 Cost Analysis (page 1)								DATE: February 2003				
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
RDT&E, N / BA-7			0204152N, E-2 SQUADRON			E0463, E-2C IMPROVEMENTS						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 03 Cost	FY 03 Award Date	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Primary Hardware Dev. - MCU	SS/CPIF	NGC, NY/FL	157.460								157.460	157.460
Primary Hardware Dev. - CEC	SS/CPFF	NGC, NY/FL	291.513	4.623	10/02						296.136	296.136
Primary Hardware Dev.	PD	NCW, Arlington, VA	5.765								5.765	
Primary Hardware Mod. - ICR	SS/CPFF	NGC, NY	1.766								1.766	1.766
Primary Hardware - JMPS/TAMPS	WX	PT. Mugu, CA	0.255								0.255	
Primary Hardware - SEI	SS/CPFF	NGC, NY	7.638								7.638	7.638
Primary Hardware - MSI	C/CPFF	Classified				2.300	10/03	1.229	10/04		3.529	3.529
Primary Hardware - IPAD	SS/CPFF	Lockheed Martin				1.000	10/03				1.000	1.000
Primary Hardware - ABC2	SS/CPFF	NGC, NY				2.383	10/03	0.200	10/04		2.583	2.583
Primary Hardware - SIAP	TBD	SPAWAR		0.700	01/03	2.100	10/03	1.933	10/04		4.733	
Primary Hardware - SIAP												
Aircraft Integration												
Ship Integration												
Ship Suitability												
Systems Engineering												
Training Development												
Licenses												
Tooling												
GFE												
Subtotal Product Development			464.397	5.323		7.783		3.362			480.865	
Remarks:												

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Exhibit R-3, Project Cost Analysis
(Exhibit R-3, page 9 of 23)

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Exhibit R-3 Cost Analysis (page 1)										DATE: February 2003			
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT				PROJECT NUMBER AND NAME						
RDT&E, N / BA-7			0204152N, E-2 SQUADRONS				E0463, E-2C IMPROVEMENTS						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 03 Cost	FY 03 Award Date	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	Cost to Complete	Total Cost	Target Value of Contract	
Government Eng. Spt - Various	WX/RC	NAWCAD, PAX RIVER, MD	75.371	0.500	01/03	0.150	10/03				76.021		
Government Eng. Spt -ASA/UESA	C/CPFF	Classified	5.661								5.661	5.661	
Government Eng. Spt - ASA	MIPR	NRL, Wash., D.C.	0.600								0.600		
Government Eng. Spt	SS/CPFF	NGC, NY	2.301								2.301	2.301	
Government Eng. Spt (RAND)	MIPR	Pentagon, Wash., D.C.	0.300								0.300		
Government Eng. Spt (SIAP)	TBD	Various						1.461	10/04		1.461		
Development Support													
Software Development													
Integrated Logistics Support													
Configuration Management													
Technical Data													
Studies & Analyses													
GFE													
Subtotal Support			84.233	0.500		0.150		1.461			86.344		
Remarks:													

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Exhibit R-3 Cost Analysis (page 2)									DATE: August 2002			
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
RDTE&E, N / BA-7			0204152N, E-2 SQUADRONS			E0463, E-2C IMPROVEMENTS						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 03 Cost	FY 03 Award Date	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Dev. Test & Eval. - MCU/Various	WX/RC	NAWCAD, PAX RIVER, MD	88.905	1.457	12/02	0.700	10/03	0.703	10/04	Continuing	Continuing	
Dev. Test & Eval. ACIS (PMS-440)	PD	NAVSEA	2.483								2.483	
Dev. Test & Eval. LEAR Jet - MCU	PD	PMA-207	0.601								0.601	
Dev. Test & Eval. - MCU	WX	PMRF, HAWAII	1.500								1.500	
Dev. Test & Eval. Misc. - MCU	MIPR	VARIOUS	0.666								0.666	
Dev. Test & Eval. - Contract/Improv	MIPR	TBD	0.325								0.325	
Dev. Test & Eval. - EBC	TBD	VARIOUS	2.500								2.500	
Subtotal T&E			96.980	1.457		0.700		0.703		Continuing	Continuing	
Remarks:												
Contractor Engineering Support											0.000	
Government Engineering Support											0.000	
Program Management Support	WX/RX	NAWCAD, PAX RIVER, MD	0.091	0.413	01/03	0.430	10/03	0.683	10/04		1.617	
Travel	WX/WR	NAWCAD, PAX RIVER, MD	0.166	0.080	12/02	0.020	10/03	0.020	10/04	Continuing	Continuing	
Transportation											0.000	
											0.000	
Subtotal Management			0.257	0.493		0.450		0.703		Continuing	Continuing	
Remarks:												
Total Cost			645.867	7.773		9.083		6.229		Continuing	Continuing	
Remarks:												

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Exhibit R-3, Project Cost Analysis
(Exhibit R-3, page 11 of 23)

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* Not required for Budget Activities 1, 2, 3, and 6

[illegible]

Exhibit R-4, Schedule Profile
(Exhibit R-4, page 12 of 23)

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[illegible]

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Exhibit R-4a, Schedule Detail
(Exhibit R-4a, page 13 of 23)

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CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE: February 2003	
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-7		PROGRAM ELEMENT NUMBER AND NAME 0204152N, E-2 SQUADRONS			PROJECT NUMBER AND NAME E2321, RADAR MODERNIZATION PROGRAM			
COST (\$ in Millions)	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Project Cost	12.973	10.780						
RDT&E Articles Qty								

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

The Radar Modernization Program (RMP) is a ground and flight prototype test demonstration and risk mitigation of multiple technologies. It initiates the application of new radar technologies to modernize the primary sensor of the E-2C weapon system to provide a definitive littoral surveillance capability integral to the Navy's Theater Air Missile Defense (TAMD) Integrated Warfare Architecture. Key technologies to be integrated are space-time adaptive processing (STAP), electronically scanning array (ESA), solid state transmitter, and high dynamic range digital receivers. The resulting detection system will provide a substantially improved overland performance, enhancing all current required mission areas while simultaneously contributing to the emerging TAMD mission requirements. The impact of the dominant battlefield awareness provided by this improved airborne early warning system will substantially contribute to the development of a Single Integrated Air Picture (SIAP). These technologies and resultant equipment demonstrated in ground environment in FY1999, is being tested in FY2001 through FY2003. The P.E. is being utilized for RMP pre-system development and demonstration (Pre-SD&D) FY2001 . FY2002 followed by development and demonstration (SD&D) for RMP. This funding is included in P.E. 0604234N, E-2C Radar Modernization Program.

FY2002-2003: Funding provides for the integration of RMP advanced development hardware into the NC-130H test bed aircraft and for flight test and data analysis of the advanced development system. Emphasis will be on flying qualities testing, NC-130H processing suite design and fabrication, Integration and Check (IACO) of the processing suite, RMP flight testing and tracking analysis. Additional follow-on modification and flight testing of the NC-130H will be conducted under P.E. 0604234N, RMP, for risk reduction in the core RMP Program.

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Exhibit R-2a, RDTE Project Justification
(Exhibit R-2a, page 14 of 23)

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EXHIBIT R-2a, RDT&E Project Justification			DATE: February 2003																
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-7	PROGRAM ELEMENT NUMBER AND NAME 0204152N, E-2 SQUADRONS	PROJECT NUMBER AND NAME E2321, RADAR MODERNIZATION PROGRAM																	
B. Accomplishments/Planned Program																			
<table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 25%;"></th><th style="width: 15%;">FY 02</th><th style="width: 15%;">FY 03</th><th style="width: 15%;">FY 04</th><th style="width: 15%;">FY 05</th></tr></thead><tbody><tr><td>Accomplishments/Effort/Subtotal Cost</td><td style="text-align: center;">12.973</td><td style="text-align: center;">10.780</td><td></td><td></td></tr><tr><td>RDT&E Articles Quantity</td><td></td><td></td><td></td><td></td></tr></tbody></table>						FY 02	FY 03	FY 04	FY 05	Accomplishments/Effort/Subtotal Cost	12.973	10.780			RDT&E Articles Quantity				
	FY 02	FY 03	FY 04	FY 05															
Accomplishments/Effort/Subtotal Cost	12.973	10.780																	
RDT&E Articles Quantity																			
<div style="border: 1px solid black; padding: 5px; min-height: 80px;">Flight Test and Data Analysis Completed subsystem flying qualities tests. Initiated data analysis and final report. Completed design and parts fabrication for NC-130H processing suite. Funded NC-130H integration and check out (IACO) flights of Littoral Configuration Processing suite. Complete E-2C RMP NC-130H IACO of Processing Suite, conduct E-2C RMP Processing Subsystem Test, and perform Tracking Analysis/Generate Final Report for efforts for E-2C RMP.</div>																			
<table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 25%;"></th><th style="width: 15%;">FY 02</th><th style="width: 15%;">FY 03</th><th style="width: 15%;">FY 04</th><th style="width: 15%;">FY 05</th></tr></thead><tbody><tr><td>Accomplishments/Effort/Subtotal Cost</td><td></td><td></td><td></td><td></td></tr><tr><td>RDT&E Articles Quantity</td><td></td><td></td><td></td><td></td></tr></tbody></table>						FY 02	FY 03	FY 04	FY 05	Accomplishments/Effort/Subtotal Cost					RDT&E Articles Quantity				
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RDT&E Articles Quantity																			
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EXHIBIT R-2a, RDT&E Project Justification			DATE: February 2003	
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-7	PROGRAM ELEMENT NUMBER AND NAME 0204152N, E-2 SQUADRONS	PROJECT NUMBER AND NAME E2321, RADAR MODERNIZATION PROGRAM		

C. PROGRAM CHANGE SUMMARY:

Funding:	FY 2002	FY 2003	FY 2004	FY 2005
Previous President's Budget:	13.411	11.046	0.000	0.000
Current BES/President's Budget	12.973	10.780	0.000	0.000
Total Adjustments	-0.438	-0.266	0.000	0.000
Summary of Adjustments				
Congressional program reductions				
Congressional undistributed reductions		-0.064		
Congressional rescissions	-0.029			
SBIR/STTR Transfer	-0.402			
Economic Assumptions	-0.036	-0.202		
Reprogrammings	0.029			
Other Navy/OSD Adjustments				
Congressional increases				
Subtotal	-0.438	-0.266	0.000	0.000

Schedule:

Schedule changed from President's budget reflects flight test period extended due to maintenance downtime and weather conditions. IACO was completed in 4Q/02.

Technical:

Not Applicable.

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EXHIBIT R-2a, RDT&E Project Justification							DATE: February 2003			
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-7			PROGRAM ELEMENT NUMBER AND NAME 0204152N, E-2 SQUADRONS			PROJECT NUMBER AND NAME E2321, RADAR MODERNIZATION PROGRAM				

D. OTHER PROGRAM FUNDING SUMMARY:

Line Item No. & Name	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To Complete	Total Cost
APN-1/E-2C (LI# 13 & 14)	273.668	287.959	228.506	246.098	254.582	221.169	176.684	732.518	8,276.303	10,697.487
APN-5/E-2C (LI# 38)	55.519	23.638	43.139	13.689	12.647	8.265	8.416	8.568	514.343	688.224
APN-6/E-2C (LI# 55)	43.123	20.97	3.675	1.880	7.716	11.739	0.000	17.073	240.729	346.905

Related RDT&E
(U) 0604234N (E-2C Radar Modernization Program)

E. ACQUISITION STRATEGY:

The program is a Non-Acquisition Program governed by a Non-Acquisition Program Definition Document (NAPDD) #501-880C2 dated 16 May 1997 in accordance with SECNAVINST 5000.2B.

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Exhibit R-3 Cost Analysis (page 1)								DATE: February 2003				
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
RDT&E, N / BA-7			0204152N, E-2 SQUADRONS			E2321, RADAR MODERNIZATION PROGRAM						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 03 Cost	FY 03 Award Date	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Primary Hardware Dev.	SS/CPFF	Classified	65.631	5.492	10/02						71.123	71.123
Primary Hardware Dev.	SS/CPFF	NGC, NY	24.318	3.541	02/03						27.859	27.859
Primary Hardware Dev.	MIPR	HANSCOMB AFB, MA	0.748								0.748	
Primary Hardware Dev.	SS/CPFF	BAAs	0.406								0.406	0.406
Primary Hardware Dev.	SS/CPFF	KIRKLAND AFB, TX	1.026								1.026	1.026
Ancillary Hardware Development												
Aircraft Integration												
Ship Integration												
Ship Suitability												
Systems Engineering												
Training Development												
Licenses												
Tooling												
GFE												
Award Fees												
Subtotal Product Development			92.129	9.033							101.162	
Remarks:												

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Exhibit R-3, Project Cost Analysis
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CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 2)										DATE: February 2003		
APPROPRIATION/BUDGET ACTIVITY RDTE, N / BA-7			PROGRAM ELEMENT 0204152N, E-2 SQUADRONS			PROJECT NUMBER AND NAME E2321, RADAR MODERNIZATION PROGRAM						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 03 Cost	FY 03 Award Date	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	WX/WR	NAWCAD, PAX RIVER, MD	5.629	0.594	01/03						6.223	
Developmental Test & Evaluation	C/CPFF	Classified	1.635	0.360	01/03						1.995	1.995
Operational Test & Evaluation												
Test Assets												
Tooling												
GFE												
Award Fees												
Subtotal T&E			7.264	0.954		0.000		0.000		0.000	8.218	
Remarks:												
Contractor Engineering Support												
Government Engineering Support												
Program Management Support	C/CPFF	Classified	0.165	0.060	01/03						0.225	0.225
Travel	WX/WR	NAWCAD, PAX RIVER, MD	0.105	0.020	01/03						0.125	
Transportation												
Subtotal Management			0.270	0.080							0.350	
Remarks:												
Total Cost			104.796	10.780							115.576	
Remarks:												

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Exhibit R-3, Project Cost Analysis
(Exhibit R-3, page 20 of 23)

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CLASSIFICATION:

EXHIBIT R4, Schedule Profile																								DATE:								
APPROPRIATION/BUDGET ACTIVITY												PROGRAM ELEMENT NUMBER AND NAME												PROJECT NUMBER AND NAME								
RDT&E, N / BA-7												0204152N, E-2 SQUADRONS												E2321, RADAR MODERNIZATION PROGRAM								
Fiscal Year	2002				2003				2004				2005				2006				2007				2008				2009			
	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/T&E Milestones																																
C-130			IACO																													
Radar System Development																																
EDM Radar Delivery																																
Software 1XXSW Delivery 2XXSW Delivery																																
Production Milestones																																
LRIP I																																
LRIP II																																
FRP																																
Deliveries																																

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* Not required for Budget Activities 1, 2, 3, and 6

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Exhibit R-4a, Schedule Detail
(Exhibit R-4a, page 22 of 23)

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CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE: February 2003	
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-7		PROGRAM ELEMENT NUMBER AND NAME 0204152N, E-2 SQUADRONS			PROJECT NUMBER AND NAME R3007, UHF ELECTRONICALLY SCANNABLE ANTENNA			
COST (\$ in Millions)	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Project Cost	16.320							
RDT&E Articles Qty								

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

UHF Electronically Scannable Antenna: Develop, demonstrate, and analyze UESA radar testbed concept on the Mountaintop on Kauai. FY01 effort includes integrating UESA Antenna developed by Randtron, SiC Transmitter developed by Northrop Grumman, ESSS, Direct Digital Synthesis Exciter by EWA, Console and External Communications by Solipsys, and T/R Switch by University of Hawaii and Research Corporation of University of Hawaii, Phaseshifter by Trex Industries. NGC ESSS is the system integrator for the MT Testbed. This effort initially will demonstrate a non-real time surveillance radar operation, and a real time system by Jan 04.

FY02 effort integrated an IFF system as well as advanced digital receivers and supercombiner circuits. Comprehensive real time demonstration is planned for integrated Surveillance and IFF capability by March of FY04. Extensive work will be done with PMRF for the use of their range, and targets to conduct the full UESA RTB capability demonstration to assess UESA's ability to meet the Littoral Surveillance needs.

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Exhibit R-2a, RD TEN Project Justification
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