

# UNCLASSIFIED

**CLASSIFICATION:**

EXHIBIT R-2, RDT&E Budget Item Justification							DATE:	
							February 2005	
APPROPRIATION/BUDGET ACTIVITY RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-7					R-1 ITEM NOMENCLATURE 0204152N, E-2 Squadrons			
COST (\$ in Millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Total PE Cost	18.863	18.576	2.256	1.540	1.575	1.590	1.616	1.656
0463 - (E-2C Improvements)	8.546	6.000	2.256	1.540	1.575	1.590	1.616	1.656
9417 - (E-2C Program Support Activity)	* 0.962							
9418 - (E-2C Program Support Activity)	* 3.378	** 2.077						
9419 - (Non-Cooperative Combat Identification)	* 1.640	** 1.684						
9420 - (PMRF Net Centric Bed/Adv. Haw.)	* 4.337	** 5.053						
9615 - (Airborne Data Terminal Set)		** 2.772						
9616 - (Magnetorheological Shock Engine Mount)		** 0.990						
* The FY 2004 budget reflects the following Congressional adds: \$1.0M for E-2C Program Support Activity (PSA) which has been revised by \$.011 for Congressional Undistributed Adjustments, .026 for FY 2004 SBIR adjustments and .001 for Economic Assumptions; \$3.5M for E-2C PSA (SBIR Phase III) which has been revised by \$.039 for Congressional Undistributed Adjustments, .080 for FY 2004 SBIR adjustments and .003 for Economic Assumptions; \$1.7M for Non-Cooperative Combat Identification Capability which has been revised by \$.018 for Congressional Undistributed Adjustments, .040 for FY 2004 SBIR adjustments and .002 for Economic Assumptions; and \$4.5M for PMRF Net-Centric Test Bed/Advanced Hawkeye (AHE) Testing which has been revised by \$.050 for Congressional Undistributed Adjustments, .109 for FY 2004 SBIR adjustments and .004 for Economic Assumptions.								
**The FY 2005 budget reflects the following Congressional adds: \$2.1M for E-2C Program Support Activity (PSA)/E-2C Hawkeye Propeller Safety and Reliability which has been revised by \$.022 for Congressional Undistributed Adjustments, and .001 for Nuclear Physical Security; \$1.7M for Non-Cooperative Combat Identification Capability which has been revised by \$.016 for Congressional Undistributed Adjustments; \$5.1M for PMRF Net-Centric Test Bed/Advanced Hawkeye (AHE) Testing which has been revised by \$.046 for Congressional Undistributed Adjustments, and .001 for Nuclear Physical Security; \$2.8M for Airborne Data Terminal Set which has been revised by \$.027 for Congressional Undistributed Adjustments, and .001 for Nuclear Physical Security; and \$1.0M for Magnetorheological Shock Engine Mount which has been revised by \$.010 for Congressional Undistributed Adjustments.								
A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: 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. The program 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 serves as a foundation for growth to provide additional functional capabilities to satisfy evolving operational requirements, e.g., Cooperative Engagement Capability (CEC), Satellite Communications (SATCOMS), and permits the evolutionary growth of a Combat Identification and Theater Air and Missile Defense (TAMD) Capability as well as Airborne Battle Management and Command and Control (BMC2) capability.								

R-1 SHOPPING LIST - Item No.

170

# UNCLASSIFIED

**Exhibit R-2, RDTEN Budget Item Justification**  
(Exhibit R-2, page 1 of 14)

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2, RDT&E Budget Item Justification		DATE: <b>February 2005</b>
APPROPRIATION/BUDGET ACTIVITY <b>RESEARCH DEVELOPMENT TEST &amp; EVALUATION, NAVY /BA-7</b>	R-1 ITEM NOMENCLATURE 0204152N, E-2 Squadrons	
<p>FY2005-2011: 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>		

R-1 SHOPPING LIST - Item No. 170

# UNCLASSIFIED

## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE:	
							February 2005	
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-7	PROGRAM ELEMENT NUMBER AND NAME 0204152N, E-2 Squadrons				PROJECT NUMBER AND NAME 0463, E-2C IMPROVEMENTS			
COST (\$ in Millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Project Cost	18.863*	18.576**	2.256	1.540	1.575	1.590	1.616	1.656
RDT&E Articles Qty								
<p>*The FY 2004 budget reflects the following Congressional adds: \$1.0M for E-2C Program Support Activity (PSA) which has been revised by \$.011 for Congressional Undistributed Adjustments, .026 for FY 2004 SBIR adjustments and .001 for Economic Assumptions; \$3.5M for E-2C PSA (SBIR Phase III) which has been revised by \$.039 for Congressional Undistributed Adjustments, .080 for FY 2004 SBIR adjustments and .003 for Economic Assumptions; \$1.7M for Non-Cooperative Combat Identification Capability which has been revised by \$.018 for Congressional Undistributed Adjustments, .040 for FY 2004 SBIR adjustments and .002 for Economic Assumptions; and \$4.5M for PMRF Net-Centric Test Bed/Advanced Hawkeye (AHE) Testing which has been revised by \$.050 for Congressional Undistributed Adjustments, .109 for FY 2004 SBIR adjustments and .004 for Economic Assumptions.</p> <p>**The FY 2005 budget reflects the following Congressional adds: \$2.1M for E-2C Program Support Activity (PSA)/E-2C Hawkeye Propeller Safety and Reliability which has been revised by \$.022 for Congressional Undistributed Adjustments, and .001 for Nuclear Physical Scurity; \$1.7M for Non-Cooperative Combat Identification Capability which has been revised by \$.016 for Congressional Undistributed Adjustments; \$5.1M for PMRF Net-Centric Test Bed/Advanced Hawkeye (AHE) Testing which has been revised by \$.046 for Congressional Undistributed Adjustments, and .001 for Nuclear Physical Scurity; \$2.8M for Airborne Data Terminal Set which has been revised by \$.027 for Congressional Undistributed Adjustments, and .001 for Nuclear Physical Scurity; and \$1.0M for Magneto Rheological Shock Engine Mount which has been revised by \$.010 for Congressional Undistributed Adjustments.</p> <p><b>A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:</b></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. The program 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 serves as a foundation for growth to provide additional functional capabilities to satisfy evolving operational requirements, e.g., Cooperative Engagement Capability (CEC), Satellite Communications (SATCOMS), and permits the evolutionary growth of a Combat Identification and Theater Air and Missile Defense (TAMD) Capability as well as Airborne Battle Management and Command and Control (BMC2) capability.</p> <p>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>								

R-1 SHOPPING LIST - Item No.

170

**Exhibit R-2a, RDTE&E Project Justification**  
(Exhibit R-2a, page 3 of 14)

# UNCLASSIFIED

# UNCLASSIFIED

## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE: <b>February 2005</b>																
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-7</b>	PROGRAM ELEMENT NUMBER AND NAME 0204152N, E-2 Squadrons	PROJECT NUMBER AND NAME 0463, E-2C IMPROVEMENTS																	
<b>B. Accomplishments/Planned Program</b>																			
<table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 30%;"></th><th style="width: 15%;">FY 04</th><th style="width: 15%;">FY 05</th><th style="width: 15%;">FY 06</th><th style="width: 15%;">FY 07</th></tr></thead><tbody><tr><td>Accomplishments/Effort/Subtotal Cost</td><td style="text-align: center;">0.850</td><td></td><td></td><td></td></tr><tr><td>RDT&amp;E Articles Quantity</td><td></td><td></td><td></td><td></td></tr></tbody></table>						FY 04	FY 05	FY 06	FY 07	Accomplishments/Effort/Subtotal Cost	0.850				RDT&E Articles Quantity				
	FY 04	FY 05	FY 06	FY 07															
Accomplishments/Effort/Subtotal Cost	0.850																		
RDT&E Articles Quantity																			
<div style="border: 1px solid black; padding: 5px; min-height: 60px;"><p>Multi-Source Integration (MSI) Phase I Conducted integration and testing with updated Multi-mode Advanced Tactical Terminal (MATT) Block 3 hardware to support fleet release in FY 2005.</p></div>																			
<table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 30%;"></th><th style="width: 15%;">FY 04</th><th style="width: 15%;">FY 05</th><th style="width: 15%;">FY 06</th><th style="width: 15%;">FY 07</th></tr></thead><tbody><tr><td>Accomplishments/Effort/Subtotal Cost</td><td style="text-align: center;">1.219</td><td style="text-align: center;">0.950</td><td style="text-align: center;">0.950</td><td style="text-align: center;">0.579</td></tr><tr><td>RDT&amp;E Articles Quantity</td><td></td><td></td><td></td><td></td></tr></tbody></table>						FY 04	FY 05	FY 06	FY 07	Accomplishments/Effort/Subtotal Cost	1.219	0.950	0.950	0.579	RDT&E Articles Quantity				
	FY 04	FY 05	FY 06	FY 07															
Accomplishments/Effort/Subtotal Cost	1.219	0.950	0.950	0.579															
RDT&E Articles Quantity																			
<div style="border: 1px solid black; padding: 5px; min-height: 100px;"><p>Multi-Source Integration (MSI) Phase II Developed software applications to facilitate incorporation of new technologies such as MSI in existing E-2C operational Flight Program (OFP). Produced hardware-in-the-loop data sets, performance measures, and data analysis tools in support of MSI Ph II. FY 2005-2007 will fund software architecture analysis and design for incorporation of diverse applications in the E-2 Weapon System, including MSI, Combat ID, and Distributed Weapons Coordination. Fund all-source data fusion in the E-2 including radar, identification Friend or Foe (IFF), Electronic Surveillance (ES), Link 16, Link 11, and Cooperative Engagement Capability (CEC). 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-2.</p></div>																			
<table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 30%;"></th><th style="width: 15%;">FY 04</th><th style="width: 15%;">FY 05</th><th style="width: 15%;">FY 06</th><th style="width: 15%;">FY 07</th></tr></thead><tbody><tr><td>Accomplishments/Effort/Subtotal Cost</td><td style="text-align: center;">0.046</td><td></td><td></td><td></td></tr><tr><td>RDT&amp;E Articles Quantity</td><td></td><td></td><td></td><td></td></tr></tbody></table>						FY 04	FY 05	FY 06	FY 07	Accomplishments/Effort/Subtotal Cost	0.046				RDT&E Articles Quantity				
	FY 04	FY 05	FY 06	FY 07															
Accomplishments/Effort/Subtotal Cost	0.046																		
RDT&E Articles Quantity																			
<div style="border: 1px solid black; padding: 5px; min-height: 60px;"><p>Integrated Processor Architecture Development Analyzed technology options for improving mission computer integrated processor architecture. Conducted laboratory demonstration of candidate mission computer processor solution.</p></div>																			

R-1 SHOPPING LIST - Item No.

170

UNCLASSIFIED

Exhibit R-2a, RDTEN Project Justification  
(Exhibit R-2a, page 4 of 14)

# UNCLASSIFIED

## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE: <b>February 2005</b>																																														
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-7</b>	PROGRAM ELEMENT NUMBER AND NAME 0204152N, E-2 Squadrons	PROJECT NUMBER AND NAME 0463, E-2C IMPROVEMENTS																																															
<b>B. Accomplishments/Planned Program (Cont.)</b>																																																	
<table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <tr> <td style="width: 30%;"></td> <td style="width: 15%;">FY 04</td> <td style="width: 15%;">FY 05</td> <td style="width: 15%;">FY 06</td> <td style="width: 15%;">FY 07</td> </tr> <tr> <td>Accomplishments/Effort/Subtotal Cost</td> <td>2.003</td> <td>0.200</td> <td>0.200</td> <td>0.200</td> </tr> <tr> <td>RDT&amp;E Articles Quantity</td> <td></td> <td></td> <td></td> <td></td> </tr> </table> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p>Single Integrated Air Picture (SIAP) Block 0              Successfully completed Preliminary Design Review/Critical Design Review of SIAP Block 0 software implementation for fielding in 2005. Outyear funding will support testing and fielding of SIAP Block 0 software.</p> </div> <table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <tr> <td style="width: 30%;"></td> <td style="width: 15%;">FY 04</td> <td style="width: 15%;">FY 05</td> <td style="width: 15%;">FY 06</td> <td style="width: 15%;">FY 07</td> </tr> <tr> <td>Accomplishments/Effort/Subtotal Cost</td> <td>3.928</td> <td>3.621</td> <td>1.106</td> <td>0.761</td> </tr> <tr> <td>RDT&amp;E Articles Quantity</td> <td></td> <td></td> <td></td> <td></td> </tr> </table> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p>Fund Airborne Battlefield Command and Control (ABC2)              Conducted demonstration of High Frequency Secret Internet Protocol Router Network (HF SIPRNet) capability and VRC-99 Joint Tactical Radio System Wideband Networking Waveform Prototype waveforms. Developed E-2 RAIDER for Digital Communications Suite capability to FA-18 strike aircraft. FY 2005-2007 funding will be used to conduct demonstration on E-2 airborne Network Centric Collaborative Targeting (NCCT) capability. Conduct demonstration of the Advanced Digital Networking Systems using the HF SIPRNET and VRC-99. Conduct airborne demonstration of advanced mission computer and communications technologies. Participate in the fleet experiments such as TRIDENT WARRIOR, TALISMAN SABER, and Joint Task Force Exercise. Conduct demonstration of advanced tactical laptop capability.</p> </div> <table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <tr> <td style="width: 30%;"></td> <td style="width: 15%;">FY 04</td> <td style="width: 15%;">FY 05</td> <td style="width: 15%;">FY 06</td> <td style="width: 15%;">FY 07</td> </tr> <tr> <td>Accomplishments/Effort/Subtotal Cost</td> <td>0.500</td> <td>1.229</td> <td></td> <td></td> </tr> <tr> <td>RDT&amp;E Articles Quantity</td> <td></td> <td></td> <td></td> <td></td> </tr> </table> <div style="border: 1px solid black; padding: 5px;"> <p>Air Operations Decision Support (AODS)              Developed software applications to automate the Air Tasking Order (ATO) and Airspace Control Order (ACO) to allow effective Command and Control of the Battlespace in cooperation with Office of Naval Research Knowledge Superiority Assurance Future Naval Capabilities. Conduct full data base development in FY 2005 to allow automated track Identification, and fusion of ATO/ACO information and conduct hardware/software development of automated update technologies for ATO, ACO, Special Instructions, Rules of Engagement, and all database information.</p> </div>						FY 04	FY 05	FY 06	FY 07	Accomplishments/Effort/Subtotal Cost	2.003	0.200	0.200	0.200	RDT&E Articles Quantity						FY 04	FY 05	FY 06	FY 07	Accomplishments/Effort/Subtotal Cost	3.928	3.621	1.106	0.761	RDT&E Articles Quantity						FY 04	FY 05	FY 06	FY 07	Accomplishments/Effort/Subtotal Cost	0.500	1.229			RDT&E Articles Quantity				
	FY 04	FY 05	FY 06	FY 07																																													
Accomplishments/Effort/Subtotal Cost	2.003	0.200	0.200	0.200																																													
RDT&E Articles Quantity																																																	
	FY 04	FY 05	FY 06	FY 07																																													
Accomplishments/Effort/Subtotal Cost	3.928	3.621	1.106	0.761																																													
RDT&E Articles Quantity																																																	
	FY 04	FY 05	FY 06	FY 07																																													
Accomplishments/Effort/Subtotal Cost	0.500	1.229																																															
RDT&E Articles Quantity																																																	

R-1 SHOPPING LIST - Item No.

170

UNCLASSIFIED

**Exhibit R-2a, RDTEN Project Justification**  
 (Exhibit R-2a, page 5 of 14)

# UNCLASSIFIED

## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE: <b>February 2005</b>																
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-7</b>	PROGRAM ELEMENT NUMBER AND NAME 0204152N, E-2 Squadrons	PROJECT NUMBER AND NAME 0463, E-2C IMPROVEMENTS																	
<b>B. Accomplishments/Planned Program (Cont.)</b>																			
<table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 30%;"></th><th style="width: 15%;">FY 04</th><th style="width: 15%;">FY 05</th><th style="width: 15%;">FY 06</th><th style="width: 15%;">FY 07</th></tr></thead><tbody><tr><td>Accomplishments/Effort/Subtotal Cost</td><td style="text-align: center;">0.962</td><td></td><td></td><td></td></tr><tr><td>RDT&amp;E Articles Quantity</td><td></td><td></td><td></td><td></td></tr></tbody></table> <div style="border: 1px solid black; padding: 5px; margin-top: 5px;">Congressional Add for E-2C Program Support Activity (9417). Completed ground testing and initiated flight test of a slide lateral engine mount design to improve vibration isolation capabilities.</div>						FY 04	FY 05	FY 06	FY 07	Accomplishments/Effort/Subtotal Cost	0.962				RDT&E Articles Quantity				
	FY 04	FY 05	FY 06	FY 07															
Accomplishments/Effort/Subtotal Cost	0.962																		
RDT&E Articles Quantity																			
<table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 30%;"></th><th style="width: 15%;">FY 04</th><th style="width: 15%;">FY 05</th><th style="width: 15%;">FY 06</th><th style="width: 15%;">FY 07</th></tr></thead><tbody><tr><td>Accomplishments/Effort/Subtotal Cost</td><td style="text-align: center;">3.378</td><td style="text-align: center;">2.077</td><td></td><td></td></tr><tr><td>RDT&amp;E Articles Quantity</td><td></td><td></td><td></td><td></td></tr></tbody></table> <div style="border: 1px solid black; padding: 5px; margin-top: 5px;">Congressional Add for E-2C Program Support Activity (9418). Supported integration of the Multi-purpose Transportable Middleware capability into the E-2C Hawkeye 2000 mission computer.</div>						FY 04	FY 05	FY 06	FY 07	Accomplishments/Effort/Subtotal Cost	3.378	2.077			RDT&E Articles Quantity				
	FY 04	FY 05	FY 06	FY 07															
Accomplishments/Effort/Subtotal Cost	3.378	2.077																	
RDT&E Articles Quantity																			
<table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 30%;"></th><th style="width: 15%;">FY 04</th><th style="width: 15%;">FY 05</th><th style="width: 15%;">FY 06</th><th style="width: 15%;">FY 07</th></tr></thead><tbody><tr><td>Accomplishments/Effort/Subtotal Cost</td><td style="text-align: center;">1.640</td><td style="text-align: center;">1.684</td><td></td><td></td></tr><tr><td>RDT&amp;E Articles Quantity</td><td></td><td></td><td></td><td></td></tr></tbody></table> <div style="border: 1px solid black; padding: 5px; margin-top: 5px;">Congressional Add for Non-Cooperative Combat Identification Capability (E9419). Supported concept development, system engineering, and system prototyping for an advanced non-cooperative identification system capability.</div>						FY 04	FY 05	FY 06	FY 07	Accomplishments/Effort/Subtotal Cost	1.640	1.684			RDT&E Articles Quantity				
	FY 04	FY 05	FY 06	FY 07															
Accomplishments/Effort/Subtotal Cost	1.640	1.684																	
RDT&E Articles Quantity																			

R-1 SHOPPING LIST - Item No.

170

UNCLASSIFIED

# UNCLASSIFIED

## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE: <b>February 2005</b>																
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-7</b>	PROGRAM ELEMENT NUMBER AND NAME 0204152N, E-2 Squadrons	PROJECT NUMBER AND NAME 0463, E-2C IMPROVEMENTS																	
<b>B. Accomplishments/Planned Program (Cont.)</b>																			
<table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 30%;"></th><th style="width: 15%;">FY 04</th><th style="width: 15%;">FY 05</th><th style="width: 15%;">FY 06</th><th style="width: 15%;">FY 07</th></tr></thead><tbody><tr><td>Accomplishments/Effort/Subtotal Cost</td><td style="text-align: center;">4.337</td><td style="text-align: center;">5.053</td><td></td><td></td></tr><tr><td>RDT&amp;E Articles Quantity</td><td></td><td></td><td></td><td></td></tr></tbody></table> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;">Congressional Add for PMRF Net-Centric Test Bed/Advanced Hawkeye Testing (9420). Supported science and technology and advanced technology demonstration initiatives for potential transition to the E-2 Hawkeye program.</div>						FY 04	FY 05	FY 06	FY 07	Accomplishments/Effort/Subtotal Cost	4.337	5.053			RDT&E Articles Quantity				
	FY 04	FY 05	FY 06	FY 07															
Accomplishments/Effort/Subtotal Cost	4.337	5.053																	
RDT&E Articles Quantity																			
<table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 30%;"></th><th style="width: 15%;">FY 04</th><th style="width: 15%;">FY 05</th><th style="width: 15%;">FY 06</th><th style="width: 15%;">FY 07</th></tr></thead><tbody><tr><td>Accomplishments/Effort/Subtotal Cost</td><td></td><td style="text-align: center;">2.772</td><td></td><td></td></tr><tr><td>RDT&amp;E Articles Quantity</td><td></td><td></td><td></td><td></td></tr></tbody></table> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;">Congressional Add for Airborne Data Terminal Set (DTS) (9615). Enhance the Advanced Hawkeye data communications capability.</div>						FY 04	FY 05	FY 06	FY 07	Accomplishments/Effort/Subtotal Cost		2.772			RDT&E Articles Quantity				
	FY 04	FY 05	FY 06	FY 07															
Accomplishments/Effort/Subtotal Cost		2.772																	
RDT&E Articles Quantity																			
<table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 30%;"></th><th style="width: 15%;">FY 04</th><th style="width: 15%;">FY 05</th><th style="width: 15%;">FY 06</th><th style="width: 15%;">FY 07</th></tr></thead><tbody><tr><td>Accomplishments/Effort/Subtotal Cost</td><td></td><td style="text-align: center;">0.990</td><td></td><td></td></tr><tr><td>RDT&amp;E Articles Quantity</td><td></td><td></td><td></td><td></td></tr></tbody></table> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;">Congressional Add for Magneto Rheological (MR) Shock Engine Mount (9616). Research, development and testing of an airworthy MR shock mount for the E-2C aircraft.</div>						FY 04	FY 05	FY 06	FY 07	Accomplishments/Effort/Subtotal Cost		0.990			RDT&E Articles Quantity				
	FY 04	FY 05	FY 06	FY 07															
Accomplishments/Effort/Subtotal Cost		0.990																	
RDT&E Articles Quantity																			

R-1 SHOPPING LIST - Item No.

170

UNCLASSIFIED

# UNCLASSIFIED

## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: <b>February 2005</b>
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-7</b>	PROGRAM ELEMENT NUMBER AND NAME 0204152N, E-2 Squadrons	PROJECT NUMBER AND NAME 0463, E-2C IMPROVEMENTS

**C. PROGRAM CHANGE SUMMARY:**

Funding:	FY 04	FY 05	FY 06	FY 07
Previous President's Budget:	19.331	6.055	2.155	1.579
Current BES/President's Budget	18.863	18.576	2.256	1.540
Total Adjustments	-0.468	12.521	0.101	-0.039
Summary of Adjustments				
Congressional program reductions				
Congressional undistributed reductions		-0.175		
Congressional rescissions				
SBIR/STTR Transfer	-0.421			
Other Adjustments		-0.004	0.062	-0.068
Economic Assumptions	-0.010		0.039	0.029
Reprogrammings	-0.037			
Congressional increases		12.700		
Subtotal	-0.468	12.521	0.101	-0.039

Schedule:

MSI PHI Deploy/AODS Deploy schedule changed due to Software System Configuration Set 05 (SCS 05) changes.

IPAD - Effort completed ahead of shedule.

ABC2 Dev - Additional effort to conduct demo of the Advanced Digital Networking System and conduct airborne demos.

MSI PHII FQT - Schedule changed due to Software System Configuration Set 07 (SCS 07) changes.

ABC2 HF SIPRNET Fleet Prototype schedule has changed due to aircraft availability.

JEFX 06 exercise has been added.

NCCT Demo name has been changed to Trident Warrior 05.

Technical:

Not Applicable.

R-1 SHOPPING LIST - Item No. 170

UNCLASSIFIED



# UNCLASSIFIED

## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification								DATE:	
								<b>February 2005</b>	
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT NUMBER AND NAME			PROJECT NUMBER AND NAME			
<b>RDT&amp;E, N / BA-7</b>			0204152N, E-2 Squadrons			0463, E-2C IMPROVEMENTS			

  

**D. OTHER PROGRAM FUNDING SUMMARY:**

<u>Line Item No. &amp; Name</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>To Complete</u>	<u>Total Cost</u>
APN-1/E-2C (LI# 14 & 15)	226.013	246.992	248.952	208.065						930.022
APN-5/E-2C (LI# 39)	49.791	15.066	13.654	9.401	9.379	8.633	8.855	9.078	495.321	619.178
APN-6/E-2C (LI# 57)	14.695	8.879	5.573	0.559						29.706

APN-1/APN-6 funding after FY07 is related to P.E. 0604234N, P.U. E3051, E-2 Advanced Hawkeye.

Related RDT&E  
 (U) 0603658N (Ship Self Defense, CEC)  
 (U) 0604234N Advanced Hawkeye

**E. ACQUISITION STRATEGY:**

Not Applicable

R-1 SHOPPING LIST - Item No. 170

UNCLASSIFIED

**UNCLASSIFIED**

February 2005

Remarks:
----------

**Exhibit R-3, Project Cost Analysis**  
(Exhibit R-3, page 10 of 14)

# UNCLASSIFIED

CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 1)										DATE: <b>February 2005</b>			
APPROPRIATION/BUDGET ACTIVITY <b>RDTE&amp;E, N / BA-7</b>			PROGRAM ELEMENT 0204152N, E-2 Squadrons				PROJECT NUMBER AND NAME 0463, E-2C IMPROVEMENTS						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	Cost to Complete	Total Cost	Target Value of Contract	
Government Eng Spt - Various	WX/RC	NAWCAD, Pax River, MD	75.578	1.073	10/04	0.405	10/05	0.200	10/06	Continuing	Continuing		
Government Eng Spt - ASA/UESA	C/CPFF	Classified	5.661								5.661	5.661	
Government Eng Spt	Various	Various	2.514								2.514		
Government Eng Spt	SS/CPFF	NGC, NY	2.301								2.301	2.301	
Government Eng Spt - Air Missile/BLR	C/CPFF		1.020								1.020	1.020	
Govermemnt Eng Spt - SIAP	Various	Various	2.205	0.200	01/05	0.200	01/06	0.200	01/07	Continuing	Continuing		
Development Support	WX	NAWCWD, China Lake, CA	0.200								0.200		
Studies & Analyses - IPAD	C/CPFF		0.048								0.048	0.048	
											0.000		
											0.000		
											0.000		
											0.000		
											0.000		
											0.000		
											0.000		
											0.000		
											0.000		
											0.000		
											0.000		
											0.000		
											0.000		
											0.000		
											0.000		
											0.000		
											0.000		
											0.000		
Subtotal Support			89.527	1.273		0.605		0.400		Continuing	Continuing		
Remarks:													

R-1 SHOPPING LIST - Item No. 170

UNCLASSIFIED

# UNCLASSIFIED

## CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 2)										DATE: <b>February 2005</b>		
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
<b>RDTE&amp;, N / BA-7</b>			0204152N, E-2 Squadrons			0463, E-2C IMPROVEMENTS						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Developmental T&E - Various	WX	NAWCAD, Pax River MD	92.580	1.639	11/04	0.400	11/05	0.229	11/06	Continuing	Continuing	
Operational T&E ACIS (PMS-440)	PD	NAVSEA	2.483								2.483	
Dev T&E	Various	Various	4.112								4.112	
Dev T&E MCU	WX/RX	PMRF, HI	1.500								1.500	
											0.000	
											0.000	
											0.000	
Subtotal T&E			100.675	1.639		0.400		0.229		Continuing	Continuing	
Remarks:												
Contractor Engineering Support											0.000	
Government Engineering Support											0.000	
Program Management Support	WX/RX	NAWCAD, Pax River MD	1.968	0.628	11/04	0.500	11/05	0.500	11/06	Continuing	Continuing	
Travel	WX	NAWCAD, Pax River MD	0.197	0.060	11/04	0.050	11/05	0.050	11/06	Continuing	Continuing	
Transportation											0.000	
SBIR Assessment											0.000	
Subtotal Management			2.165	0.688		0.550		0.550		Continuing	Continuing	
Remarks:												
Total Cost			662.771	6.000		2.256		1.540		Continuing	Continuing	
Remarks:												

R-1 SHOPPING LIST - Item No. 170

UNCLASSIFIED

Exhibit R-3, Project Cost Analysis  
(Exhibit R-3, page 12 of 14)

**UNCLASSIFIED**

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

[illegible]

**Exhibit R-4, Schedule Profile**  
(Exhibit R-4, page 13 of 14)

**UNCLASSIFIED**

**CLASSIFICATION:**

[illegible]

R-1 SHOPPING LIST - Item No.	170
------------------------------	-----

**UNCLASSIFIED**

**Exhibit R-4a, Schedule Detail**  
(Exhibit R-4a, page 14 of 14)