

EXHIBIT R-2, RDT&E Budget Item Justification							DATE:	
							May 2009	
APPROPRIATION/BUDGET ACTIVITY RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-5					R-1 ITEM NOMENCLATURE 0604234N, ADVANCED HAWKEYE			
COST (\$ in Millions)	FY 2008	FY 2009	FY 2010					
Total PE Cost	785.792	482.355	364.557					
3051 E-2C RMP	785.792	482.355	364.557					
<p>A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:</p> <p>The E-2D Advanced Hawkeye (AHE) program develops, demonstrates, tests, and procures the replacement of the AN/APS-145 radar system and other aircraft system components including Cooperative Engagement Capability Pre-Planned Product Improvement (CEC P3I) and Dual Transmit Satellite Communications (SATCOM) that modernize the E-2 weapon system to maintain open ocean mission capability while providing the United States Navy (USN) with an effective littoral surveillance, battle management, and Theater Air and Missile Defense (TAMD) capability. Key radar technologies are Space-Time Adaptive Processing (STAP), Electronically Scanning Array (ESA), solid state transmitter, high dynamic range digital receivers and Identification Friend or Foe (IFF)/radar aperture integration. The resultant detection system will provide a substantially improved overland performance by correcting current sensor shortfalls and enhancing all current required mission areas, while simultaneously contributing to the emerging TAMD mission requirements. Mode 5/S is an upgrade to the existing IFF System providing the warfighter positive, secure and reliable identification of friendly aircraft, surface and sub-surface platforms. Mode 5/S replaces the National Security Administration (NSA) de-certified Mode 4 IFF capability, which is no longer effective or suitable for modern military operations. Mode 5/S will support the Joint Initial Operational Capability (IOC) as defined by the Joint Requirements Oversight Council (JROC).</p> <p>This Program Element was utilized for AHE (Radar Modernization Program (RMP)) pre-System Development and Demonstration (Pre-SD&D), followed by SD&D. Major activities in FY 2009 included continued subsystem and weapon system verification testing, discrepancy report and yellow sheet resolution and on going risk reduction efforts on the two SDD aircraft. The three pilot production aircraft continue being manufactured on the production line, and Milestone C approval will give authority to enter the production and deployment phase and to procure Low Rate Initial Production lot aircraft. A second Operational Assessment on SDD aircraft will be conducted in FY 2010, with Initial Operational Test and Evaluation scheduled for FY 2012. IOC is planned for FY 2015.</p>								

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B. PROGRAM CHANGE SUMMARY:

Funding:	FY08	FY09	FY10
Previous President's Budget:	791.707	484.159	213.613
Current President's Budget:	785.792	482.355	364.557
Total Adjustments	-5.915	-1.804	150.944

Summary of Adjustments

Congressional Rescissions			
Congressional Adjustments		-0.493	
SBIR/STTR/FTT Assessments	-5.915		
Program Adjustments			150.957
Rate/Misc Adjustments		-1.311	-0.013
Subtotal	-5.915	-1.804	150.944

Schedule:

Extend DT/DT Assist to correlate with Pilot Production DT/DT Assist. Corrected dates for LRIP I contract award.

Milestone C decision was postponed from 2Q FY 2009 to 3Q FY 2009, awaiting confirmation of USD (AT&L). An OIPT and Operational Assessment #2 were added to support a new DAB decision for approval of LRIP III and IV.

Technical:

Not Applicable.

EXHIBIT R-2a, RDT&E Project Justification							DATE: May 2009	
APPROPRIATION/BUDGET ACTIVITY RDT&E,N / BA-5	PROGRAM ELEMENT NUMBER AND NAME 0604234N, ADVANCED HAWKEYE			PROJECT NUMBER AND NAME 3051, E-2C RMP				
COST (\$ in Millions)	FY 2008	FY 2009	FY 2010					
Project Cost	785.792	482.355	364.557					
RDT&E Articles Qty	3							

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

The E-2D Advanced Hawkeye (AHE) program develops, demonstrates, tests, and procures the replacement of the AN/APS-145 radar system and other aircraft system components including Cooperative Engagement Capability Pre-Planned Product Improvement (CEC P3I) and Dual Transmit Satellite Communications (SATCOM) that modernize the E-2 weapon system to maintain open ocean mission capability while providing the United States Navy (USN) with an effective littoral surveillance, battle management, and Theater Air and Missile Defense (TAMD) capability. Key radar technologies are Space-Time Adaptive Processing (STAP), Electronically Scanning Array (ESA), solid state transmitter, high dynamic range digital receivers and Identification Friend or Foe (IFF)/radar aperture integration. The resultant detection system will provide a substantially improved overland performance by correcting current sensor shortfalls and enhancing all current required mission areas, while simultaneously contributing to the emerging TAMD mission requirements. Mode 5/S is an upgrade to the existing IFF System providing the warfighter positive, secure and reliable identification of friendly aircraft, surface and sub-surface platforms. Mode 5/S replaces the National Security Administration (NSA) de-certified Mode 4 IFF capability, which is no longer effective or suitable for modern military operations. Mode 5/S will support the Joint Initial Operational Capability (IOC) as defined by the Joint Requirements Oversight Council (JROC).

The AHE program also upgrades or replaces aircraft system components that are either obsolete or becoming unsupportable, upgrades or replaces other aircraft systems as required and improves the operational availability and producibility of the weapons system. 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. The AHE is intended to meet battle management and TAMD needs as the United States Navy develops its "Sea Power 21" concepts in support of Joint Vision 2020.

This program element was utilized for AHE (Radar Modernization Program (RMP)) pre-System Development and Demonstration (Pre-SD&D), followed by SD&D. Major activities in FY 2009 include continued subsystem and weapon system verification testing, discrepancy report and yellow sheet resolution and on going risk reduction efforts on the two SDD aircraft. The three pilot production aircraft continue being manufactured on the production line, and Milestone C approval will give authority to enter the production and deployment phase and to procure Low Rate Initial Production lot aircraft. A second Operational Assessment on SDD aircraft will be conducted in FY 2010, with Initial Operational Test and Evaluation scheduled for FY 2012. IOC is planned for FY 2015.

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B. Accomplishments/Planned Program				
System Development and Demonstration	FY 08	FY 09	FY 10	
Accomplishments/Effort/Subtotal Cost	612.774	327.518	213.523	
RDT&E Articles Quantity	3			
<p>Awarded System Development and Demonstration (SD&D) Contract with Northrop Grumman Corporation. Entered into SD&D for E-2D AHE program. Conduct engineering and development efforts for weapon system and SD&D pilot production. Continue SD&D, Pilot Production, Cooperative Engagement Capability Pre-Planned Product Improvement (CEC P3I), and Dual Transmit SATCOM efforts. Conduct System Functional Qualification Testing, Phase D Testing and Production Validation, Weapon System functional and physical configuration audits of Pilot Production aircraft.</p>				
Government Furnished Equipment	FY 08	FY 09	FY 10	
Accomplishments/Effort/Subtotal Cost	19.210			
RDT&E Articles Quantity				
<p>Funded Government Furnished Equipment (GFE) Pilot Production aircraft through FY 2008.</p>				
NAWCAD Engineering and Test Support	FY 08	FY 09	FY 10	
Accomplishments/Effort/Subtotal Cost	56.115	45.082	35.749	
RDT&E Articles Quantity				
<p>Fund Government Engineering, Contractor Engineering, and Classified Engineering Support. Perform Government oversight. Execute test program risk reduction efforts. FY 2008 and FY 2009 fund flight test activities in St. Augustine, FL, and Patuxent River, MD, development of CEC P3I and Dual Transmit SATCOM capabilities, and provide engineering oversight for production related activities for pilot production aircraft. FY 2010 funds the continuation of developmental testing including radar performance testing and remaining full system integration testing. Continue Weapon System Specification Verification for resolution of deficiencies prior to Operational Evaluation (OPEVAL).</p>				

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B. Accomplishments/Planned Program (Cont.)

NC-130H/E-2D Classified Programs	FY 08	FY 09	FY 10	
Accomplishments/Effort/Subtotal Cost	63.733	67.723	45.312	
RDT&E Articles Quantity				

Provide support for the NC-130H engineering risk reduction efforts. Fund E-2D Classified Development efforts. Fund NC-130H AHE Advanced Development Model system flight test and test analysis.

Trainers	FY 08	FY 09	FY 10	
Accomplishments/Effort/Subtotal Cost	33.960	42.032	45.528	
RDT&E Articles Quantity				

Fund Weapons System Trainers, Operational Flight Trainers and Simulated Maintenance Trainers.

Mode 5/S	FY 08	FY 09	FY 10	
Accomplishments/Effort/Subtotal Cost			24.445	
RDT&E Articles Quantity				

Mode 5/S is the replacement/upgrade to the existing Identification Friend or Foe (IFF) system. This funding is for system development, integration and testing to support the incorporation of Identification Friend or Foe (IFF) Mode 5/S technology into the E-2D IFF Interrogator mission equipment. Emphasis will be on software development for both the IFF Enclosure and the Mission Computer. Integration testing will include laboratory, ground and flight tests.

EXHIBIT R-2a, RDT&E Project Justification		DATE: May 2009												
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<p>C. OTHER PROGRAM FUNDING SUMMARY:</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left; border-bottom: 1px solid black;">Line Item No. & Name</th> <th style="text-align: right; border-bottom: 1px solid black;">FY 2008</th> <th style="text-align: right; border-bottom: 1px solid black;">FY 2009</th> <th style="text-align: right; border-bottom: 1px solid black;">FY 2010</th> </tr> </thead> <tbody> <tr> <td>APN-1/E-2C/D (LI# 18 & 19)</td> <td style="text-align: right;">52.220</td> <td style="text-align: right;">384.559</td> <td style="text-align: right;">606.169</td> </tr> <tr> <td>APN-6/E-2C/D (LI# 57)</td> <td style="text-align: right;">0.970</td> <td style="text-align: right;">34.735</td> <td style="text-align: right;">53.047</td> </tr> </tbody> </table> <p>D. ACQUISITION STRATEGY:</p> <p>Acquisition Strategy was signed by Milestone Decision Authority (MDA), USD (AT&L) on 13 May 2003. Milestone B approval to proceed with System Development and Demonstration was given June 2003 by the Defense Acquisition Board (DAB).</p>			Line Item No. & Name	FY 2008	FY 2009	FY 2010	APN-1/E-2C/D (LI# 18 & 19)	52.220	384.559	606.169	APN-6/E-2C/D (LI# 57)	0.970	34.735	53.047
Line Item No. & Name	FY 2008	FY 2009	FY 2010											
APN-1/E-2C/D (LI# 18 & 19)	52.220	384.559	606.169											
APN-6/E-2C/D (LI# 57)	0.970	34.735	53.047											

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Exhibit R-3 Cost Analysis							DATE: May 2009						
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME							
RDT&E, N / BA-5			0604234N, ADVANCED HAWKEYE			3051, E-2C RMP							
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 09 Cost	FY 09 Award Date	FY 10 Cost	FY 10 Award Date						
Developmental Test & Evaluation	WX	NAWCAD, PAX RIVER MD	17.054	13.015	11/08	11.250	11/09						
Developmental Test & Evaluation	VARIOUS	VARIOUS	13.884	4.707	VARIOUS	3.526	VARIOUS						
Developmental Test & Evaluation	SS-FFP	STICHTING D, NEDERLANDS	4.657										
Developmental Test & Evaluation	TBD	TBD				3.493	VARIOUS						
Developmental T&E ETS	C-CPFF	WYLE LABS, AL	4.380	2.176	12/08	1.985	12/09						
Developmental T&E ETS	VARIOUS	VARIOUS	0.614										
Developmental T&E ETS	C-FFP	L-3 COMMUNICATIONS, VA	2.482	0.356	12/08	0.423	12/09						
Oper Test & Eval	WX	NAWCAD, PAX RIVER MD	0.146										
Oper Test & Eval	VARIOUS	VARIOUS	1.217	0.350	VARIOUS	0.350	VARIOUS						
Test Assets	SS-CPAF	NGC NY	3.900										
All T&E cost from program implementation thru FY04			3.208										
Subtotal T&E			51.542	20.604		21.027							
Remarks: Totals may not add due to rounding.													
Contractor Engineering Support	VARIOUS	VARIOUS	12.188										
Contractor Engineering Spt NSMA	RX	NAVY SYST MGT ACT, VA	3.327										
Contractor Eng Support MSS	VARIOUS	VARIOUS	1.289	0.207	12/08	0.209	12/09						
Contractor Eng Support MSS	C-CPFF	WYLE LABS, AL	8.050	0.871	12/08	0.858	12/09						
Government Eng Support	WX	NAWCAD, PAX RIVER MD	8.303	0.918	11/08	2.932	11/09						
Government Eng Support	VARIOUS	VARIOUS	13.456	0.572	11/08	0.416	11/09						
Program Mgmt Support	VARIOUS	VARIOUS	0.273	0.312	11/08	1.060	11/09						
Travel	VARIOUS	VARIOUS	1.554	0.300	10/08	0.290	10/09						
All Mgmt cost from program implementation thru FY04			10.659										
Subtotal Management			59.099	3.180		5.765							
Remarks: Totals may not add due to rounding.													
Total Cost			2,910.219	482.355		364.557							
Remarks: Totals may not add due to rounding.													

UNCLASSIFIED

EXHIBIT R4, Schedule Profile													DATE: May 2009				
APPROPRIATION/BUDGET ACTIVITY					PROGRAM ELEMENT NUMBER AND NAME					PROJECT NUMBER AND NAME							
RDT&E,N / BA-5					0604234N, ADVANCED HAWKEYE					3051, E-2C RMP							
Fiscal Year	2008				2009				2010								
	1	2	3	4	1	2	3	4	1	2	3	4					
Acquisition Milestones							MSC △			OIPT △							
AHE System Development																	
SDD AHE Systems Installation																	
Test & Evaluation Milestones										DT/DT Assist - Pilot Production							
Development Test											DT/DT						
Operational Test					Operational Assessment #1						Operational Assessment #2						
Production Milestones							LRIP I CA △			LRIP II CA △							
Production Deliveries																	2 a/c PP

- DT/DT Assist in FY09 included efforts for weapon system development and air vehicle testing on SD&D #1 and SD&D #2 aircraft.

