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EXHIBIT R-2, RDT&E Budget Item Justification							DATE:		
APPROPRIATION/BUDGET ACTIVITY							February 2007		
RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-5							R-1 ITEM NOMENCLATURE		
							0604234N, E-2C RADAR MODERNIZATION PROGRAM		
COST (\$ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	
Total PE Cost	598.069	495.962	808.993	491.243	218.476	125.259	48.684	15.721	
3051 E-2C RMP	598.069	495.962	808.993	491.243	218.476	125.259	48.684	15.721	

(U) 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-2C 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.

This P.E. was utilized for AHE (Radar Modernization Program (RMP)) pre-System Development and Demonstration (Pre-SD&D), followed by SD&D. The program completed a Weapon System Preliminary Design Review (PDR) and a Radar System Critical Design Review (CDR) in FY 2005, and supported a Weapon System CDR in FY 2006. Major activities in FY 2007 are system integration, lab equipment installation, subsystem and weapon system verification testing, software development and ongoing risk reduction efforts. The program begins E-2D AHE Pilot Production in FY 2007 (long lead on three aircraft), the production phase with a Low-Rate Initial Production (LRIP) Milestone C decision in FY 2009, and achieves Initial Operational Capability (IOC) in FY 2011.

B. PROGRAM CHANGE SUMMARY

Funding:	FY 2006	FY 2007	FY 2008	FY 2009
Previous President's Budget:	614.231	497.842	748.203	339.531
Current President's Budget:	598.069	495.962	808.993	491.243
Total Adjustments	-16.162	-1.880	60.790	151.712

Summary of Adjustments

Congressional Reductions				
Congressional Rescissions				
Congressional Undistributed Reductions	-16.549	-1.880		
Congressional Increases	0.386			
Economic Assumptions	0.000		4.892	4.060
Miscellaneous Adjustments	0.001		55.898	147.652
Subtotal	-16.162	-1.880	60.790	151.712

Schedule:

Project Unit 3051 - Schedule change of LRIP aircraft delivery from FY 2011 3Q-4Q to the middle of FY 2011 3Q through middle of FY 2012 1Q, and Pilot Production and LRIP aircraft number change from four to three. Changes were due to the Advanced Hawkeye program replan precipitated by cost growth in the areas of air vehicle design and parts/materials.

Technical:

Not Applicable.

EXHIBIT R-2a, RDT&E Project Justification						DATE: February 2007			
APPROPRIATION/BUDGET ACTIVITY RDT&E,N / BA-5		PROGRAM ELEMENT NUMBER AND NAME 0604234N, E-2C RADAR MODERNIZATION PROGRAM			PROJECT NUMBER AND NAME 3051, E-2C RMP				
COST (\$ in Millions)		FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
3051 E-2C RMP		598.069	495.962	808.993	491.243	218.476	125.259	48.684	15.721
RDT&E Articles Qty			*2	*3					

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

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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 to support the radar upgrade, 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 P.E. was utilized for AHE (Radar Modernization Program (RMP)) pre-System Development and Demonstration (Pre-SD&D), followed by SD&D. The program completed a Weapon System Preliminary Design Review (PDR) and a Radar System Critical Design Review (CDR) in FY 2005, and supported a Weapon System CDR in FY 2006. Major activities in FY 2007 are system integration, lab equipment installation, subsystem and weapon system verification testing, software development and ongoing risk reduction efforts. The program begins E-2D AHE Pilot Production in FY 2007 (long lead on three aircraft), the production phase with a Low-Rate Initial Production (LRIP) Milestone C decision in FY 2009, and achieves Initial Operational Capability (IOC) in FY 2011.

*Two Multi-Year Procurement E-2C aircraft will be delivered and modified in FY 2007 to provide RDT&E assets for the AHE program. Quantities in FY 2008 are the pilot production aircraft, which was reduced from four to three due to the Advanced Hawkeye program replan.

APPROPRIATION/BUDGET ACTIVITY RDT&E,N / BA-5	PROGRAM ELEMENT NUMBER AND NAME 0604234N, E-2C RADAR MODERNIZATION PROGRAM	PROJECT NUMBER AND NAME 3051, E-2C RMP
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B. ACCOMPLISHMENTS / PLANNED PROGRAM:

System Development and Demonstration	FY 2006	FY 2007	FY 2008	FY 2009
Accomplishments / Effort / Sub-total Cost	555.723	432.511	693.559	410.414
RDT&E Articles Qty		*2	*3	

Awarded System Development and Demonstration (SD&D) Contract with Northrop Grumman Corporation. Entered into SD&D for E-2D AHE program. The program completed a Weapon System Preliminary Design Review (PDR) and a Radar System Critical Design Review (CDR) in FY 2005, and supported a Weapon System CDR in FY 2006. Conducted engineering and development efforts for weapon system and SD&D pilot production. Continue SD&D efforts. Initial funding for pilot production, Cooperative Engagement Capability Pre-Planned Product Improvement (CEC P3I), and Dual Transmit SATCOM.

*Two Multi-Year Procurement E-2C aircraft will be delivered and modified in FY 2007 to provide RDT&E assets for the AHE program. Quantities in FY 2008 are the pilot production aircraft, which was reduced from four to three due to the Advanced Hawkeye program replan.

Government Furnished Equipment	FY 2006	FY 2007	FY 2008	FY 2009
Accomplishments / Effort / Sub-total Cost	2.564	20.520	33.129	
RDT&E Articles Qty				

Fund Government Furnished Equipment (GFE) for the SD&D aircraft through FY 2007. Fund GFE for pilot production aircraft in FY 2007 through FY 2008.

NAWCAD Engineering and Test Support	FY 2006	FY 2007	FY 2008	FY 2009
Accomplishments / Effort / Sub-total Cost	23.869	26.512	41.473	31.153
RDT&E Articles Qty				

Fund Government Engineering, Contractor Engineering, and Classified Engineering Support. Perform Government oversight. Perform engineering, design, instrumentation and ground test calibration for NP2000 performance testing. Execute test program risk reduction efforts. FY 2007 is to fund Qualification/Reliability Developmental Testing (QUAL/RDT), preparation for ground and first flight test activities at St. Augustine, FL, and execute digital engine control system for obsolescence, weight reduction, and performance improvements. Wind tunnel test execution including data reduction analysis and updating Control Analysis Simulation Test Loop Environment (CASTLE) with wind tunnel test data. FY 2008 and FY 2009 fund flight test activities in St. Augustine, FL, and Patuxent River, MD, develop CEC P3I and Dual Transmit SATCOM capabilities, and provides engineering oversight for production related activities for pilot production aircraft.

NC-130H/E-2D Classified Programs	FY 2006	FY 2007	FY 2008	FY 2009
Accomplishments / Effort / Sub-total Cost	9.712	3.531	4.511	7.632
RDT&E Articles Qty				

Provided 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.

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EXHIBIT R-2a, RDT&E Project Justification

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APPROPRIATION/BUDGET ACTIVITY RDT&E,N / BA-5	PROGRAM ELEMENT NUMBER AND NAME 0604234N, E-2C RADAR MODERNIZATION PROGRAM	PROJECT NUMBER AND NAME 3051, E-2C RMP
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Trainers	FY 2006	FY 2007	FY 2008	FY 2009
Accomplishments / Effort / Sub-total Cost	6.201	12.888	36.321	42.044
RDT&E Articles Qty				

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

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-1/E-2C/D (LI# 16 & 17)			57.275	593.565	697.734	792.410	810.098	787.188	9,657.963	13,396.233
APN-6/E-2C/D (LI# 59)				48.689	38.363	32.506	30.692	27.236	62.898	240.384

APN Funding prior to FY08 is related to P.E. 0204152N, P.U. 0463, E-2C Improvements.

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

D. ACQUISITION STRATEGY:
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 6 June 2003 by the Defense Acquisition Board (DAB).

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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		0604234N, E-2C RADAR MODERNIZATION PROGRAM				3051, E-2C RMP						
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												
Award Fees	SS-CPAF	NORTHROP GRUMMAN SYS, NY	31.019	24.821	10/06	24.764	10/07	26.153	10/08	26.823	133.580	133.580
GFE	VARIOUS	VARIOUS	9.330	20.520	VARIOUS	33.129	VARIOUS				62.979	
Primary Hardware Dev - SD&D	SS-CPAF	NORTHROP GRUMMAN SYS, NY	1,353.083	397.161	10/06	652.769	10/07	363.657	10/08	215.878	2,982.548	2,982.548
Primary Hdw Dev Training Dev	VARIOUS	VARIOUS		10.449	VARIOUS						10.449	
Primary Hdw Dev Training Dev	TBD	TBD				34.060	02/08	39.525	02/09	22.773	96.358	
Systems Engineering	RX	NAVY SYST MGT ACT, ARLINGTON VA	7.185			3.711	03/08	7.632	03/09	8.816	27.344	
Systems Engineering	VARIOUS	VARIOUS	.440								.440	
All Product Dev cost from program implementation thru FY04			128.796								128.796	
SUBTOTAL PRODUCT DEVELOPMENT			1,529.853	452.951		748.433		436.967		274.290	3,442.494	

Remarks:

Increases are due to Advanced Hawkeye program replan.
 Totals may not add due to rounding.
 Award Fee Period 1 FY04 - 90%
 Period 2 FY04 - 91%
 Period 3 FY05 - 80%
 Period 4 FY06 - 94%
 Period 5 FY06 - 100%

SUPPORT												
Contractor Eng Sup ETS (Non-FE)	VARIOUS	VARIOUS	4.150	3.884	11/06	10.235	11/07	8.113	11/08	1.229	27.612	
Development Support	VARIOUS	VARIOUS	7.838								7.838	
Government Eng Sup	WX	NAWCAD, PATUXENT RIVER MD	22.406	12.713	11/06	14.466	11/07	14.453	11/08	48.248	112.287	
Government Eng Sup	WX	NAWCTSD, ORLANDO FL	1.126	1.119	11/06	1.204	11/07	1.277	11/08	.375	5.101	
Government Eng Sup	VARIOUS	VARIOUS	3.079	1.103	VARIOUS	.997	VARIOUS	1.262	VARIOUS	7.164	13.605	
Integrated Logistics Sup	MIPR	Defense Technical Information Ctr,	.035								.035	
Studies & Analyses (Non- FFRDC)	RX	NAVY SYST MGT ACT, ARLINGTON VA	2.518	1.700	03/07	.800	03/08				5.018	
All Support cost from program implementation thru FY04			5.806								5.806	
SUBTOTAL SUPPORT			46.958	20.519		27.703		25.105		57.016	177.301	

Remarks:

Totals may not add due to rounding.

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Exhibit R-3 Cost Analysis (page 2)										DATE: February 2007		
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT				PROJECT NUMBER AND NAME						
RDT&E,N / BA-5		0604234N, E-2C RADAR MODERNIZATION PROGRAM				3051, E-2C RMP						
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
TEST & EVALUATION												
Developmental Test & Evaluatio	WX	NAWCAD, PATUXENT RIVER MD	1.315	7.668	11/06					32.651	41.634	
Developmental Test & Evaluatio	VARIOUS	VARIOUS	9.616			16.026	VARIOUS	20.604	VARIOUS	19.439	65.685	
Test Assets	SS-CPAF	NORTHROP GRUMMAN SYS, NY	3.900								3.900	3.900
Test Assets	VARIOUS	VARIOUS		2.861	VARIOUS						2.861	
All T&E cost from program implementation thru FY04			3.208								3.208	
SUBTOTAL TEST & EVALUATION			18.039	10.529		16.026		20.604		52.090	117.288	

Remarks:
Totals may not add due to rounding.

MANAGEMENT												
Contractor Eng Sup ETS (Non-FE	VARIOUS	VARIOUS	12.188	6.203	11/06	2.247	11/07	2.604	11/08	8.575	31.818	
Contractor Eng Sup ETS NSMA(Nc	RX	NAVY SYST MGT ACT, ARLINGTON VA	3.327	1.831	03/07			2.700	03/09		7.858	
Contractor Eng Sup MSS (Non-FE	VARIOUS	VARIOUS		1.814	11/06	1.860	11/07	1.900	11/08		5.574	
Government Eng Sup	WX	NAWCAD, PATUXENT RIVER MD	4.281			2.489	11/07	.524	11/08	6.291	13.586	
Government Eng Sup	VARIOUS	VARIOUS	15.057	.786	11/06	5.377	11/07			5.829	27.049	
Program Mgmt Sup	VARIOUS	VARIOUS	4.851	.829	11/06	4.358	11/07	.443	11/08	2.726	13.207	
Travel	VARIOUS	VARIOUS	.822	.500	10/06	.500	10/07	.395	10/08	1.323	3.540	
All Mgmt cost from program implementation thru FY04			10.659								10.659	
SUBTOTAL MANAGEMENT			51.186	11.963		16.831		8.567		24.744	113.291	

Remarks:
Totals may not add due to rounding.

Total Cost			1,646.036	495.962		808.993		491.243		408.140	3,850.374	
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Remarks:
Totals may not add due to rounding.

