

EXHIBIT R-2, RDT&E Budget Item Justification							DATE:		
APPROPRIATION/BUDGET ACTIVITY							R-1 ITEM NOMENCLATURE		
RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-7							0204152N, E-2 SQUADRONS		
COST (\$ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	
Total PE Cost	20.954	9.803	22.691	54.511	53.789	24.790	7.194	7.300	
0463 E-2C IMPROVEMENTS	2.368	1.534	22.691	54.511	53.789	24.790	7.194	7.300	
9999 CONGRESSIONAL ADDS	18.586	8.269							

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

E-2 Improvements provides for product improvements and incorporation of innovative technologies for the evolution of E-2 Battle Management and Command and Control (BMC2) capabilities in support of naval warfare command and control requirements. It has previously funded developments for the modification or replacement of selected weapon replaceable assemblies of current installed subsystems, as well as provided for experimentation with wideband internet protocol (IP) concepts, to include technologies such as High Frequency (HF) Secure IP Router Network (HF SIPRNET), VRC-99 digital IP radio as a surrogate to the Joint Tactical Radio System, machine-to-machine digital data communications, airborne Advanced Digital Networking System (aADNS), Tactical Information Services (TIS), and open architected hardware and software computing environments. These efforts have laid the foundation for growth to provide additional functional capabilities to satisfy evolving operational requirements, e.g., Battle Space Networking, Joint Sensor Netting, Tactical Decision Aids, Advanced communications, and permits the evolutionary growth of a Combat Identification (CID) and Theater Air and Missile Defense (TAMD) Capability. In Flight Refueling (IFR) capability allows the E-2 to receive fuel from various organic and strategic tanker aircraft. It will provide Expanded Battle Space Surveillance and Targeting through significantly enhanced persistence and increased flexibility (range & endurance). IFR will better enable the E-2 to fully support current Carrier Strike Group (CSG)/Joint 24/7 Theater Operations by providing more versatile stationing and/or forward basing options. Previous domestic E-2 concept demonstration effort successfully established the feasibility of tanking behind the F/A-18E/F and KC-130 aircraft. The Automatic Identification System (AIS) is a broadcast transponder system operating in the VHF maritime band that provides data exchange from Ship to Ship, Ship to Shore and Shore to Ship. Broadcast parameters include Registry Number, Port of Origin, Latitude, Longitude, Course, Speed and other vessel characteristics. The current prototype E-2C AIS installation is not integrated into the E-2C weapon system with no means of transfer information off board to other platforms/systems.

Funding provides for evaluation and demonstration 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, 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; identification of deficiencies and candidate solutions; and ground/airborne demonstrations of the identified technologies. Funding also provides for the development of an open architected distributed computing environment and IP networking infrastructure required to enable E-2 Global Information Grid (GIG) connectivity in a digital networking environment, to include the use of High Frequency (HF) data paths. Funding provides for the system development and testing to support the incorporation of In Flight Refueling technology into the E-2 aircraft. Emphasis during system development will be on design drawing updates, fuel system design, human systems integration and design, including interior/lighting modifications and seat replacement. Flight testing is required to evaluate field of view, aerodynamic performance, loads, and handling qualities. Funding will integrate Universal Automatic Information System (UAIS) into the E-2C and E-2D mission computer and provide for a means to transfer Automatic Information System (AIS) data from the aircraft to the warships inflight. The integration will include non-recurring engineering, logistics and test and evaluation to integrate UAIS control features and output into the E-2C and E-2D weapons system and to standardize and document the UAIS hardware already installed on E-2C aircraft, and integrate UAIS hardware on the E-2D. It will integrate other enhancing identification technologies complimentary to UAIS into the E-2C and E-2D.

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APPROPRIATION/BUDGET ACTIVITY RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-7	R-1 ITEM NOMENCLATURE 0204152N, E-2 SQUADRONS	

B. PROGRAM CHANGE SUMMARY

Funding:	FY 2006	FY 2007	FY 2008	FY 2009
Previous President's Budget:	17.022	1.540	1.577	1.592
Current President's Budget:	20.954	9.803	22.691	54.511
Total Adjustments	3.932	8.263	21.114	52.919
Summary of Adjustments				
Congressional Reductions	-0.191			
Congressional Rescissions				
Congressional Undistributed Reductions	-0.552	-0.037		
Congressional Increases	4.500	8.300		
Economic Assumptions			0.111	0.583
Miscellaneous Adjustments	0.175		21.003	52.336
Subtotal	3.932	8.263	21.114	52.919

Schedule:

Project Unit 0463, E-2C Improvements - Schedule changes to AODS, MSI Phase I, and SIAP Block 0 Deployment, which are included in Software Systems Configuration Set 5 (SCS5) functionality, are due to resolution of SCS5 Software Trouble Reports (STRs). Increased STRs have caused additional lab, ground, and flight testing, which resulted from hardware and software deficiencies related to the mission computer and software.

Project Unit 9999, Congressional Adds - Not Applicable.

Technical:

Increased complexity of hardware and software integration has required additional lab, ground, and flight test.

EXHIBIT R-2a, RDT&E Project Justification

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APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME			PROJECT NUMBER AND NAME					
RDT&E,N / BA-7	0204152N, E-2 SQUADRONS			0463, E-2C IMPROVEMENTS					
COST (\$ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	
0463 E-2C IMPROVEMENTS	2.368	1.534	22.691	54.511	53.789	24.790	7.194	7.300	
RDT&E Articles Qty			*10						

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

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Funding provides for evaluation and demonstration 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, 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; identification of deficiencies and candidate solutions; and ground/airborne demonstrations of the identified technologies. Funding also provides for the development of an open architected distributed computing environment and IP networking infrastructure required to enable E-2 Global Information Grid (GIG) connectivity in a digital networking environment, to include the use of High Frequency (HF) data paths. Funding provides for the system development and testing to support the incorporation of In Flight Refueling technology into the E-2 aircraft. Emphasis during system development will be on design drawing updates, fuel system design, human systems integration and design, including interior/lighting modifications and seat replacement. Flight testing is required to evaluate field of view, aerodynamic performance, loads, and handling qualities. Funding will integrate Universal Automatic Information System (UAIS) into the E-2C and E-2D mission computer and provide for a means to transfer Automatic Information System (AIS) data from the aircraft to the warships inflight. The integration will include non-recurring engineering, logistics and test and evaluation to integrate UAIS control features and output into the E-2C and E-2D weapons system and to standardize and document the UAIS hardware already installed on E-2C aircraft, and integrate UAIS hardware on the E-2D. It will integrate other enhancing identification technologies complimentary to UAIS into the E-2C and E-2D.

* Quantity reflects number of Core Open Architecture (5) and High Frequency Internet Protocol (5) test article sets to be procured. For each, 3 sets will be used for laboratory development efforts at both the Contractor and Government sites, 1 set will be installed in the test aircraft, and 1 set will serve as a spare for both laboratory and aircraft use.

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
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B. ACCOMPLISHMENTS / PLANNED PROGRAM:

Multi-Source Integration (MSI) Phase II	FY 2006	FY 2007	FY 2008	FY 2009
Accomplishments / Effort / Sub-total Cost	.204	.180		
RDT&E Articles Qty				

Developed software applications to facilitate incorporation of new technologies such as Multi-Source Integration (MSI) in existing E-2 Operational Flight Program (OFP). Produced hardware-in-the-loop data sets, performance measures, and data analysis tools in support of MSI Ph II. 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.

Single Integrated Air Picture (SIAP) Block 0	FY 2006	FY 2007	FY 2008	FY 2009
Accomplishments / Effort / Sub-total Cost	.235	.400		
RDT&E Articles Qty				

Successfully completed Preliminary Design Review/Critical Design Review and coding of Single Integrated Air Picture (SIAP) Block 0 software for implementation and fielding in Systems Configuration Set (SCS) 5. Outyear funding will support testing and fielding of SIAP Block 0 software.

Airborne Battlefield Command and Control (ABC 2)	FY 2006	FY 2007	FY 2008	FY 2009
Accomplishments / Effort / Sub-total Cost	1.929	.954	4.850	6.842
RDT&E Articles Qty				

Conducted demonstrations of High Frequency Secure Internet Protocol (IP) Router Network (HF SIPRNET) capability, VRC-99 IP networking, and Tactical Targeting Networking Technology (TTNT) communications network and waveforms. Participated in DARPA TTNT, Trident Warrior and Joint Task Force Exercise (JEFX) experimentation events. Funding will be used to conduct development and demonstrations of E-2 airborne Joint Sensor Netting (including Network Centric Collaborative Targeting (NCCT)), IP networking concepts (including Advanced Digital Networking Systems, Tactical Information Services, and IP enabled communications systems), machine-to-machine interface, open architected computing environment, network applications, tactical decision aids, combat identification technologies, on-board and off-board data fusion capabilities, and airborne demonstration of advanced mission computer and communications technologies.

In Flight Refueling (IFR)	FY 2006	FY 2007	FY 2008	FY 2009
Accomplishments / Effort / Sub-total Cost				8.952
RDT&E Articles Qty				

Funding provides for the system development and testing to support the incorporation of In Flight Refueling (IFR) technology into the E-2 aircraft. Emphasis during system development will be on design drawing updates, fuel system design, human systems integration and design, including interior/lighting modifications and seat replacement. Flight testing is required to evaluate field of view, aerodynamic performance, loads, and handling qualities.

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Universal Automatic Information System (UAIS)	FY 2006	FY 2007	FY 2008	FY 2009
Accomplishments / Effort / Sub-total Cost				4.199
RDT&E Articles Qty				

Funding will integrate Universal Automatic Information System (UAIS) into the E-2C and E-2D mission computer and provide for a means to transfer Automatic Information System (AIS) data from the aircraft inflight to the warships. The integration will include non-recurring engineering, logistics and test and evaluation to integrate UAIS control features and output into the E-2C and E-2D weapons system and to standardize and document the UAIS hardware already installed on E-2C aircraft, and integrate UAIS hardware on the E-2D. It will integrate other enhancing identification technologies complimentary to UAIS into the E-2C and E-2D.

E-2 Core Open Architecture (OA)	FY 2006	FY 2007	FY 2008	FY 2009
Accomplishments / Effort / Sub-total Cost			11.947	25.976
RDT&E Articles Qty			*5	

Funding supports the development, integration and test of an open architected distributed computing environment and Internet Protocol networking infrastructure, which includes airborne Advanced Digital Networking System and Tactical Information Services.

* Quantity reflects number of Core OA test article sets to be procured. 3 sets will be used for laboratory development efforts at both the Contractor and Government sites. 1 set will be installed in the test aircraft, and 1 set will serve as a spare for both laboratory and aircraft use.

E-2 High Frequency (HF) Internet Protocol (IP)	FY 2006	FY 2007	FY 2008	FY 2009
Accomplishments / Effort / Sub-total Cost			5.894	8.542
RDT&E Articles Qty			*5	

Funds the development, integration and test of High Frequency (HF) radio and Mission Computer hardware and software modifications and additions to provide an E-2 HF digital data communications path, allowing for E-2 connectivity with other HF Internet Protocol (IP) users.

* Quantity reflects number of HF IP test article sets to be procured. 3 sets will be used for laboratory development efforts at both the Contractor and Government sites. 1 set will be installed in the test aircraft, and 1 set will serve as a spare for both laboratory and aircraft use.

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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 0463, E-2C IMPROVEMENTS			
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)	249.439	202.754	57.275	593.565	697.734	792.410	810.098	787.188	9,657.963	13,848.426
APN-5/E-2 (LI# 40)	23.084	9.050	11.047	11.587	21.006	19.401	27.034	31.757	115.397	269.363
APN-6/E-2C/D (LI# 58)	0.500	0.355		48.689	38.363	32.506	30.692	27.236	62.898	241.239

APN-1/APN-6 funding after FY07 is related to P.E. 0604234N, P.U. 3051, E-2 Advanced Hawkeye.

D. ACQUISITION STRATEGY:
Not Applicable.

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Exhibit R-3 Cost Analysis (page 1)										DATE:					
APPROPRIATION/BUDGET ACTIVITY										PROGRAM ELEMENT			PROJECT NUMBER AND NAME		
RDT&E,N / BA-7										0204152N, E-2 SQUADRONS			0463, E-2C IMPROVEMENTS		
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	TBD	TBD				2.147	12/07	3.776	12/08	4.074	9.997				
Ancillary Hdw Development	TBD	TBD				.200	12/07	.400	12/08	1.799	2.399				
Primary Hdw Development	VARIOUS	VARIOUS	.759								.759				
Primary Hdw Development - ABC2	VARIOUS	VARIOUS	1.616	.355	VARIOUS	.404	VARIOUS	.616	VARIOUS	3.406	6.397				
Primary Hdw Development	VARIOUS	VARIOUS				2.034	01/08	10.765	01/09	14.331	27.130				
Primary Hdw Development - MSI	VARIOUS	VARIOUS	1.497								1.497				
Systems Eng - ABC2	TBD	TBD				.200	VARIOUS	.200	VARIOUS	.800	1.200				
SUBTOTAL PRODUCT DEVELOPMENT			3.872	.355		4.985		15.757		24.410	49.379				

Remarks:
Totals may not add due to rounding.

SUPPORT												
Development Support ABC2	VARIOUS	VARIOUS	.405			.556	11/07	.623	11/08	2.795	4.379	
Eng & Tech Serv (NON-FFRDC)	VARIOUS	VARIOUS	1.191			.110	12/07	.591	12/08	1.151	3.043	
Government Eng Spt	WX	NAWCAD, PATUXENT RIVER MD						.728	11/08	1.568	2.296	
Government Eng Spt	VARIOUS	VARIOUS	7.354	.200	11/06			.707	11/08	.113	8.374	
Government Eng Spt - SIAP	VARIOUS	VARIOUS	.516	.200	01/07						.716	
Integrated Logistics Sup	TBD	TBD				1.432	11/07	1.947	11/08	1.854	5.233	
Software Development	TBD	TBD				9.191	12/07	19.875	12/08	25.224	54.290	
Studies & Analyses	TBD	TBD				.100	12/07	.100	12/08	.900	1.100	
SUBTOTAL SUPPORT			9.466	.400		11.389		24.571		33.605	79.431	

Remarks:
Totals may not add due to rounding.

TEST & EVALUATION												
Dev T&E ETS (NON-FFRDC)	TBD	TBD						.389	12/08	4.221	4.610	
Dev Test & Eval - ABC2	VARIOUS	VARIOUS	1.440			1.100	11/07	2.100	11/08	8.050	12.690	
Dev Test & Eval - ABC2 (Non-FFRDC)	VARIOUS	VARIOUS	.647								.647	
Dev Test & Eval	VARIOUS	VARIOUS	4.560	.049	11/06			1.878	11/08	9.715	16.202	
Dev Test & Eval - MSI	WX	NAWCAD, PATUXENT RIVER MD	.169								.169	
Dev Test & Eval - MSI (Non-FFRDC)	VARIOUS	VARIOUS	.561	.180	11/06						.741	
Test Assets	TBD	TBD				1.756	11/07	2.107	11/08	2.589	6.452	
SUBTOTAL TEST & EVALUATION			7.378	.229		2.856		6.474		24.575	41.511	

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-7		0204152N, E-2 SQUADRONS				0463, E-2C IMPROVEMENTS						
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
MANAGEMENT												
Gov't Eng Spt - (NoN-FFRDC)	TBD	TBD						.105	11/08	.172	.277	
Government Eng Sup	VARIOUS	VARIOUS	.042			1.932	12/07	4.594	12/08	5.052	11.620	
Program Management Support ABC	VARIOUS	VARIOUS	3.029	.500	11/06	.500	11/07	.601	11/08	2.200	6.830	
Program Mgmt Spt ETS (NoN-FFRDC)	TBD	TBD						.373	12/08	.804	1.177	
Program Mgmt Sup	WX	NAWCAD, PATUXENT RIVER MD				.976	11/07	1.890	11/08	1.879	4.745	
Travel	VARIOUS	VARIOUS	.249	.050	11/06	.053	11/07	.146	11/08	.376	.874	
SUBTOTAL MANAGEMENT			3.320	.550		3.461		7.709		10.483	25.524	

Remarks:
Totals may not add due to rounding.

Total Cost			24.036	1.534		22.691		54.511		93.073	195.845	
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Remarks:
Totals may not add due to rounding.

CLASSIFICATION:

EXHIBIT R4, Schedule Profile																								DATE: February 2007								
APPROPRIATION/BUDGET ACTIVITY								PROGRAM ELEMENT NUMBER AND NAME								PROJECT NUMBER AND NAME																
RDT&E,N / BA-7								0204152N, E-2 SQUADRONS								0463, E-2C IMPROVEMENTS																
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
Acquisition Milestones																																
Air Ops Dec Supp																																
Multiple Source Integ PH I																																
Single Integ Air Pict Blk 0																																
Airborne Battlefield C2																																
Trident Warrior 05																																
Multi Source Integ PH 2																																
Core Open Arch																																
High Frequency Internet Proto																																
In Flight Refueling																																
Automatic Info System																																
Deliveries																																

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Exhibit R-4a, Schedule Detail						DATE:		
						February 2007		
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT				PROJECT NUMBER AND NAME			
RDT&E,N / BA-7	0204152N, E-2 SQUADRONS				0463, E-2C IMPROVEMENTS			
Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
MSI PH I Deploy		3Q						
AODS Deploy		3Q						
ABC2 Development	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
ABC2 Trident Warrior	1Q		1Q	1Q	1Q	1Q	1Q	
ABC2 Joint Expeditionary Force Exercise (JEFX)	3Q		3Q		3Q		3Q	
Limited Objective Experiment (LOE)		2Q						
MSI PH II Development	1Q - 4Q	1Q - 4Q	1Q - 4Q					
MSI Ph II Deploy HE2K			4Q					
SIAP Blk 0 Deploy HE2K		3Q						
Core OA - Requirements Definition & Analysis			1Q-2Q					
Core OA - Design & Code			2Q-4Q	1Q-2Q				
Core OA - Test Asset Delivery (Est.)			4Q					
Core OA - System Integration & Test				2Q-4Q	1Q-2Q			
Core OA - Deploy					3Q			
HF IP - Requirements Definition & Analysis			1Q-3Q					
HF IP - Design & Code			3Q-4Q	1Q-2Q				
HF IP - System Integration & Test				3Q-4Q	1Q-2Q			
HF IP - Deploy					3Q			
IFR Acquisition Milestones - Milestone C						2Q		
IFR Preliminary Design Review (PDR)				4Q				
IFR Critical Design Review (CDR)					2Q			
IFR Prototype System Installation					4Q			
IFR Developmental Test (DT)/Integrated Operational Test & Evaluation				4Q	1Q-4Q	1Q-2Q		
IFR Operational Test & Evaluation						3Q-4Q		
IFR Operational Assessment						1Q		
IFR Operational Test Readiness Review						3Q		
AIS System Development				1Q - 4Q				
AIS Test Readiness Review				4Q				
AIS Developmental Testing					1Q - 3Q			
AIS Software Delivery					4Q			

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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 9999, Congressional Adds		
COST (\$ in Millions)			FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Project Cost			18.586	8.269				
RDT&E Articles Qty-Not Applicable								

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

Congressional Adds

B. ACCOMPLISHMENTS / PLANNED PROGRAM:

9418 - E-2C Open Architecture Computing Framework	FY 2006	FY 2007	FY 2008	FY 2009
Accomplishments / Effort / Sub-total Cost	2.017	1.295		
RDT&E Articles Qty				

Supported development and test of a Model Driven Architecture for E-2 Hawkeye mission computer software. This included modeling modular software components using the Unified Modeling Language, and interfacing elements using data distribution middleware. Support development and testing of a Model Driven Architecture for the E-2 Advanced Control Indicator Set software. This will include modeling the applications using the Unified Modeling Language with initial emphasis on associated interfaces.

9419 - Non-Cooperative Combat Identification Capability	FY 2006	FY 2007	FY 2008	FY 2009
Accomplishments / Effort / Sub-total Cost	1.251			
RDT&E Articles Qty				

Supported concept development, system engineering, and system prototyping for an advanced non-cooperative identification system capability. Provided for the installation of a prototype Non-Cooperative Combat Identification system for system evaluation and live testing with targets of opportunity in the vicinity.

9420 - Makaha Ridge FORCENet Lab	FY 2006	FY 2007	FY 2008	FY 2009
Accomplishments / Effort / Sub-total Cost	3.274	3.188		
RDT&E Articles Qty				

Supported science and technology and advanced technology demonstration initiatives for potential transition to the E-2 program. Conduct research and development efforts at the Makaha Ridge FORCENet Laboratory, which will serve as a Battle Management Command and Control test center to develop capabilities for FORCENet oriented technologies and systems. Integrate a Cooperative Engagement Capability (CEC) into the FORCENet lab and enable participation in a CEC network with live assets.

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9616 - Magneto Rheological Side Lateral Engine Mount	FY 2006	FY 2007	FY 2008	FY 2009
Accomplishments / Effort / Sub-total Cost	.966			
RDT&E Articles Qty				

Funded research, development and tested an airworthy Magneto Rheological (MR) shock mount for the E-2C aircraft. Continued development, test and qualification for an airworthy MR Shock mount for E-2C aircraft, to reduce vibration loads into the airframe resulting in higher reliability for E-2C mission systems.

9744 - Airborne Advanced Network	FY 2006	FY 2007	FY 2008	FY 2009
Accomplishments / Effort / Sub-total Cost	2.503	2.192		
RDT&E Articles Qty				

Developed air-to-air kill chain networking techniques and applications to improve interoperability and level of service. Developed techniques and applications to improve information sharing in a networked environment between tactical airborne platforms. Demonstrate the Internet Protocol network waveform Tactical Targeting Network Technology (TTNT). Provide insight into the network architecture of TTNT and a realistic software and radio frequency environment that will encable a Single Integrated Air Picture. Provide a means to measure and compare performance against legacy Tactical Digital Information Links and validate the requirements for the Joint Tactical Radio System waveform.

9745 - Global Information Grid Middleware Portal	FY 2006	FY 2007	FY 2008	FY 2009
Accomplishments / Effort / Sub-total Cost	.961			
RDT&E Articles Qty				

Developed a services oriented Architecture and provided Network Centric Enterprise Services. Architecture contained services through which applications can be added or developed to exchange information via the Global Information Grid.

9746 - Pacific Missile Range Facility/Pearl Harbor	FY 2006	FY 2007	FY 2008	FY 2009
Accomplishments / Effort / Sub-total Cost	3.273			
RDT&E Articles Qty				

Funded Cooperative Engagement Capability (CEC) like capability for Makaha Ridge to connect to Pearl Harbor CEC activities. Tested and evaluated a distributed command and control networking environment with assets and facilities that existed in the Pacific Missile Range Facility/Pearl Harbor areas, including the Makaha Ridge FORCENet Laboratory.

UNCLASSIFIED

EXHIBIT R-2a, RDT&E Project Justification

DATE:

February 2007

APPROPRIATION/BUDGET ACTIVITY RDT&E,N / BA-7	PROGRAM ELEMENT NUMBER AND NAME 0204152N, E-2 SQUADRONS	PROJECT NUMBER AND NAME 9999, Congressional Adds
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9771 - SCRAMscreen Display Technology	FY 2006	FY 2007	FY 2008	FY 2009
Accomplishments / Effort / Sub-total Cost	4.341			
RDT&E Articles Qty				

Designed, developed, tested, and qualified the E-2C replacement display. Developed a prototype that provided aircraft with reliable tactical displays capable of displaying sufficient data that met the required situational awareness of the E-2 operator.

9A70 - E-2C/Advanced Hawkeye Transmitter Technologies	FY 2006	FY 2007	FY 2008	FY 2009
Accomplishments / Effort / Sub-total Cost		1.594		
RDT&E Articles Qty				

Design, development, laboratory testing of the E-2C replacement APS-145 Radar Transmitter (ATR). Developing a prototype that will provide aircraft with reliable radar transmitter that is capable of detecting airborne and surface targets within the E-2C operational environment to meet the required situational awareness of the E-2 operator.