Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Navy										DATE: February 2011	
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*				R-1 ITEM NOMENCLATURE PE 0604214N: *AV-8B Aircraft - Engine Dev*							
COST ($ in Millions)	**FY 2010**	**FY 2011**	**FY 2012 Base**	**FY 2012 OCO**	**FY 2012 Total**	**FY 2013**	**FY 2014**	**FY 2015**	**FY 2016**	**Cost To Complete**	**Total Cost**
Total Program Element	24.134	22.867	30.676	-	30.676	23.763	26.862	24.932	17.021	Continuing	Continuing
0652: *AV-8B*	20.659	22.867	30.676	-	30.676	23.763	26.862	24.932	17.021	Continuing	Continuing
2634: *OPEN SYSTEMS CORE AVIONICS REQUIREMENT*	3.475	-	-	-	-	-	-	-	-	0.000	3.475

A. Mission Description and Budget Item Justification

The program provides for AV-8B Design, Development, Integration and Test of various platform improvements such as: Engine Life Management Program (ELMP), Escape Systems, Joint Mission Planning System (JMPS), and Block upgrades to various mission systems, communications systems, navigation equipment, weapons carriage and countermeasures, and the Aircraft Handling/Readiness Management Plan (RMP). The JMPS is required as part of the DON directed migration to a common Navy and Marine Corps mission planning system. A/C handling and performance represents all engineering activities for development and design to support aircraft safety flight clearance and concept exploration to support POM objectives. The program's Evolutionary Acquisition Strategy includes Design, Development, Integration and Test activities under the consolidated effort of Block Developments: H5.0, H6.0, H6.1 and follow-on block upgrades. H5.0 provides weapons carriage capability of the Litening pod on centerline/station 4 and also delivers Dual Mode Laser Guided Bomb capability. H6.0 block upgrade will provide weapons carriage expansion through the Digital Improved Triple Ejector Rack (D-ITER) program and will also deliver critical improvements to aircraft survivability equipment. The H6.1 update will provide enhancements and software corrections that improve the AV-8B platform combat effectiveness, survivability, and relevance through avionics processor upgrades and Litening Operational Flight Program. The ELMP is a comprehensive plan to increase safety of flight and operational readiness of the AV-8B F402-RR-408 Engine and accessories. PMA-257 will accomplish this mission by conducting Engineering Project Description investigations and performing a series of planned Accelerated Simulated Mission Endurance Test to derive engineering improvements to the engine. The Escape System qualifies an improved ejection seat to reduce the risk of injury to aircrew. The RMP is required to ensure the AV-8B air vehicle's sustained mission availability, and safe and reliable operational readiness until end of service. Air vehicle sustainment requires component and system analyses, technical planning, identification and diagnosis of problems and the development, testing and flight clearance of engineering solutions in the areas of flight and crew safety, structural integrity, obsolescence, systems reliability and maintainability, inventory preservation, alternative mission development, or other emergent material or equipment conditions affecting AV-8B systems readiness. Activities include research/analysis for system safety deficiency corrections, fuel system safety improvements, structural analyses, monitoring and integrity analysis, component obsolescence analyses including development of display computer and air data computer replacement, alternatives explorations for aging equipment, reliability improvement analyses and design developments.

FY2010 funding was realigned from P.E. 0205633N, PU 3189, for Digital Improved Triple Ejector Rack.

Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Navy	DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604214N: *AV-8B Aircraft - Engine Dev*

B. Program Change Summary ($ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	20.799	22.867	21.446	-	21.446
Current President's Budget	24.134	22.867	30.676	-	30.676
Total Adjustments	3.335	-	9.230	-	9.230
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	3.873	-			
• SBIR/STTR Transfer	-0.400	-			
• Program Adjustments	-	-	9.705	-	9.705
• Section 219 Reprogramming	-0.138	-	-	-	-
• Rate/Misc Adjustments	-	-	-0.475	-	-0.475

Change Summary Explanation

Technical: Block upgrades for H7.0 and H8.0 were removed and the H6.1 software update was added.

Schedule: Acquisition Milestones for H6.0 CDR, H6.0 OTRR, H6.0 IOC and H6.0 Software Deliveries changed due to delay in H6.0 CDR.

Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604214N: *AV-8B Aircraft - Engine Dev*	PROJECT 0652: *AV-8B*	

COST ($ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
0652: *AV-8B*	20.659	22.867	30.676	-	30.676	23.763	26.862	24.932	17.021	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

This program provides for AV-8B Design, Development, Integration and Test of the following improvements: The Engine Life Management Program (ELMP), Escape System and Aircraft Handling/Readiness Management Plan (RMP). The ELMP is a comprehensive plan to increase safety of flight and operational readiness of the AV-8B F402-RR-408 Engine and Gas Turbine Starter (GTS), as well as other critical engine components. The Program Office will accomplish this mission through the Component Improvement Program, which entails Engineering Project Description (EPD) investigations and a series of planned Accelerated Simulated Mission Endurance Tests (ASMET) to derive safety and reliability improvements to the engine and engine components. The Escape System qualifies an improved ejection seat to reduce the risk of injury to aircrew. The Joint Mission Planning System (JMPS) is required as part of the DON directed migration to a common Navy and Marine Corps mission planning system. H5.0 Block Upgrade provides Dual Mode Laser Guided Bombs (DMLGB) and Litening Pod carriage on STA4 (Centerline). H6.0 includes weapons carriage expansion efforts and provides the first step toward Battle Space Networking interoperability within the Netcentric OP-area. The program is working closely with the Common Avionics program and the Allies (Spain and Italy) on these efforts. A/C handling and performance represents all engineering activities for development and design to support aircraft safety flight clearance and concept exploration for resolution of emergent service life and readiness issues.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: Development of RMP Engineering Change Proposals (ECPs)	5.461	7.650	14.291	-	14.291
Articles:	0	0	0		0
Description: Improve structural integrity of the AV-8B aircraft as well as development of an improved Radar Display Computer and Flight Control Computer.					
FY 2010 Accomplishments: Conducted systems engineering analyses, identification, and diagnoses of problems and the development and testing of engineering solutions in the areas of flight and crew safety, structural integrity, obsolescence, and systems reliability, and other material and equipment conditions affecting AV-8B systems readiness. Conducted studies concerning improvements and correction of deficiencies and issues including obsolescence and structural fatigue in Frame 43 and the Bullet Fairing. Analyzed component obsolescence including exploring alternative solutions and development for obsolete aging equipment including the Flight Control Computer, crew ejection system, and other safety-deficient components. Continued development and Critical Design Review					

Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604214N: *AV-8B Aircraft - Engine Dev*	PROJECT 0652: *AV-8B*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
of Radar Display Computer. Additional funds were provided to the Radar Display Computer for development efforts. ***FY 2011 Plans:*** Continuing to conduct systems engineering analyses, identification, and diagnosis of problems and the development and testing of engineering solutions in the areas of flight and crew safety, structural integrity, obsolescence, and systems reliability, and other material and equipment conditions affecting AV-8B systems readiness. Conducting studies concerning improvements and correction of deficiencies and issues including obsolescence and structural fatigue for Frame 43, Frame 41 and Bullet Fairing. Conducting component obsolescence analyses including alternatives explorations and development for obsolete aging equipment, to include flight control computer, aircrew systems, and other safety deficiency corrections. Continuing development and testing of Radar Display Computer, with first flight readiness review and test readiness review. Funding reduction results from funding realignment to Airborne Variable Message Format (VMF) Terminal (AVT) Development. ***FY 2012 Base Plans:*** Funds provided will allow for the continuation of system analyses, identification, and diagnosis of problems and the development and testing of engineering solutions in the areas of flight and crew safety, structural integrity, obsolescence, and systems reliability, and other material and equipment conditions affecting AV-8B systems readiness. Additionally, the program will conduct studies concerning improvements and correction of deficiencies and issues including obsolescence and structural fatigue as well as conducting component obsolescence analyses including alternatives explorations and development for obsolete aging equipment, to include aircrew and environmental systems, flight controls and other safety deficiency corrections. Other efforts include the continuation of development and testing of Radar Display Computer and the beginning of the development of an obsolescence replacement for the Flight Control Computer.					
Title: F402-RR-408 Engine Safety and Reliability Enhancements	8.148	6.932	7.470	-	7.470
Articles:	0	0	0		0
Description: Improve Safety and Reliability of the F402-RR-408 Engine for the AV-8B Harrier. ***FY 2010 Accomplishments:*** Incorporated engineering changes and addressed obsolescence issues in the Enhanced Variable Inlet Guide Vane Control System (EVICS), Fuel Metering Unit (FMU), and Digital Control Unit (DCU) for the F402-RR-408 engine. Researched, analyzed, and developed design changes and improvements for engine accessories.					

Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604214N: *AV-8B Aircraft - Engine Dev*	PROJECT 0652: *AV-8B*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Addressed obsolescence issues with the Generator Control and Test Set (GCUTS) and the Air Turbine Starter Set for the F402-RR-408 engine. Funding reduction resulted from funding realignment to RMP ECPs and AVT development. ***FY 2011 Plans:*** Conducting research, analysis, and development of design changes and improvements to the engine and engine accessories. Continuing Component Improvement Program to ensure capabilities and performance of the F402-RR-408 and related components. Conducting multiple Engineering Change Proposals for the Gas Turbine Starter (GTS) and continuing research into improvements for the EVICS and FMU. Conducting reviews of all engine Test Cells and Support Equipment to optimize facilities and address SE obsolescence. ***FY 2012 Base Plans:*** Funds provided will allow for the continuation of the Component Improvement Program, further ensuring the capabilities and performance of the F402-RR-408 and related components. The prototype EVICS Interrogator will undergo test and evaluation and improvements to the GTS will continue. Complete EVICS design and start Kit procurements. Mitigate Test Cell facilities and Support Equipment obsolescence through Redesign and procurements.					
Title: Operational Flight Program (OFP) and Avionics Weapons Systems Development and Integration ***Articles:*** ***Description:*** Develop AVT, formerly Strikelink/A, Litening Pod software updates, and support aircraft avionics development efforts. ***FY 2010 Accomplishments:*** Efforts included developmental and integration testing in support of H6.0 block upgrade, which includes weapons carriage expansion. Continued AVT (StrikeLink/A) development and Litening Pod software updates. Additional funds increase results from realignment to support AVT development. FY 2010 accomplishment includes BTRs for $1.640 for VX-31 test aircraft support and $2.233 for AVT development. ***FY 2011 Plans:***	7.050 0	8.285 0	8.915 0	-	8.915 0

Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604214N: *AV-8B Aircraft - Engine Dev*	PROJECT 0652: *AV-8B*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Funds are providing for continuation of AVT development and testing, future capability expansion studies and analyses, and aircraft OFP/Litening Pod software updates as part of the H6.1 block upgrade. Funds increase results from realignment to support AVT development. ***FY 2012 Base Plans:*** Funds will provide for completion of AVT development and testing, future capability expansion studies and analyses, and aircraft OFP/Litening Pod software updates as part of the H6.1 block upgrade.					
Accomplishments/Planned Programs Subtotals	20.659	22.867	30.676	-	30.676

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
• APN/0514: *AV-8B Series Modification*	48.044	91.486	30.762	53.485	84.247	28.829	29.116	25.595	18.830	322.080	1,462.693

D. Acquisition Strategy

All efforts under Aircraft Handling/RMP provide investigations and analysis of testing and flight clearance authorization necessary to assess overall system capability and integration of projects. Funding for the Engine Life Management Program (ELMP) will be placed on a cost-type contract to Rolls Royce to address safety of flight issues, top readiness degraders, engine removal and mission failure drivers in order to improve Fleet readiness and reduce cost of ownership. It is also developed to assess life management program issues and design fixes for any service revealed deficiencies. The program's Evolutionary Acquisition Strategy includes Design, Development, Integration and Test activity under the consolidated effort of Block Developments: H2.0, H4.0, H5.0, H6.0, H6.1 and following systems. The development and integration of Joint Mission Planning System (JMPS) occurred concurrently with H2.0. H4.0 Block improvements included the Tactical Aircraft Moving Map Capability. H5.0 Block Upgrade provides DMLGB, Litening Centerline/Station 4 (improvement of current weapons carriage capability). The program is working closely with the Allies (Spain and Italy) and the Common Avionics program on these efforts for H6.0 and H6.1. H6.0 provides weapons carriage expansion efforts and the first step toward Battle Space Networking interoperability within the Netcentric OP-area. The H6.1 update will provide enhancements and software corrections that improve the AV-8B platform combat effectiveness, survivability, and relevance through avionics processor upgrades and Litening OFP.

E. Performance Metrics

Achieve ELMP contract award in 1Q FY2012, complete RMP Display Computer System Development in 4Q FY2012, and initiate Flight Control Computer System Development in 2Q FY2012. Continue systems development for the Airborne Variable Message Format Terminal (AVT), developmental test for the RMP Display Computer and support studies to incorporate TDL capability.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Navy			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604214N: *AV-8B Aircraft - Engine Dev*	PROJECT 0652: *AV-8B*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Primary Hardware Development	C/CPFF	Mgmt Sciences:Albuquerque, NM	0.464	-		-		-		-	0.000	0.464	0.464
Primary Hardware Development	C/CPFF	Rolls-Royce PLC:Bristol, GB	20.302	2.616	Dec 2010	3.186	Dec 2011	-		3.186	11.108	37.212	41.081
Primary Hardware Development	C/CPFF	McDonnell Douglas:St. Louis, MO	1.465	-		-		-		-	0.000	1.465	1.465
Primary Hardware Development	C/FFP	Goodrich PS:Pitstone, GB	4.450	-		-		-		-	0.000	4.450	4.450
Primary Hardware Development	WR	NAWCWD:China Lake, CA	40.820	4.215	Dec 2010	3.329	Dec 2011	-		3.329	Continuing	Continuing	Continuing
Primary Hardware Development	Various	Various:Various	10.067	-		-		-		-	0.000	10.067	10.067
Primary Hardware Development	C/CPFF	GE Aviation DS:Grand Rapids, MI	13.512	3.327	Feb 2011	0.300	Feb 2012	-		0.300	3.371	20.510	20.510
Primary Hardware Development	C/CPFF	Stauder:St. Peters, MO	7.546	3.553	Jan 2011	3.400	Jan 2012	-		3.400	7.580	22.079	22.079
Primary Hardware Development	WR	NAWCAD:Patuxent River, MD	-	-		0.300	Nov 2011	-		0.300	0.000	0.300	0.300
Primary Hardware Development	C/CPFF	TBD:TBD	-	-		7.754	Jan 2012	-		7.754	0.000	7.754	7.795
Systems Engineering	Various	McDonnell Douglas:St. Louis, MO	7.700	0.700	Dec 2010	1.016	Dec 2011	-		1.016	0.177	9.593	9.593
Systems Engineering	Various	Various:Various	0.520	-		-		-		-	0.000	0.520	0.520
Systems Engineering	WR	NAWCWD:China Lake, CA	1.073	-		2.705	Dec 2011	-		2.705	Continuing	Continuing	Continuing
Systems Engineering	MIPR	Wright Patterson AFB:Dayton, OH	0.278	-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	108.197	14.411		21.990		-		21.990			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Navy		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604214N: *AV-8B Aircraft - Engine Dev*	PROJECT 0652: *AV-8B*

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Configuration Management	Various	Various:Various	0.397	-		-		-		-	0.000	0.397	0.397
Engineering Technical Services (CSS)	C/CPFF	EDO Professional Services, Inc.:Arlington, VA	1.737	-		-		-		-	0.000	1.737	1.830
Integrated Logistics Support	WR	NAWCAD:Patuxent River, MD	1.436	-		-		-		-	0.000	1.436	1.436
Software Development	Various	DCMA Boeing:St. Louis, MO	1.148	-		-		-		-	0.000	1.148	1.148
Software Development	WR	NAWCWD:China Lake, CA	10.889	-		-		-		-	Continuing	Continuing	Continuing
Software Development	Various	Various:Various	18.875	-		-		-		-	0.000	18.875	19.967
Software Development	C/CPFF	Northrup Grumman:Rolling Meadows, IL	2.000	-		-		-		-	0.000	2.000	2.000
Studies and Analysis	Various	Various:Various	2.388	0.154	Jun 2011	0.157	Jun 2012	-		0.157	3.900	6.599	6.770
Support	Various	DCMA Boeing:St. Louis, MO	5.490	-		-		-		-	0.000	5.490	5.490
Technical Data	C/CPFF	Various:Various	2.095	0.236	Nov 2010	0.245	Nov 2011	-		0.245	0.320	2.896	2.896
		Subtotal	46.455	0.390		0.402		-		0.402			

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	C/CPFF	McDonnell Douglas:St. Louis, MO	-	-		-		-		-	5.689	5.689	5.689
Developmental Test & Evaluation	WR	NAWCWD:China Lake, CA	39.460	1.670	Jan 2011	1.725	Jan 2012	-		1.725	Continuing	Continuing	Continuing
Operational Test & Evaluation	WR	COMOPTEVFOR:Norfolk, VA	22.717	0.206	Jan 2011	-		-		-	0.000	22.923	24.727
Operational Test & Evaluation	WR		2.824	-		-		-		-	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Navy		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604214N: *AV-8B Aircraft - Engine Dev*	PROJECT 0652: *AV-8B*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		NAWCWD:China Lake, CA											
Test Assets	C/CPFF	GE Aviation DS:Grand Rapids, MI	0.972	-		-		-		-	0.000	0.972	0.972
		Subtotal	65.973	1.876		1.725		-		1.725			

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Engineering & Tec SRVC (Non-FFRDC)	C/CPFF	Various:Various	2.274	0.650	Jan 2011	0.743	Jan 2012	-		0.743	7.432	11.099	12.192
Government Engineering Support	WR	Various:Various	6.969	2.033	Nov 2010	2.076	Nov 2011	-		2.076	Continuing	Continuing	Continuing
MGT & PROF SUPPT SRVC (NON-FFRDC)	C/CPFF	Various:Various	5.626	1.130	Nov 2010	1.187	Nov 2011	-		1.187	12.542	20.485	20.697
Program Management Support	WR	Various:Various	6.642	2.242	Nov 2010	2.426	Nov 2011	-		2.426	Continuing	Continuing	Continuing
Travel	WR	Various:Various	0.812	0.135	Jun 2011	0.127	Jun 2012	-		0.127	Continuing	Continuing	Continuing
		Subtotal	22.323	6.190		6.559		-		6.559			

	Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	242.948	22.867		30.676		-		30.676			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2012 Navy		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604214N: *AV-8B Aircraft - Engine Dev*	**PROJECT** 0652: *AV-8B*

Exhibit R-4, RDT&E Schedule Profile: PB 2012 Navy		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604214N: *AV-8B Aircraft - Engine Dev*	**PROJECT** 0652: *AV-8B*

Exhibit R-4A, RDT&E Schedule Details: PB 2012 Navy		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604214N: *AV-8B Aircraft - Engine Dev*	PROJECT 0652: *AV-8B*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
AV-8B AIRCRAFT - ENGINE DEV				
Acquisition Milestones: Milestones: H5.0 Initial Operational Capability (IOC)	1	2010	1	2010
Acquisition Milestones: Milestones: H6.0 IOC	4	2011	4	2011
Acquisition Milestones: Milestones: Readiness Management Program (RMP) Display Computer Initial Operational Capability (IOC)	3	2013	3	2013
Acquisition Milestones: Milestones: H6.1 IOC	3	2013	3	2013
Acquisition Milestones: Milestones: Airborne Variable Message Format Terminal (AVT) Initial Operational Capability (IOC)	1	2015	1	2015
Systems Development: Hardware Development: RMP Display Computer System Development	1	2010	4	2012
Systems Development: Hardware Development: RMP Flight Control Computer System (FCC) Development	2	2012	4	2015
Systems Development: Reviews: RMP Display Computer Critical Design Review (CDR)	1	2010	1	2010
Systems Development: Reviews: AVT Systems Development	1	2010	3	2013
Systems Development: Reviews: AVT Program Initiation Review (PIR)	1	2010	1	2010
Systems Development: Reviews: AVT System Requirements Review (SRR)	2	2010	2	2010
Systems Development: Reviews: AVT PDR	4	2010	4	2010
Systems Development: Reviews: AVT CDR	2	2011	2	2011
Systems Development: Software Development: H6.0 Weapons (WPNS) Carriage Expansion COMM Network Sys Dev	1	2010	4	2010
Systems Development: Reviews: H6.0 Critical Design Review (CDR)	1	2010	1	2010
Systems Development: Reviews: H6.0 Operational Test Readiness Review (OTRR)	2	2011	2	2011
Systems Development: Reviews: H6.1 Development	2	2010	1	2013

Exhibit R-4A, RDT&E Schedule Details: PB 2012 Navy		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604214N: *AV-8B Aircraft - Engine Dev*	PROJECT 0652: *AV-8B*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Systems Development: Reviews: H6.1 PIR	2	2010	2	2010
Systems Development: Reviews: H6.1 SRR	3	2010	3	2010
Systems Development: Reviews: H6.1 CDR	2	2011	2	2011
Systems Development: Reviews: H6.1 Preliminary Design Review (PDR)	4	2010	4	2010
Test & Evaluation: Technical Evaluation: H6.0 Development Test/ Integrated Test (DT/ IT)	1	2010	1	2011
Test & Evaluation: Technical Evaluation: RMP Display Computer DT	4	2010	2	2013
Test & Evaluation: Technical Evaluation: H6.1 DT/IT	1	2012	3	2013
Test & Evaluation: Technical Evaluation: AVT DT	2	2012	1	2013
Test & Evaluation: Operational Evaluation: H6.0 Operational Test (OT)	3	2011	3	2011
Production Milestones: Contract Awards: Engine Life Management Program (ELMP): ELMP Contract Award FY10	1	2010	1	2010
Production Milestones: Contract Awards: Engine Life Management Program (ELMP): ELMP Contract Award FY11	1	2011	1	2011
Production Milestones: Contract Awards: Engine Life Management Program (ELMP): ELMP Contract Award FY12	1	2012	1	2012
Production Milestones: Contract Awards: Engine Life Management Program (ELMP): ELMP Contract Award FY13	1	2013	1	2013
Production Milestones: Contract Awards: Engine Life Management Program (ELMP): ELMP Contract Award FY14	1	2014	1	2014
Production Milestones: Contract Awards: Engine Life Management Program (ELMP): ELMP Contract Award FY15	1	2015	1	2015
Production Milestones: Contract Awards: Engine Life Management Program (ELMP): ELMP Contract Award FY16	1	2016	1	2016
Deliveries: H6.0 Software (S/W) Delivery	4	2011	4	2011
Deliveries: H6.1 S/W Delivery	3	2013	3	2013

Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604214N: *AV-8B Aircraft - Engine Dev*	PROJECT 2634: *OPEN SYSTEMS CORE AVIONICS REQUIREMENT*	

COST ($ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
2634: *OPEN SYSTEMS CORE AVIONICS REQUIREMENT*	3.475	-	-	-	-	-	-	-	-	0.000	3.475
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

The Open Systems Core Avionics Requirements (OSCAR) initiative is replacing the Mission Computer and Store Management System with commercial components and continued development of the common integrated Night Attack/Radar software to include integration of the 1000lb Joint Direct Attack Munitions (JDAM) weapon. The Digital Improved Triple Ejector Rack (I-TER) provides for the increased capability to the existing BRU-42 I-TER for the AV-8B platform. This provides for multiple carriage capability for smart weapons such as the JDAM.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: OSCAR	3.475	-	-	-	-
Articles:	0				
FY 2010 Accomplishments: Continued D-ITER development/integration/operational testing with H6.0 OFP block upgrade and fleet introduction of capabilities.					
Accomplishments/Planned Programs Subtotals	3.475	-	-	-	-

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
• RDT&E,N/ 0205633N: *Aviation Improvements*	121.986	133.611	123.012	0.000	123.012	118.817	117.581	118.672	118.705	Continuing	Continuing

D. Acquisition Strategy

PEO(A) ADM Ser DPEO(A)-ACQ2/015-97 dated 6 March 1997 approved the MSII acquisition strategy for OSCAR as an Acquisition Category (ACAT) IVT program. OSCAR avionics Critical Design Review was held in January 1998 and completed first flight 29 May 1998. Using the Naval Air Warfare Center - Weapons Division (NAWC-WD) Cost-Plus Award Fee (CPAF) contract, funds will be used for basic design definition, drawing development, and Operational Flight Program development and test. Twelve Mission System Computers and fourteen Warfare Management Computer engineering models have been procured for laboratory and flight test. The NAWC-WD/Boeing follow-on CPAF Contract was awarded on 16 December 1998. The period of performance will be for five years based on the need to complete OSCAR and begin follow-on software block upgrade H2.0. As directed during 4 September 1998 program restructuring, an ACAT redesignation letter was approved

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changing the OSCAR program from an ACAT IVT program to an ACAT II program. Acquisition documentation will be updated accordingly to include the funding in FY2009 and FY2010 for the incorporation of Dig I-TER within OSCAR.

E. Performance Metrics

Complete H6.0 Digital ITER OTRR in 2Q 2011. Complete Digital ITER Operational Test in 3Q 2011. Accept delivery of H6.0 Digital ITER software in 4Q 2011.