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Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Navy									DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 5: Development & Demonstration (SDD)				R-1 ITEM NOMENCLATURE PE 0604512N: Shipboard Aviation Systems							
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	50.356	78.496	70.117	0.000	70.117	34.068	18.602	29.799	18.720	Continuing	Continuing
2232: CV/CVN Launch and Recover	47.564	77.301	70.117	0.000	70.117	34.068	18.602	29.799	18.720	Continuing	Continuing
9999: Congressional Adds	2.792	1.195	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	12.037
A. Mission Description and Budget Item Justification											
CV Launch & Recovery System - This Navy unique project addresses the System Development and Demonstration (SDD) of all systems required to recover and launch Navy/Marine Corps Aircraft (Fixed/Rotary Wing and Vertical/Short Take Off and Landing (VSTOL)) operating aboard aircraft carriers (CV/CVN), amphibious assault ships (LHA/LHD) and aviation facility ships. This program element includes the following:											
(1) Advanced Arresting Gear (AAG)											
(2) Aviation Data Management and Control System (ADMACS)											
(3) Electromagnetic Aircraft Launch System (EMALS)											
(4) Advanced Launch Control System (ALCS)(PB-10 identified as Advanced Catapult Control System for Steam Catapults)											
(5) Swaging Machine											
(6) Aircraft Launch & Recovery Equipment (ALRE) Modernization											
(7) Aircraft Launch and Recovery Equipment (ALRE) Service Life Management program											

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B. Program Change Summary (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Previous President's Budget	45.301	80.623	0.000	0.000	0.000
Current President's Budget	50.356	78.496	70.117	0.000	70.117
Total Adjustments	5.055	-2.127	70.117	0.000	70.117
• Congressional General Reductions		-0.327			
• Congressional Directed Reductions		-3.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		1.200			
• Congressional Directed Transfers		0.000			
• Reprogrammings	6.000	0.000			
• SBIR/STTR Transfer	-0.945	0.000			
• Program Adjustments	0.000	0.000	70.117	0.000	70.117
Congressional Add Details (\$ in Millions, and Includes General Reductions)					
Project: 9999: Congressional Adds					
Congressional Add: Voyage Repair Team Tool Management					
Congressional Add: Sensorless Control of Linear Motors in EMALS					
Congressional Add Subtotals for Project: 9999					
Congressional Add Totals for all Projects					
Change Summary Explanation					
Schedule:					
2232: AAG: Minor schedule adjustments.					
2232: ADMACS Block 2: Software development and hardware qualification were completed, behind schedule, and ADMACS Block 2 completed operational assessment (NOV 09) to support 2nd quarter FY10 MS-C. Developmental hardware and software test will complete 2nd quarter FY10. Installation of engineering development model (EDM) on fleet CVN will start 4th quarter FY10. Schedule adjustments accommodate the above.					

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Technical: Not applicable.		
FY11 from previous President's Budget is shown as zero because no FY11-15 data was presented in President's Budget 2010.		

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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
2232: <i>CV/CVN Launch and Recover</i>	47.564	77.301	70.117	0.000	70.117	34.068	18.602	29.799	18.720	Continuing	Continuing
Quantity of RDT&E Articles	0	2	5	0	5	0	0	0	0		

A. Mission Description and Budget Item Justification

This Navy unique project addresses the System Development and Demonstration (SDD) of all systems required to recover and launch Navy/Marine Corps Aircraft (Fixed/Rotary Wing and Vertical/Short Take-Off and Landing (VSTOL)) operating aboard aircraft carriers (CV/CVN), amphibious assault ships (LHA/LHD) and aviation facility ships. This program includes the following systems under Project 2232, including the funding of production representative models (PRM) for:

(1). Advanced Arresting Gear (AAG): The AAG program will design, develop, test and field an aircraft arrestment system to replace the MK7 arresting gear, which is approaching its design limits. AAG systems will be forward-fit on all new construction aircraft carriers and back-fit on existing carriers during their RCOH availability periods. AAG will provide the U.S. Navy with improved operational capability and enhance safety margins while reducing operating and support costs. The AAG system will recover all existing and projected carrier based tail hook-equipped air vehicles well into the 21st century. The AAG Program's System Design and Development phase test articles will consist of a land based, single wire configured aircraft arresting system, which includes an Energy Absorption System, Power Conditioning System, Control System, and Thermal Management System as well as associated hardware and software needed to conduct system integrated testing by arresting both dead-loads and fleet aircraft.

(2). Aviation Data Management and Control System (ADMACS): ADMACS will use state-of-the-art information technology and decision support systems to automate collection and distribution of information, enabling aviation operations on board aircraft carriers to be accomplished in a more efficient and effective manner.

(a). ADMACS Block 2: Is a shipboard aviation information management system providing CVN aviation planning, execution & readiness assessment using integrated decision aids and supporting systems built into a highly adaptive Net-Centric comprehensive system for sea & land. ADMACS Block 2 provides real time, fault tolerant (redundant), tactical information management system. The Block 2 test article consists of network switches, servers, workstations and affiliated database and communications software.

(b). ADMACS Block 3: ADMACS Block 3 begins to automate data input through various system interfaces. It also adds intelligent agents and decision aides. These are added to the Block 2 architecture.

(3). Electromagnetic Aircraft Launch System (EMALS) Technology Insertion: EMALS will be the fixed wing aircraft catapult for the CVN-21 class of aircraft carriers. The intent of this program is to further the development and insertion of applicable emerging technologies into EMALS capitalizing the major advantages of the system.

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<p>Test articles (FY12) will be manufactured, installed at the EMALS System Functional Demonstration (SFD) site and tested. Sensorless Control funded in FY09 through Congressional Adds (PU: 9D80A)</p> <p>(4). Advanced Launch Control System (ALCS) (PB-10 identified as Advanced Catapult Control System for Steam Catapults): Introduce control, prognostics and health monitoring technology into the steam catapult, providing a common operator interface, reduced maintenance and enhanced availability. The insertion of an array of sensors into the steam catapult, along with the information technology (IT) infrastructure, algorithms development and integration with ADMACS will provide health monitoring and prognostics, as well as maintenance and workload reductions.</p> <p>(5). Swaging Machine: Funded by ONR (OSD PE# 060051D8Z) in FY 2009. The current process of pouring zinc sockets to attach the arresting gear purchase cable will be replaced with a new swaged terminal design that will be pressed on by means of a high density, compact, light weight swaging machine.</p> <p>(6). Aircraft Launch & Recovery Equipment (ALRE) Modernization: This is new start for FY 2010.</p> <p>(a). Improved Fresnel Lens Optical Landing System (IFLOLS) Phase 4: Control system processor and digital interfaces upgrades to support Built-In-Test (BIT), ADMACS integration & maintenance /obsolescence reduction.</p> <p>(b). Embarked Aircraft Track System (EATS): Improve aircraft on deck tracking.</p> <p>(c). Improved Manually Operated Visual Landing Aid System (IMOVLAS): This will be the manual backup for IFLOLS which is the primary carrier Visual Landing Aid (VLA). Used in high sea states or if IFLOLS is inoperable and will mirror current IFLOLS configuration in size & display.</p> <p>(d). ALRE MK-7 System: Re-design of various components within the MK-7 Arresting Gear system that were identified as maintenance intensive components.</p> <ol style="list-style-type: none"> 1. Re-design the retractable sheaves on the flight deck to a fixed deck sheave design. 2. Design a new sealed bearing which would eliminate the requirements to periodically lubricate the bearings on fairlead sheaves. 3. Increase time in service of the barricade webbing material. <p>(7). Aircraft Launch and Recovery Equipment (ALRE) Service Life Management program: This is new start for FY2011. The ALRE Service Life Management Program for Catapult and Arresting Gear Systems is required to sustain carrier aviation operations of heavier and faster aircraft. Changes in aircraft weight and speed are increasing loads on the Launcher & Arresting System which affect availability, maintainability, and life cycle cost. This program will consist of Service Life Assessment and Extension initiatives and will re-establish the design foundation (structural, reliability, and maintainability analyses), permit appropriate assessment, tracking, and lead to optimum use of resources by focusing design changes where most needed.</p>		
B. Accomplishments/Planned Program (\$ in Millions)		

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Advanced Arresting Gear (AAG) The Advanced Arresting Gear (AAG) program will design, develop, test and field an aircraft arrestment system to replace the MK7 arresting gear, which is approaching its design limits. Provide engineering and management support for the AAG System Design and Development (SDD) program. FY 2009 Accomplishments: FY09: Complete procurement, production, installation, commissioning and integrated testing of the first test article for the Extended Reliability Testing (ERT) laboratory. Procure and produce one (1) AAG production representative test system to support shorebased integrated testing at the Jet Car Track Site (JCTS) test facility. Complete test site upgrades. FY 2010 Plans: FY10: Award contract for first ship-set production. Conduct Test Readiness Reviews. Complete JCTS and Runway Arrested Landing Site (RALS) upgrades. Deliver test system to the NAVAIR Lakehurst JCTS test site. Install test system at JCTS. Integrate and commission test system hardware. Conduct integrated testing at JCTS. FY 2011 Base Plans: FY11: Complete JCTS integrated testing. Prepare RALS test site. Install test system at RALS. Integrate and commission hardware at RALS test site.		45.666	66.604	54.127	0.000	54.127
Aviation Data Management & Control System (ADMACS) Block 2 Aviation Data Management & Control System (ADMACS) Block 2 provides real time, fault tolerant (redundant), tactical information management system. ADMACS Block 2 was funded under Project 9071 (Congressional Add) and Project 3126 (ONR) in FY 2002-2005.		1.898	5.635	0.102	0.000	0.102

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B. Accomplishments/Planned Program (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2009 Accomplishments:</i> FY09: Integrated the tested Block 2 software and hardware. Conducted a Production Readiness Reviews of the ADMACS Block 2 system. Prepared for Milestone C for Block 2 upgrade. Conducted Block 2 Formal Qualification Testing to validate the correct operation of application software. Completed Development Test Report (DTR).					
<i>FY 2010 Plans:</i> FY10: Complete Block 2 Formal Qualification Testing to validate the correct operation of application software. Conduct MS C for Block 2 upgrade. Install ADMACS Block 2 system on board CVN-69.					
<i>FY 2011 Base Plans:</i> FY11: Conduct Technical and Operational Evaluation. Conduct Full Rate Production Decision Review.					
Aviation Data Management & Control System (ADMACS) Block 3					
FY2010 Aviation Data Management & Control System (ADMACS) Block 3 data input through various system interfaces. It also adds intelligent agent and decision aides. These are added to the Block 2 architecture established during the development and installation.					
<i>FY 2011 Base Plans:</i> FY11: Conduct Preliminary Design Review. Begin software and hardware development. Develop interfaces for ADMACS Block 3.					
EMALS Technology Insertion					
Electromagnetic Aircraft Launch System (EMALS) Technology Insertion is developed in areas such as sensorless control and energy storage technologies.					
Sensorless Control - funded in FY09 through Congressional Adds (PU: 9D80A)					

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 Base Plans: FY11: Develop system/software for integration into the ship-set design. Provide development, management, system engineering, test, and ship integration support.						
Advanced Launch Control System (ALCS) Advanced Launch Control System (ALCS)- introduce control, prognostics and health monitoring technology into the steam catapult, providing a common operator interface, reduced maintenance and enhanced availability. FY 2010 Plans: FY10: Conduct workload study. Conduct diagnostic and maintenance study. FY 2011 Base Plans: FY11: Initiate algorithms and requirements development analysis. Initiate software design requirements. Initiate hardware design requirements.		0.000	1.012	2.631	0.000	2.631
Swaging Machine This program will replace the current process for attaching the terminal on the arresting gear purchase cable with a swaged terminal design that will be pressed on by means of a of a high density, compact, light weight swaging machine. Funded by ONR (PE# 060051D8Z) in FY 2009. FY 2010 Plans: FY10: Conduct performance testing on prototype unit which will have been developed under Defense Acquisition Challenge Program funding (OSD PE 0604051D8Z). Prototype testing will consist of jet car track performance testing of the swaged terminals and Electro-Magnetic Interference (EMI) shock/ environmental testing of the high density swaging machine.		0.000	1.400	0.000	0.000	0.000

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
ALRE Modernization		0.000	2.650	5.010	0.000	5.010
<p>FY2010 new start. Improved Fresnel Lens Optical Landing System (IFLOLS), Embarked Aircraft Track System (EATS), MK-7 Arresting Gear systems and Improved Manually Operated Visual Landing Aid System (IMOVLAS) to improve carrier aviations operations. The MK 7 Arresting Gear portion of the ALRE Modernization Program consists of (3) components which will be re-designed to address maintenance and supply system degraders.</p> <p><i>FY 2010 Plans:</i></p> <p>FY10: IFLOLS - Evaluate and redesign the system microprocessor to use the latest digital technology. Redesigned system interfaces to allow for fastest possible data transfers between IFLOLS, Joint Precision Approach Landing System (JPALS), Advanced Recovery Control (ARC) and the Arresting Gear Crosscheck System.</p> <p>FY10: MK7(Sealed Bearing) - Develop Statement of Work and award prototype contract for Engineering Developmental Model(EDM) unit.</p> <p>MK7(Fixed Deck Sheave) - Finalize design requirements and begin in-house development of prototype unit.</p> <p>MK7(Barricade Svc Life Ext) - Define requirement documentation. Collect Barricade samples.</p> <p><i>FY 2011 Base Plans:</i></p> <p>FY11: IFLOLS - Conduct Critical Design Review (CDR). Conduct Test Readiness Review (TRR) Test and evaluate the system interfaces, system integration and system performance.</p> <p>FY11: EATS - Begin development phase for software redesign and coding. Conduct Critical Design Review (CDR).</p> <p>FY11: MK7(Sealed Bearing) - Build/deliver prototype unit. Conduct Technical Readiness Review (TRR) Start the integrated test phase.</p>						

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B. Accomplishments/Planned Program (\$ in Millions)											
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
MK7(Fixed Deck Sheave) - Build/deliver prototype unit. Conduct Technical Readiness Review (TRR). Start the integrated test phase MK-7(Barricade Svc Life Ext) - Conduct Technical Readiness Review (TRR). Start the integrated test phase.											
ALRE Service Life Management FY2011 new start. ALRE Service Life Management is to study the MK13 catapult and MK7 arresting gear to determine where to design fielded equipment improvement prior to aircraft fielding. FY 2011 Base Plans: FY11: Development of a load sensitive reliability model to determine the effect of the next air wing on catapult and arresting gear.						0.000	0.000	3.007	0.000	3.007	
Accomplishments/Planned Programs Subtotals						47.564	77.301	70.117	0.000	70.117	
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• OPN/4216: Aircraft Launch & Recovery Equipment - P1#93	46.225	39.683	37.063	0.000	37.063	19.289	73.892	80.089	68.045	Continuing	Continuing
D. Acquisition Strategy											
AAG: The Navy competitively awarded two Cost Plus Fixed Fee Technical Development phase contracts to develop the AAG. Upon completion of the Preliminary Design and Integrated Baseline Reviews, the Navy awarded a single Cost Plus Award Fee option to General Atomics for the System Development and Demonstration (SDD) phase to develop and demonstrate a production representative AAG at the NAVAIR Lakehurst Jet Car Track Site (JCTS) and Runway Aircraft Landing Site (RALS). In March 2009, the AAG program awarded a SDD contract modification to General Atomics for Transition to Production planning.											
ADMACS: The Navy continues to design and develop ADMACS using commercially available servers, switches, workstations and database and communications software. One EDM system has been procured from a directed 8(a) Alaskan Native Corporation source.											

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<p>EMALS Technology Insertion: The Navy will develop emerging technologies for insertion into EMALS and award a contract to develop, manufacture, install, test articles at the EMALS System Functional Demonstration (SFD) site at Lakehurst, N.J.</p> <p>Swaging Machine: The Navy will amend an existing Small Business Technology Transfer (STTR) Phase III contract in order to build and test a prototype high density swaging machine which will have been developed under Defense Acquisition Challenge Program funding (OSD PE 060051D8Z).</p> <p>Aircraft Launch & Recovery Equipment (ALRE) Modernization:</p> <p>(a). IFLOLS Phase IV: The Navy will develop IFLOLS using commercially equipment racks, processors, & displays.</p> <p>(b). EATS: The Navy will award a Phase III Small Business Innovation Research (SBIR) contract to complete development & testing of EATS tracking algorithms. The Navy will develop EATS H/W & interfaces to ADMACS.</p> <p>(c). IMOVLAS: The Navy will develop IMOVLAS using commercially equipment racks, processors, and displays.</p> <p>(d). MK-7 AG: The MK 7 Arresting Gear portion of the ALRE Modernization Program consists of (3) components which will be re-designed and/or analyzed to address maintenance and supply system degraders.</p> <p>Advanced Launch Control System (ALCS): Develop and test system improvements for the MK-13 steam catapult.</p> <p>E. Performance Metrics</p> <p>Advanced Arresting Gear (AAG) will complete SDD integrated testing at Jet Car Track Site (JCTS) and Runway Arrested Landing Site (RALS). Demonstrating key performance parameters and readiness for operational test.</p>		

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Product Development (\$ in Millions)														
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Primary HW Dev- AAG	C/CPFF	Northrop Grum Sunnyvale, CA	12.418	0.000		0.000		0.000		0.000	0.000	12.418	12.418	
Primary HW Dev - AAG	C/CPAF	Gen Atomics San Diego, CA	124.647	39.130	Oct 2009	25.100	Dec 2010	0.000		25.100	8.393	197.270	208.267	
Award Fees - AAG	C/CPAF	Gen Atomics San Diego, CA	1.723	3.400	Apr 2010	3.607	Aug 2011	0.000		3.607	3.600	12.330	12.330	
Primary HW Dev - AAG	WR	NAWCAD Lakehurst, NJ	8.789	5.028	Nov 2009	8.805	Nov 2010	0.000		8.805	2.517	25.139	Continuing	
System Eng - AAG	WR	NAWCAD Lakehurst, NJ	9.695	5.350	Nov 2009	2.919	Nov 2010	0.000		2.919	1.110	19.074	Continuing	
System Eng - AAG	C/CPFF	L3 Services,Inc. Marlton, NJ	0.092	0.000		0.096	Feb 2011	0.000		0.096	0.000	0.188	5.700	
Shipboard Intgrn - AAG	WR	NAWCAD Lakehurst, NJ	2.362	5.350	Nov 2009	2.836	Nov 2010	0.000		2.836	1.045	11.593	Continuing	
Primary HW Dev - ADMACS	WR	NAWCAD Lakehurst, NJ	4.560	2.474	Nov 2009	2.059	Nov 2010	0.000		2.059	6.275	15.368	Continuing	
Product Dev-ADMACS	C/CPFF	Specialty Sys Tom River ,NJ	0.508	0.000		1.200	Jun 2011	0.000		1.200	0.000	1.708	1.708	
Product Dev Supt-ADMACS	C/CPFF	Sabre Sys Warminster, PA	0.085	3.161	Jan 2010	0.000		0.000		0.000	0.000	3.246	3.246	
Shipboard Integ - ADMACS	WR	NAWCAD Lakehurst, NJ	1.200	0.000		0.000		0.000		0.000	0.000	1.200	1.200	
Shipboard Integ - ADMACS	WR	PSNS Bremerton, WA	0.100	0.000		0.000		0.000		0.000	0.000	0.100	0.100	
System Eng - ADMACS	WR	NAWCAD	0.140	0.000		0.180	Nov 2010	0.000		0.180	0.900	1.220	Continuing	

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Product Development (\$ in Millions)														
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
		Lakehurst, NJ												
Primary HW Dev-EMALS Tech Insert	C/CPFF	TBD Not Specified	0.000	0.000		1.182	Dec 2010	0.000		1.182	20.400	21.582	25.600	
Primary HW Dev-ALCS	WR	TBD Not Specified	0.000	0.212	Jan 2010	0.435	Dec 2010	0.000		0.435	3.500	4.147	Continuing	
Primary SW Dev-ALCS	WR	TBD Not Specified	0.000	0.212	Jan 2010	0.581	Dec 2010	0.000		0.581	7.500	8.293	Continuing	
System Eng - EMALS Tech Insert	WR	NAWCAD Lakehurst, NJ	0.000	0.000		0.326	Nov 2010	0.000		0.326	1.870	2.196	Continuing	
System Eng-ALCS	WR	NAWCAD Lakehurst, NJ	0.000	0.388	Jan 2010	0.915	Nov 2010	0.000		0.915	1.500	2.803	Continuing	
Shipboard Integ-ALCS	WR	NAWCAD Lakehurst, NJ	0.000	0.000		0.000		0.000		0.000	2.500	2.500	Continuing	
HW Fabr/Install Init Shipset-ALCS	WR	TBD Not Specified	0.000	0.000		0.500	Dec 2010	0.000		0.500	4.000	4.500	Continuing	
Primary HW Dev-Swaging Mach	SS/CPFF	Creare Inc. Hanover, NH	0.000	0.500	Jan 2010	0.000		0.000		0.000	0.000	0.500	0.500	
Shipboard Integ-Swaging Mach	SS/CPFF	Creare Inc. Hanover, NH	0.000	0.200	Jan 2010	0.000		0.000		0.000	0.000	0.200	0.200	
System Eng-Swaging Mach	WR	NAWCAD Lakehurst, NJ	0.000	0.347	Jan 2010	0.000		0.000		0.000	0.000	0.347	Continuing	
Dev Supt - Swaging Mach	WR	NAWCAD Lakehurst, NJ	0.000	0.300	Jan 2010	0.000		0.000		0.000	0.000	0.300	Continuing	
Primary HW Dev-Modern IFLOLS	WR	NAWCAD Lakehurst, NJ	0.000	0.250	Jan 2010	0.254	Dec 2010	0.000		0.254	0.000	0.504	Continuing	

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy											DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604512N: <i>Shipboard Aviation Systems</i>				PROJECT 2232: <i>CV/CVN Launch and Recover</i>					
Product Development (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
System Eng - Modern IFLOLS	WR	NAWCAD Lakehurst, NJ	0.000	1.150	Jan 2010	1.500	Nov 2010	0.000		1.500	0.400	3.050	Continuing
Primary HW Dev-Modern EATS	C/CPFF	Develosoft Corp. Boulder, CO	0.000	0.000		0.800	Jan 2011	0.000		0.800	0.200	1.000	1.800
System Eng-Modern EATS	WR	NAWCAD Lakehurst, NJ	0.000	0.000		0.403	Nov 2010	0.000		0.403	0.400	0.803	Continuing
Primary HW Dev-Modern MK7	WR	NAWCAD Lakehurst, NJ	0.000	0.800	Jan 2010	0.000		0.000		0.000	0.000	0.800	Continuing
System Eng-Modern MK7	WR	NAWCAD Lakehurst, NJ	0.000	0.100	Jan 2010	0.328	Nov 2010	0.000		0.328	0.200	0.628	Continuing
System Eng-ALRE Srv Life Mgmt	WR	NAWCAD Lakehurst, NJ	0.000	0.000		2.807	Dec 2010	0.000		2.807	22.500	25.307	Continuing
Subtotal			166.319	68.352		56.833		0.000		56.833	88.810	380.314	273.069
Remarks Award Fee is 10% of estimated cost of SDD contract.													
Support (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
ILS- AAG	WR	NAWCAD Lakehurst, NJ	4.397	2.179	Nov 2009	2.798	Nov 2010	0.000		2.798	0.000	9.374	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy										DATE: February 2010				
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 5: Development & Demonstration (SDD)					R-1 ITEM NOMENCLATURE PE 0604512N: Shipboard Aviation Systems					PROJECT 2232: CV/CVN Launch and Recover				
Support (\$ in Millions)														
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
ILS - ADMACS	WR	NAWCAD Lakehurst, NJ	0.150	0.000		0.180	Nov 2010	0.000		0.180	0.483	0.813	Continuing	
ILS-ALCS	WR	NAWCAD Lakehurst, NJ	0.000	0.200	Jan 2010	0.200	Nov 2010	0.000		0.200	0.000	0.400	Continuing	
ILS- Swaging Machine	WR	NAWCAD Lakehurst, NJ	0.000	0.053	Jan 2010	0.000		0.000		0.000	0.000	0.053	Continuing	
ILS - Modern IFLOLS	WR	NAWCAD Lakehurst, NJ	0.000	0.050	Jan 2010	0.200	Nov 2010	0.000		0.200	0.275	0.525	Continuing	
ILS - Modern EATS	WR	NAWCAD Lakehurst, NJ	0.000	0.000		0.200	Nov 2010	0.000		0.200	0.000	0.200	Continuing	
ILS - Modern MK-7	WR	NAWCAD Lakehurst, NJ	0.000	0.050	Jan 2010	0.050	Nov 2010	0.000		0.050	0.050	0.150	Continuing	
ILS - ALRE Service Life Mgnt	WR	NAWCAD Lakehurst, NJ	0.000	0.000		0.200	Dec 2010	0.000		0.200	0.600	0.800	Continuing	
Subtotal			4.547	2.532		3.828		0.000		3.828	1.408	12.315		
Remarks														

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy											DATE: February 2010																																																																																																																																																																			
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Test and Evaluation (\$ in Millions) <table border="1" style="width:100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th rowspan="2">Cost Category Item</th> <th rowspan="2">Contract Method & Type</th> <th rowspan="2">Performing Activity & Location</th> <th rowspan="2">Total Prior Years Cost</th> <th colspan="2">FY 2010</th> <th colspan="2">FY 2011 Base</th> <th colspan="2">FY 2011 OCO</th> <th>FY 2011 Total</th> <th rowspan="2">Cost To Complete</th> <th rowspan="2">Total Cost</th> <th rowspan="2">Target Value of Contract</th> </tr> <tr> <th>Cost</th> <th>Award Date</th> <th>Cost</th> <th>Award Date</th> <th>Cost</th> <th>Award Date</th> <th>Cost</th> </tr> </thead> <tbody> <tr> <td>Dev Test & Eval - AAG</td> <td>WR</td> <td>NAWCAD Lakehurst, NJ</td> <td>6.465</td> <td>1.308</td> <td>Nov 2009</td> <td>2.221</td> <td>Nov 2010</td> <td>0.000</td> <td></td> <td>2.221</td> <td>0.697</td> <td>10.691</td> <td>Continuing</td> </tr> <tr> <td>Operational T&E - AAG</td> <td>WR</td> <td>Various Various</td> <td>0.902</td> <td>0.000</td> <td></td> <td>0.222</td> <td>Dec 2010</td> <td>0.000</td> <td></td> <td>0.222</td> <td>0.222</td> <td>1.346</td> <td>Continuing</td> </tr> <tr> <td>Facility Test - JCTS/ RALS AAG</td> <td>WR</td> <td>NAWCAD Lakehurst, NJ</td> <td>2.799</td> <td>4.642</td> <td>Nov 2009</td> <td>5.318</td> <td>Nov 2010</td> <td>0.000</td> <td></td> <td>5.318</td> <td>12.499</td> <td>25.258</td> <td>Continuing</td> </tr> <tr> <td>Dev Test Lab - ADMACS</td> <td>WR</td> <td>NAWCAD Lakehurst, NJ</td> <td>0.450</td> <td>0.000</td> <td></td> <td>0.000</td> <td></td> <td>0.000</td> <td></td> <td>0.000</td> <td>0.600</td> <td>1.050</td> <td>Continuing</td> </tr> <tr> <td>Integrated Test - ADMACS</td> <td>WR</td> <td>NAWCAD Lakehurst, NJ</td> <td>0.090</td> <td>0.000</td> <td></td> <td>0.102</td> <td>Jan 2011</td> <td>0.000</td> <td></td> <td>0.102</td> <td>0.000</td> <td>0.192</td> <td>Continuing</td> </tr> <tr> <td>Dev Test & Eval - EMALS Tech Insert</td> <td>WR</td> <td>NAWCAD Lakehurst, NJ</td> <td>0.000</td> <td>0.000</td> <td></td> <td>0.113</td> <td>Jan 2011</td> <td>0.000</td> <td></td> <td>0.113</td> <td>0.707</td> <td>0.820</td> <td>Continuing</td> </tr> <tr> <td>Dev Test & Eval - ALCS</td> <td>WR</td> <td>NAWCAD Lakehurst, NJ</td> <td>0.000</td> <td>0.000</td> <td></td> <td>0.000</td> <td></td> <td>0.000</td> <td></td> <td>0.000</td> <td>5.960</td> <td>5.960</td> <td>Continuing</td> </tr> <tr> <td>Dev Test & Eval - Modern IFLOLS</td> <td>WR</td> <td>NAWCAD Lakehurst, NJ</td> <td>0.000</td> <td>0.250</td> <td>Jan 2010</td> <td>0.150</td> <td>Jan 2011</td> <td>0.000</td> <td></td> <td>0.150</td> <td>0.000</td> <td>0.400</td> <td>Continuing</td> </tr> <tr> <td>Dev Test&Eval - Modern MK-7</td> <td>WR</td> <td>NAWCAD Lakehurst, NJ</td> <td>0.000</td> <td>0.000</td> <td></td> <td>1.125</td> <td>Jan 2011</td> <td>0.000</td> <td></td> <td>1.125</td> <td>0.275</td> <td>1.400</td> <td>Continuing</td> </tr> <tr> <td align="right" colspan="3">Subtotal</td><td>10.706</td><td>6.200</td><td></td><td>9.251</td><td></td><td>0.000</td><td></td><td>9.251</td><td>20.960</td><td>47.117</td><td></td> </tr> </tbody> </table>														Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Dev Test & Eval - AAG	WR	NAWCAD Lakehurst, NJ	6.465	1.308	Nov 2009	2.221	Nov 2010	0.000		2.221	0.697	10.691	Continuing	Operational T&E - AAG	WR	Various Various	0.902	0.000		0.222	Dec 2010	0.000		0.222	0.222	1.346	Continuing	Facility Test - JCTS/ RALS AAG	WR	NAWCAD Lakehurst, NJ	2.799	4.642	Nov 2009	5.318	Nov 2010	0.000		5.318	12.499	25.258	Continuing	Dev Test Lab - ADMACS	WR	NAWCAD Lakehurst, NJ	0.450	0.000		0.000		0.000		0.000	0.600	1.050	Continuing	Integrated Test - ADMACS	WR	NAWCAD Lakehurst, NJ	0.090	0.000		0.102	Jan 2011	0.000		0.102	0.000	0.192	Continuing	Dev Test & Eval - EMALS Tech Insert	WR	NAWCAD Lakehurst, NJ	0.000	0.000		0.113	Jan 2011	0.000		0.113	0.707	0.820	Continuing	Dev Test & Eval - ALCS	WR	NAWCAD Lakehurst, NJ	0.000	0.000		0.000		0.000		0.000	5.960	5.960	Continuing	Dev Test & Eval - Modern IFLOLS	WR	NAWCAD Lakehurst, NJ	0.000	0.250	Jan 2010	0.150	Jan 2011	0.000		0.150	0.000	0.400	Continuing	Dev Test&Eval - Modern MK-7	WR	NAWCAD Lakehurst, NJ	0.000	0.000		1.125	Jan 2011	0.000		1.125	0.275	1.400	Continuing	Subtotal			10.706	6.200		9.251		0.000		9.251	20.960	47.117	
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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Navy

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

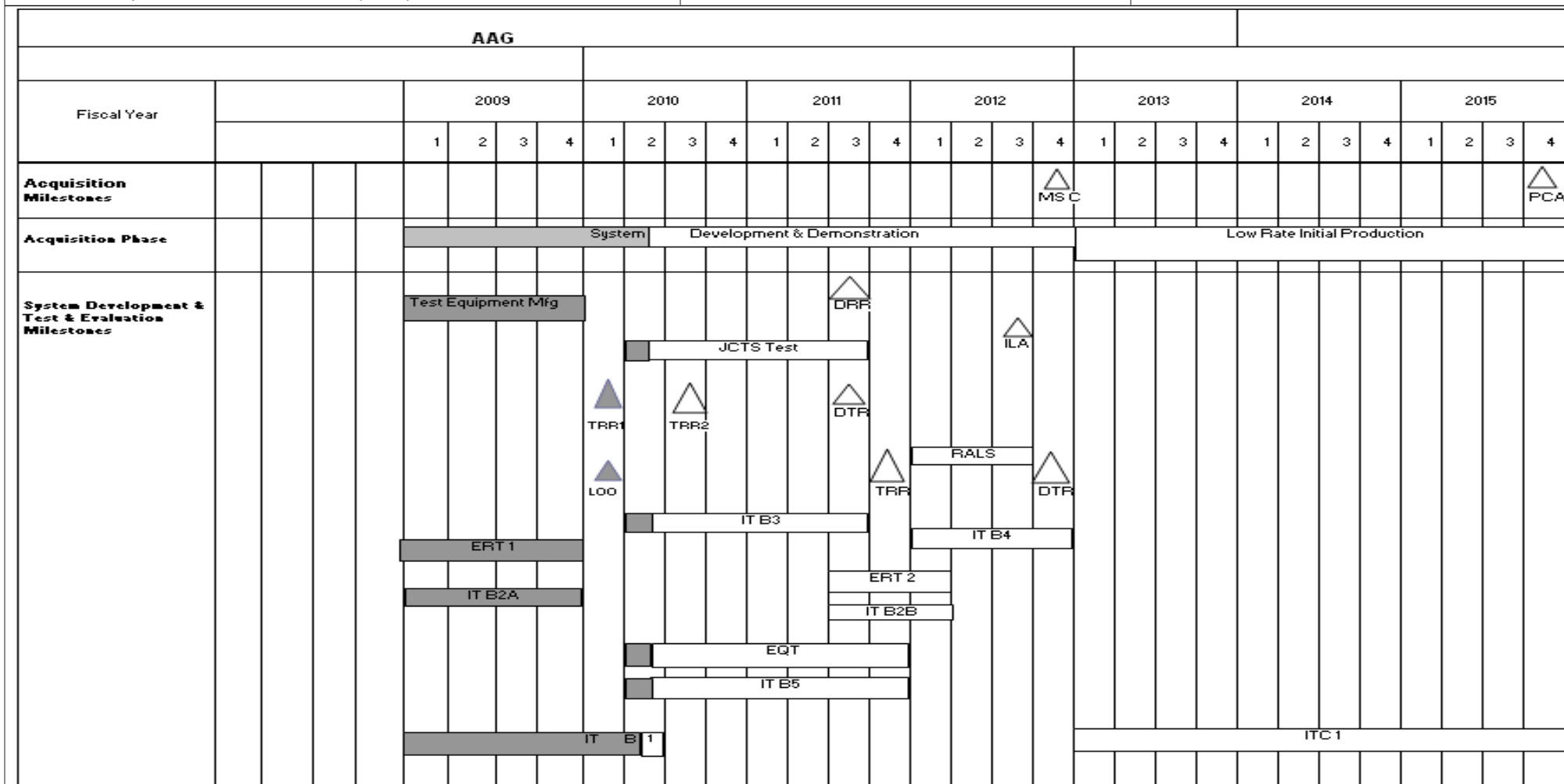
1319: Research, Development, Test & Evaluation, Navy
BA 5: Development & Demonstration (SDD)

R-1 ITEM NOMENCLATURE

PE 0604512N: Shipboard Aviation Systems

PROJECT

2232: CV/CVN Launch and Recover



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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Navy																							DATE: February 2010						
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 5: Development & Demonstration (SDD)										R-1 ITEM NOMENCLATURE PE 0604512N: Shipboard Aviation Systems										PROJECT 2232: CV/CVN Launch and Recover									
ADMACS BLOCK 2																													
Fiscal Year		2009				2010				2011				2012				2013				2014				2015			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
Milestones/Phase		SDD				LRIP				Full Rate Production																			
						MSC								FRPDR															
Program Events														IOC															
Procurement/Integration/Installation		Procure/Integrate CVN-XX								Install CVN-XX																			
Testing		Design & Dev				Ship Integration				ITC2				OPEVAL															
		IT-B2				IT-C1								OT-C1				FOT&E											
		Env Effects - E3								TechEVAL																			
		IT-B3												DTR															

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Navy												DATE: February 2010																							
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ADMACS BLOCK 3																																			
Fiscal Year								2009				2010				2011				2012				2013				2014				2015			
								1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
Milestones/Phases													Development & Testing									Installation													
Program Events															PDR				CDR						TRR										
Testing																			Design, Development, Integration and Formal Testing																
Procurement																										Procurements									

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DATE: February 2010

R-1 ITEM NOMENCLATURE

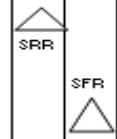
PE 0604512N: *Shipboard Aviation Systems*

2232: CV/CVN Launch and Recover

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APPROPRIATION/BUDGET ACTIVITY

1319: *Research, Development, Test & Evaluation, Navy*

BA 5: *Development & Demonstration (SDD)*

R-1 ITEM NOMENCLATURE

PE 0604512N: *Shipboard Aviation Systems*

PROJECT

2232: CV/CVN Launch and Recover

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Navy

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PROJECT

2232: CV/CVN Launch and Recover

ALRE MODERNIZATION																																
Fiscal Year					2009				2010				2011				2012				2013				2014				2015			
					1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
A). Improved Fresnel Lens Optical Landing Sys (IFLOLS)																																
Acquisition Milestone													CDR △							CCB △												
Test & Evaluation																																
Production Milestone																																
B). Embarked Aircraft Track Sys (EATS)																																
Acquisition Milestone																																
Test & Evaluation																																
Production Milestone																																

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Navy

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Navy

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

1319: *Research, Development, Test & Evaluation, Navy*

BA 5: Development & Demonstration (SDD)

R-1 ITEM NOMENCLATURE

PE 0604512N: Shipboard Aviation Systems

PROJECT

2232: CV/CVN Launch and Recover

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Navy			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604512N: <i>Shipboard Aviation Systems</i>	PROJECT 2232: <i>CV/CVN Launch and Recover</i>	

Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
ADVANCED ARRESTING GEAR (AAG)	1	2009	4	2015
-- System Design & Development (SDD Phase) AAG	1	2009	4	2012
-- Test Equipment Manufacture -	1	2009	4	2009
-- Extended Reliability Testing 1 (ERT1)	1	2009	4	2009
-- Integration Testing (IT B2A)	1	2009	4	2009
-- Integration Testing (IT B1)	1	2009	2	2010
-- Letter of Observation (LOO)	1	2010	1	2010
-- Test Readiness Review1 (TRR1)	1	2010	1	2010
-- Test Readiness Review 2(TRR2)	3	2010	3	2010
-- Jet Car Track Site (JCTS) Test	2	2010	3	2011
--- Integration Testing (IT B3)	2	2010	3	2011
-- Environmental Qualification Test (EQT)	2	2010	4	2011
-- Integration Testing (IT B5)	2	2010	4	2011
-- Design Readiness Review (DRR)	3	2011	3	2011
-- Development Test Report (DTR) 1	3	2011	3	2011
--Test Readiness Review (TRR)	4	2011	4	2011
-- Extended Reliability Testing 2 (ERT2)	3	2011	1	2012
--- Integration Testing (IT B2B)	3	2011	1	2012

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Navy			DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 5: Development & Demonstration (SDD)	R-1 ITEM NOMENCLATURE PE 0604512N: Shipboard Aviation Systems	PROJECT 2232: CV/CVN Launch and Recover		
	Start		End	
Event	Quarter	Year	Quarter	Year
-- Runway Arrested Landing Site Test (RALS)	1	2012	3	2012
--Integration Testing (IT B4)	1	2012	4	2012
-- Milestone C	4	2012	4	2012
-- Integrated Logistic Assessment (ILA)	3	2012	3	2012
-- Development Test Report (DTR) 2	4	2012	4	2012
-- Physical Configuration Assessment (PCA)	4	2015	4	2015
--Integrated Testing (IT C1)	1	2013	4	2015
-- Low Rate Initial Production (LRIP)	1	2013	4	2015
AVIATION DATA MANAGEMENT & CONTROL SYSTEM (ADMACS) BLK 2	1	2009	4	2015
--- System Design & Development (SDD Phase) ADMACS BLK 2	1	2009	2	2010
-- Procure/Integration CVN-XX	1	2009	4	2009
--- Design & Development Test	1	2009	1	2010
-- IT-B2 Integrated Test	1	2009	1	2010
--- Environmental Effect Test -E3	1	2009	2	2010
-- IT-B3 Integrated Test	1	2009	2	2010
-- Development Test Report (DTR)3	3	2011	3	2011
-- Milestone C (MS-C)	2	2010	2	2010
-- Low-Rate Initial Production (LRIP)	3	2010	4	2011
-- Install CVN-XX	4	2010	1	2011
-- Ship Integration	4	2010	1	2011

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Navy			DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 5: Development & Demonstration (SDD)	R-1 ITEM NOMENCLATURE PE 0604512N: Shipboard Aviation Systems		PROJECT 2232: CV/CVN Launch and Recover	
	Start		End	
Event	Quarter	Year	Quarter	Year
-- Integrated Test (IT-C1)	4	2010	1	2011
-- Integrated Test (IT-C2)/Tech Eval	2	2011	2	2011
--- Operational Test Evaluation (OpEval/OTC)	3	2011	3	2011
-- Full Rate Production Decision Review (FRPDR)	4	2011	4	2011
-- Follow-on Test & Evaluation (FOT&E)	1	2012	1	2012
-- Initial Operational Capability (IOC)	2	2012	2	2012
-- Full Rate Production (FRP)4	1	2012	4	2015
-AVIATION DATA MANAGEMENT & CONTROL SYSTEM (ADMACS) BLK 3	1	2011	4	2015
-- Development and Testing	1	2011	4	2013
-- Preliminary Design Review (PDR)	3	2011	3	2011
-- Critical Design Review (CDR)5	2	2012	2	2012
-- Test Readiness Review (TRR)6	3	2013	3	2013
- Design, Development, Integration & Formal Testing	1	2012	4	2013
---- Procurements	1	2014	4	2015
- Installation	2	2014	4	2015
-EMALS TECHNOLOGY INSERTION	1	2011	4	2015
--- System Development and Testing	1	2011	4	2015
-- Critical Design Review (CDR)7	4	2012	4	2012
-- Test Readiness Review (TRR)8	4	2014	4	2014
-ADVANCED LAUNCH CONTROL SYSTEM (ALCS)	1	2011	4	2015

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Navy			DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 5: Development & Demonstration (SDD)	R-1 ITEM NOMENCLATURE PE 0604512N: Shipboard Aviation Systems		PROJECT 2232: CV/CVN Launch and Recover	
	Start		End	
Event	Quarter	Year	Quarter	Year
-- System Requirement Review (SRR)	2	2014	2	2014
-- System Functional Review (SFR)	3	2014	3	2014
-- Hardware Design Requirements	1	2011	1	2013
-- Software Design Requirements	1	2011	1	2013
-- Algorithm Requirements	1	2011	2	2012
-- Hardware Integration Requirements	2	2012	3	2013
-SWAGING MACHINE	3	2010	4	2015
-- Prototype Build	3	2010	3	2010
-- Performance Test	2	2010	2	2010
-- Electromagnetic Interference (EMI) Shock/Environmental Test	2	2010	2	2010
-- Configuration Control Board (CCB)9	1	2011	1	2011
- Full Rate Production	3	2013	4	2015
-ALRE MODERNIZATION	1	2011	4	2015
--A - Improved Fresnel Lens Optical Landing Sys (IFLOLS)	1	2011	4	2015
----- Critical Design Review (CDR)a	1	2011	1	2011
----- Test Readiness Review (TRR)s	4	2011	4	2011
----- Integrated Testd	4	2011	3	2012
----- Configuration Control Board (CCB)f	4	2012	4	2012
----- Full Rate Production (FRP)g	1	2013	4	2015
--B - Embarked Aircraft Track System (EATS)	3	2011	4	2015

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Navy			DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 5: Development & Demonstration (SDD)		R-1 ITEM NOMENCLATURE PE 0604512N: Shipboard Aviation Systems		PROJECT 2232: CV/CVN Launch and Recover
	Start		End	
Event	Quarter	Year	Quarter	Year
----- Critical Design Review (CDR)h	4	2011	4	2011
----- Test Readiness Review (TRR)j	3	2011	3	2011
----- Integrated Test1	3	2011	4	2012
----- Configuration Control Board (CCB)k	1	2013	1	2013
----- Full Rate Production (FRP)21	1	2014	4	2015
-C - Improved Manually Operated Visual Landing Aids Sys (IMOVLAS)	3	2012	4	2015
----- Critical Design Review (CDR)	3	2012	3	2012
----- Test Readiness Review (TRR)	1	2013	1	2013
----- Integrated Test32	1	2013	3	2013
----- Configuration Control Board (CCB)4	4	2013	4	2013
----- Full Rate Production (FRP)5	1	2014	4	2015
D - ALRE MK-7 Systems	4	2010	4	2015
-----1). Fixed Deck Sheave	4	2010	4	2015
----- Technical Review (TR1)	4	2010	4	2010
----- Prototype Build (EDM1)	2	2011	2	2011
----- Test Readiness Review (TRR1)	3	2011	3	2011
----- Integrated Test6	4	2011	3	2012
----- Configuration Control Board (CCB)7	2	2013	2	2013
----- Full Rate Production (FRP)	1	2014	4	2015
-----2). Sealed Bearing	4	2010	4	2015

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Navy			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604512N: <i>Shipboard Aviation Systems</i>	PROJECT 2232: <i>CV/CVN Launch and Recover</i>	

Event	Start		End	
	Quarter	Year	Quarter	Year
----- Technical Review (TR2)	4	2010	4	2010
----- Prototype Build (EDM 2)	3	2011	3	2011
----- Test Readiness Review (TRR 2)	3	2011	3	2011
----- Integrated Test	4	2011	2	2012
----- Configuration Control Board (CCB)1	2	2013	2	2013
----- Full Rate Production (FRP)23	1	2014	4	2015
---3). Barricade Service Life Extension	4	2010	3	2011
----- Technical Review (TR3)	4	2010	4	2010
----- Prototype Build (EDM 3)	1	2011	1	2011
----- Test Readiness Review (TRR 3)	2	2011	2	2011
----- Integrated Test34	2	2011	3	2011
ALRE SERVICE LIFE MANAGEMENT	1	2011	4	2015
--- Engineering Analysis	1	2011	4	2012
- Design Development	4	2012	4	2015

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604512N: <i>Shipboard Aviation Systems</i>				PROJECT 9999: <i>Congressional Adds</i>			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
9999: <i>Congressional Adds</i>	2.792	1.195	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	12.037
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		
A. Mission Description and Budget Item Justification Congressional Adds											
B. Accomplishments/Planned Program (\$ in Millions)											
							FY 2009	FY 2010			
Congressional Add: Voyage Repair Team Tool Management <i>FY 2010 Plans:</i> Design and develop an Integrated Tool Control System within the Voyage Repair Team (VRT) organizations. This will reduce cost, improve work efficiency and improve that availability of Aircraft Launch & Recovery Equipment (ALRE) in support of the Fleet's mission.							0.000	1.195			
Congressional Add: Sensorless Control of Linear Motors in EMALS <i>FY 2009 Accomplishments:</i> The Navy will initiate the development of advanced sensorless control for the Electromagnetic Aircraft Launch System (EMALS) program.							2.792	0.000			
Congressional Adds Subtotals							2.792	1.195			

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604512N: <i>Shipboard Aviation Systems</i>	PROJECT 9999: <i>Congressional Adds</i>
C. Other Program Funding Summary (\$ in Millions) N/A		
D. Acquisition Strategy Not Applicable		
E. Performance Metrics Congressional Adds		