

CLASSIFICATION:

UNCLASSIFIED

EXHIBIT R-2, RDT&E Budget Item Justification							DATE:	
							February 2003	
APPROPRIATION/BUDGET ACTIVITY					R-1 ITEM NOMENCLATURE			
RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-5					0604512N Shipboard Aviation Systems			
COST (\$ in Millions)	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Total PE Cost	16.684	26.031	18.352	25.255	23.231	18.828	19.184	19.539
W2232 CV Launch & Recovery Systems	14.974	24.075	18.352	25.255	23.231	18.828	19.184	19.539
W9071 Shipboard Aviation Information Technology	1.710	1.956						
A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:								
<p>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 concept exploration and the development phase of the following systems under Projects W2232, and Project W9071 including the funding of Production Representative Models (PRM):</p> <ul style="list-style-type: none"><li>- (U) Advanced Launch and Recovery Control System (ALRCS), provides a common control, monitoring and maintenance hardware system platform for current steam catapults and future arresting gear.</li><li>- (U) Virtual Imaging System for Approach and Landing (VISUAL), replaces the Landing Signal Officer Heads Up Display (LSO HUD) and base console. VISUAL provides the LSO and ship's force with real time high-resolution composite video (IR/TVC) imagery of tracked aircraft.</li><li>- (U) Moriah Wind System (MWS): Integrated digital wind measurement designed to replace the Type F wind system on all U.S. Navy air capable ships.</li><li>- (U) Advanced Arresting Gear (AAG): The AAG replaces the MK7 arresting gear engine, which has reached the limits of its operating capability.</li><li>- (U) Cost Reduction and Effectiveness Improvement Initiative (CREI) Aircraft Carrier Arresting Gear Hydraulic Fluid: This program seeks to replace the unique hydraulic fluid , ethylene glycol , used in the arresting gear systems with a commercially available ethylene glycol product. The commercial product will be less expensive, contain system component protection and will reduce the life cycle cost of the system.</li><li>- (U) Shipboard Aviation Data Management System Initiative: This initiative will use state-of-the-art information technology and decision support systems to automate the current manual intensive process in collecting and distributing information to enable aviation operations on board aircraft carriers to be accomplished in a more efficient and effective manner.</li></ul>								

R-1 SHOPPING LIST - Item No.

115

UNCLASSIFIED

**Exhibit R-2, RDTEN Budget Item Justification**  
 (Exhibit R-2, page 1 of 18)

# UNCLASSIFIED

## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE: <b>February 2003</b>	
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-5</b>	PROGRAM ELEMENT NUMBER AND NAME 0604512N Shipboard Aviation Systems	PROJECT NUMBER AND NAME W2232 CV Launch & Recovery Systems		

**(U) B. Accomplishments/Planned Program**

VISUAL	FY 02	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	8.697	7.769	1.918	
RDT&E Articles Quantity		2	2	

**VISUAL**  
Completed fabrication of two (2) CV/CVN PRM units and conducted integration/test efforts. Provided engineering and management support to the program. Deliver two (2) CV/CVN PRM units. Complete environmental/EMI/R&M lab and conduct landbased/shipboard developmental testing. Provide engineering and management support to the program. Award LH development contract option. Complete CV/CVN system operational testing. Deliver one (1) LH PRM Unit for shipboard testing. Modify and configure one of the CV components for delivery as one (1) LH PRM unit for lab testing. Conduct developmental and operational testing for LH system. Conduct MS C for CV and for LH systems.

MWS	FY 02	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	2.442	2.311	0.250	
RDT&E Articles Quantity		1		

**MWS**  
Received MS B approval and awarded SDD contract. Completed PDR and provided engineering and management support to the program. Complete CDR and deliver one (1) MWS PRM. Initiate and complete developmental testing. Provide engineering management support for the program. Initiate and complete MWS operational testing. Receive MS C and FRP approval.

ALRCS	FY 02	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	0.996			
RDT&E Articles Quantity				

**ALRCS**  
Solicited industry for technology and system solutions. Prepared system technical specification requirements. Combined program with and folded efforts into Advanced Arresting Gear program. Provided engineering and management support to the program.

# UNCLASSIFIED

## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE: <b>February 2003</b>	
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-5</b>	PROGRAM ELEMENT NUMBER AND NAME 0604512N Shipboard Aviation Systems				PROJECT NUMBER AND NAME W2232 CV Launch & Recovery Systems			
COST (\$ in Millions)	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Project Cost	14.974	24.075	18.352	25.255	23.231	18.828	19.184	19.539
RDT&E Articles Qty		3	2					

### 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 system development phase of the following systems under Project W2232, including the funding of production representative models (PRM):

- (U) Advanced Launch and Recovery Control System (ALRCS): ALRCS introduces modern, modularized computer control systems to the catapults and arresting gear on aircraft carriers, which will support Condition Based Maintenance (CBM), enhance performance, and reduce life cycle costs.
- (U) Moriah Wind System (MWS): MWS replaces current analog wind system with an integrated digital wind measurement system which will be an affordable, LAN compatible, wind suite for all classes of air capable Navy ships.
- (U) Virtual Imaging System for Approach and Landing (VISUAL): VISUAL provides ship's force and Landing Signal Officer (LSO) with enhanced images of the aircraft during recovery operations in low visibility, day and night conditions.
- (U) Advanced Arresting Gear (AAG): The AAG replaces the MK7 arresting gear, which has reached the limits of its operating capability.
- (U) Cost Reduction and Effectiveness Improvement Initiative (CREI) (Aircraft Carrier Arresting Gear Hydraulic Fluid): This program seeks to replace the unique hydraulic fluid, ethylene glycol, used in the arresting gear systems with a commercially available ethylene glycol product. The commercial product will be less expensive, contain system component projection, and will reduce the life cycle cost of the systems.

# UNCLASSIFIED

## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE: <b>February 2003</b>																
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-5</b>	PROGRAM ELEMENT NUMBER AND NAME 0604512N Shipboard Aviation Systems	PROJECT NUMBER AND NAME W2232 CV Launch & Recovery Systems																	
<b>(U) B. Accomplishments/Planned Program</b>																			
<table border="1" style="width: 100%; border-collapse: collapse;"><tr><td style="width: 30%;">AAG</td><td style="width: 15%;">FY 02</td><td style="width: 15%;">FY 03</td><td style="width: 15%;">FY 04</td><td style="width: 15%;">FY 05</td></tr><tr><td>Accomplishments/Effort/Subtotal Cost</td><td style="text-align: center;">2.764</td><td style="text-align: center;">13.811</td><td style="text-align: center;">16.184</td><td style="text-align: center;">25.255</td></tr><tr><td>RDT&amp;E Articles Quantity</td><td></td><td></td><td></td><td></td></tr></table>					AAG	FY 02	FY 03	FY 04	FY 05	Accomplishments/Effort/Subtotal Cost	2.764	13.811	16.184	25.255	RDT&E Articles Quantity				
AAG	FY 02	FY 03	FY 04	FY 05															
Accomplishments/Effort/Subtotal Cost	2.764	13.811	16.184	25.255															
RDT&E Articles Quantity																			
<div style="border: 1px solid black; padding: 5px;"><b>AAG</b> Completed AoA and Technology Maturity Assessment. Prepared and received approval for Acquisition Strategy. Prepared and released RFP to Industry. Conduct source selection efforts. Prepare for and receive milestone A approval and award Concept Technology Development (CTD) contract(s). Complete System Requirements Review. Initiate system design efforts for AAG to include modeling and simulation and trade studies. Complete Preliminary Design and Integrated Baseline Reviews. Select SDD phase contractor. Receive MS B approval and award SDD contract. Initiate Critical Design Review. Provide engineering and management support to the program.</div>																			
<table border="1" style="width: 100%; border-collapse: collapse;"><tr><td style="width: 30%;">CREI</td><td style="width: 15%;">FY 02</td><td style="width: 15%;">FY 03</td><td style="width: 15%;">FY 04</td><td style="width: 15%;">FY 05</td></tr><tr><td>Accomplishments/Effort/Subtotal Cost</td><td style="text-align: center;">0.075</td><td style="text-align: center;">0.184</td><td></td><td></td></tr><tr><td>RDT&amp;E Articles Quantity</td><td></td><td></td><td></td><td></td></tr></table>					CREI	FY 02	FY 03	FY 04	FY 05	Accomplishments/Effort/Subtotal Cost	0.075	0.184			RDT&E Articles Quantity				
CREI	FY 02	FY 03	FY 04	FY 05															
Accomplishments/Effort/Subtotal Cost	0.075	0.184																	
RDT&E Articles Quantity																			
<div style="border: 1px solid black; padding: 5px;"><b>CREI</b> Conducted PDR for Commercial Arresting Gear hydraulic fluid in support of Cost Reduction &amp; Effectiveness Improvement Initiative (CREI). Conduct dead-load testing on selected alternative hydraulic fluids. Initiate developmental testing of commercial Arresting Gear recyclable hydraulic fluid.</div>																			

R-1 SHOPPING LIST - Item No.

115

UNCLASSIFIED

Exhibit R-2a, RDTEN Project Justification  
(Exhibit R-2a, page 4 of 18)

# UNCLASSIFIED

## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE: <b>February 2003</b>	
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-5</b>	PROGRAM ELEMENT NUMBER AND NAME 0604512N Shipboard Aviation Systems	PROJECT NUMBER AND NAME W2232 CV Launch & Recovery Systems		

**(U) C. PROGRAM CHANGE SUMMARY:**

	FY 2002	FY 2003	FY 2004	FY 2005
(U) Funding:				
Previous President's Budget:	16.230	24.619	18.953	18.719
Current BES/President's Budget	14.974	24.075	18.352	25.255
Total Adjustments	-1.256	-0.544	-0.601	6.536
Summary of Adjustments				
Congressional program reductions				
Congressional undistributed reductions		-0.145		
Congressional rescissions	-0.035			
SBIR/STTR Transfer	-0.326			
Economic Assumptions	-0.042	-0.399	-0.464	-0.568
Programmatic Adjustments	-0.853		-0.137	7.104
Congressional increases				
Subtotal	-1.256	-0.544	-0.601	6.536

(U) Schedule:

MWS program slipped due to delays in receiving program documentation and directed changes to the acquisition strategy. MWS finalized program specifications and engaged industry for presolicitation comments. These changes have caused the following modifications to the MWS effort: MWS PDR scheduled for 3Q/02 has been moved to 4Q/02. MWS CDR has slipped from 4Q/02 to 1Q/03.

All ALRCS milestones have been incorporated into the AAG program. The AAG program was delayed and the acquisition strategy modified in accordance with the direction of the Milestone Decision Authority to reduce technical and schedule risk. Changes to the AAG program schedule include the addition of a CTD phase prior to SDD. MS A and CTD contract award are scheduled for 3Q/03, MS B is delayed from 2Q/02 to 4Q/04 and MS C is delayed from 2Q/08 to 4Q/09. AAG SRR has moved from 2Q/02 to 1Q/04, PDR has moved from 4Q/03 to 3Q/04 and CDR has slipped from 4Q/04 to 3Q-4Q/05.

(U) Technical:

In accordance with the direction of the MDA, the AAG program has added a modeling and simulation intensive CTD phase prior to SDD as a result of AoA and Technology Maturity Assessment to reduce risk.

R-1 SHOPPING LIST - Item No. 115

UNCLASSIFIED

# UNCLASSIFIED

## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE: <b>February 2003</b>			
APPROPRIATION/BUDGET ACTIVITY <b>RDTE&amp;E, N / BA-5</b>			PROGRAM ELEMENT NUMBER AND NAME 0604512N Shipboard Aviation Systems			PROJECT NUMBER AND NAME W2232 CV Launch & Recovery Systems				

**(U) D. OTHER PROGRAM FUNDING SUMMARY:**

Line Item No. & Name	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To Complete	Total Cost
OPN (Aircraft Launch & Recovery Equipment, 43SJ) Related RDT&E: P.E. 0603512N (Carrier Systems Development)	27.049	18.949	20.277	21.319	31.883	33.077	33.714	34.323	Continuing	

**(U) E. ACQUISITION STRATEGY:**

MWS: The Navy has prepared a performance specification and competitively awarded an IDIQ contract to cover SDD (CPIF) and production requirements (FFP).

VISUAL: The Navy prepared a performance specification and competitively awarded a cost plus incentive fee contract to develop/deliver PRMs, with fixed-price successive target production options. LH system development is a contractual option

ALRCS: ALRCS has become part of Advanced Arresting Gear program and strategy. Advanced Launch control System deferred pending redefinition of launch process under Electromagnetic Aircraft Launcher Systems program.

AAG: The Navy will competitively award up to two Cost Plus Award Fee (CPAF) CTD phase contracts to develop the AAG. Upon completion of the Preliminary Design and Integrated Baseline Reviews, the Navy will award a single Cost Plus Incentive Fee (CPIF) contract for the SDD phase to develop and demonstrate a production representative AAG at the NAVAIR Lakehurst Jet Car and Runway Aircraft Landing test sites. After successful demonstration of the production representative AAG, the Navy will award Fixed Price Incentive Fee (FPIF) contracts for production quantities.

CREI: The Navy will competitively award a prototype contract of a commercial fluid. The Navy will laboratory test commercial samples and then award and test one engines worth of fluid.

UNCLASSIFIED

# UNCLASSIFIED

## CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 1)								DATE: <b>February 2003</b>				
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
<b>RDT&amp;E, N / BA-5</b>			0604512N Shipboard Aviation Systems			W2232 CV Launch & Recovery Systems						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 03 Cost	FY 03 Award Date	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Primary H/W Development (AAG)	C/CPAF	TBD		8.968	06/03	10.971	11/03				19.939	19.939
Primary H/W Development (AAG)	C/CPIF	TBD						19.923	11/04		19.923	19.923
Primary H/W Development (AAG)	WX	NAWCAD, Lakehurst		1.199	11/02	1.223	11/03	1.247	11/04		3.669	
Primary H/W Development (VISUAL)	C/CPIF	DRS / Anaheim, CA	21.586	5.750	11/02	0.794	11/03				28.130	28.130
Primary H/W Development (VISUAL)	WX	NAWCAD, Lakehurst		0.050	11/02						0.050	
Primary H/W Development (MWS)	CPIF/FP	QPI / Fredricksburg, VA	1.541	1.320	11/02						2.861	2.861
Primary H/W Development (MWS)	WX	NAWCAD, Lakehurst		0.135	11/02					Continuing	Continuing	
Systems Engineering	WX	NAWCAD, Lakehurst	45.625	5.486	11/02	4.593	11/03	3.775	11/03		59.479	
(MWS/CREI/VISUAL/AAG/ALRCS)												
Systems Engineering (VISUAL/MWS)	WX	NAWCAD, Patuxent River	0.307								0.307	
Systems Engineering (VISUAL)	WX	NSWC, Crane IN	1.800								1.800	
Subtotal Product Development			70.859	22.908		17.581		24.945		Continuing	Continuing	
Remarks: A portion of the FY03 AAG funding will be carried over to FY04, given the late FY03 CTD contract award. The AAG budget profile may be revised, once the contract(s) are finalized.												
Development Support												
Software Development												
Integrated Logistics Support												
Configuration Management												
Technical Data												
Studies & Analyses												
GFE												
Award Fees												
Subtotal Support												
Remarks:												

# UNCLASSIFIED

## CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 2)								DATE: <b>February 2003</b>				
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-5</b>			PROGRAM ELEMENT 0604512N Shipboard Aviation Systems			PROJECT NUMBER AND NAME W2232 CV Launch & Recovery Systems						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 03 Cost	FY 03 Award Date	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	WX	NAWCAD Lakehurst, NJ		0.828	11/02	0.350	11/03				1.178	
Operational Test & Evaluation	WX	NAWCAD Lakehurst, NJ				0.100	11/03				0.100	
GFE												
Award Fees												
Subtotal T&E				0.828		0.450					1.278	
Remarks:												
Program Management Support	RX	NAWCAD Patuxent Rv, MD		0.214	03/03	0.216	05/04	0.220	05/05	Continuing	Continuing	
Travel	WX	NAWCAD Patuxent Rv, MD		0.045	11/02	0.045	10/03	0.045	10/04	Continuing	Continuing	
Travel	WX	NAWCAD Lakehurst, NJ		0.080	11/02	0.060		0.045	10/04		0.185	
Subtotal Management				0.339		0.321		0.310		Continuing	Continuing	
Remarks:												
Total Cost			70.859	24.075		18.352		25.255		Continuing	Continuing	
Remarks:												

R-1 SHOPPING LIST - Item No. 115

UNCLASSIFIED

Exhibit R-3, Project Cost Analysis  
(Exhibit R-3, page 8 of 18)



UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R4, Schedule Profile																								DATE:											
APPROPRIATION/BUDGET ACTIVITY												PROGRAM ELEMENT NUMBER AND NAME												PROJECT NUMBER AND NAME											
RDT&E, N / BA-5												0604512N Shipboard Aviation Systems												W2232 CV Launch & Recovery Systems											
Fiscal Year	2002				2003				2004				2005				2006				2007				2008				2009						
	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							
<b>VISUAL Acquisition Milestones</b>																																			
Prototype Phase	System Development & Demonstration																																		
System Development																																			
EDM Delivery																																			
Software (delivered with system)																																			
<b>VISUAL Test &amp; Evaluation Milestones</b>																																			
Development Test																																			
Operational Test																																			
<b>VISUAL Production Milestones</b>																																			
FY04 Option																																			
FY05 Option																																			
FY06 Option																																			
FY07 Option																																			
FY08 Option																																			
FY09 Option																																			
Deliveries																																			

R-1 SHOPPING LIST - Item No.

115

\* Not required for Budget Activities 1, 2, 3, and 6

UNCLASSIFIED

Exhibit R-4, Schedule Profile  
(Exhibit R-4, page 9 of 18)

# UNCLASSIFIED

## CLASSIFICATION:

Exhibit R-4a, Schedule Detail						DATE: February 2003			
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT				PROJECT NUMBER AND NAME			
RDT&E, N / BA-5		0604512N Shipboard Aviation Systems				W2232 CV Launch & Recovery Systems			
Schedule Profile - VISUAL		FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
CV	Quality Design and Build	1Q-4Q							
CV	Test Readiness Review (TRR)	4Q							
CV	Eng Dev Model (EDM) CV1 Delivery - Lab		1Q						
CV	Developmental Testing (DT-IIA)		1Q-3Q						
CV	Functional Configuration Audit (FCA)		1Q						
CV	Eng Dev Model (EDM) CV2 Delivery - Shipboard		1Q						
CV	Developmental Testing (DT-IIB)(TECHEVAL)		2Q-4Q						
CV	Operational Testing (OT-IIA)		2Q						
CV	Operational Evaluation (OT-IIB) (OPEVAL)			1Q					
CV	Preproduction Readiness Review (PRR)			2Q					
CV	Milestone C (MS C)			3Q					
CV	Full Rate Production (FRP) Decision			3Q					
CV	IOC					1Q			
CV	First Deployment					1Q			
CV	Physical Configuration Audit (PCA)				4Q				
LH	Contract Award		2Q						
LH	Combined PDR/CDR		3Q						
LH	Quality Design and Build		3Q-4Q	1Q					
LH	Test Readiness Review (TRR)			3Q					
LH	Eng Dev Model (EDM) LH1 Delivery - Lab			3Q					
LH	Developmental Testing (DT-IIA)			3Q-4Q					
LH	Functional Configuration Audit (FCA)			3Q					
LH	Eng Dev Model (EDM) LH2 Delivery - Shipboard			3Q					
LH	Developmental Testing (DT-IIB) (TECHEVAL)			3Q-4Q					
LH	Operational Testing (OT-IIA)			3Q					
LH	Operational Evaluation (OT-IIB) (OPEVAL)				1Q				
LH	Preproduction Readiness Review (PRR)				2Q				
LH	Milestone C (MS C)				3Q				
LH	Full Rate Production (FRP) Decision				3Q				
LH	IOC						2Q		
LH	First Deployment						2Q		
LH	Physical Configuration Audit (PCA)						1Q		

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R4, Schedule Profile																								DATE:				February 2003				
APPROPRIATION/BUDGET ACTIVITY								PROGRAM ELEMENT NUMBER AND NAME												PROJECT NUMBER AND NAME												
RDT&E, N / BA-5								0604512N Shipboard Aviation Systems												W2232 CV Launch & Recovery Systems												
Fiscal Year	2002				2003				2004				2005				2006				2007				2008				2009			
	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				
AAG Acquisition Milestones							MS A					MS B																	MS C			
Acquisition Phase							CTD Phase				System Development & Demonstration																					
Program Events						RFP		SRR		PDR			CDR	CDR						Equipment Delivery												
							Contract Award (2)						Option Award (1)																			
AAG Test & Evaluation Milestones																																

R-1 SHOPPING LIST - Item No. 115

\* Not required for Budget Activities 1, 2, 3, and 6

UNCLASSIFIED

**UNCLASSIFIED**

**CLASSIFICATION:**

[illegible]

R-1 SHOPPING LIST - Item No. 115

**UNCLASSIFIED**

**Exhibit R-4a, Schedule Detail**  
(Exhibit R-4a, page 12 of 18)

# UNCLASSIFIED

## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE: <b>February 2003</b>	
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-5</b>		PROGRAM ELEMENT NUMBER AND NAME 0604512N Shipboard Aviation Systems			PROJECT NUMBER AND NAME W9071 Aviation Shipboard Information Technology			
COST (\$ in Millions)	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Project Cost	1.710	1.956						
RDT&E Articles Qty								

### 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 is funded under SDD because it encompasses engineering development and demonstration of new end-items prior to production approval decision. This program includes concept exploration and system development and demonstration of shipboard aviation data management systems required to automate manual processes during aviation operations on board aircraft carriers under Project W9071:

- (U) Shipboard Aviation Data Management System Initiative: This initiative will use state-of-the-art information technology and decision support systems to automate the current manual intensive process in collecting and distributing information to enable aviation operations on board aircraft carriers to be accomplished in a more efficient and effective manner.

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE: <b>February 2003</b>	
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-5</b>	PROGRAM ELEMENT NUMBER AND NAME 0604512N Shipboard Aviation Systems	PROJECT NUMBER AND NAME W9071 Aviation Shipboard Information Technology		
<b>(U) B. Accomplishments/Planned Program</b>				
	FY 02	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	1.710	1.956		
RDT&E Articles Quantity				
<div><b>Shipboard Aviation Information Technology</b> Defined and documented overall system requirements and system architecture for future development, test, production and shipboard installation. Develop prototype software architecture and prototype flight deck management applications.</div>				

# UNCLASSIFIED

## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE: <b>February 2003</b>																																																																							
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-5</b>	PROGRAM ELEMENT NUMBER AND NAME 0604512N Shipboard Aviation Systems	PROJECT NUMBER AND NAME W9071 Aviation Shipboard Information Technology																																																																								
<p><b>(U) C. PROGRAM CHANGE SUMMARY:</b></p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;"></th> <th style="text-align: right;">FY 2002</th> <th style="text-align: right;">FY 2003</th> <th style="text-align: right;">FY 2004</th> <th style="text-align: right;">FY 2005</th> </tr> </thead> <tbody> <tr> <td>(U) Funding:</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Previous President's Budget:</td> <td style="text-align: right;">1.735</td> <td style="text-align: right;">0.000</td> <td></td> <td></td> </tr> <tr> <td>Current BES/President's Budget</td> <td style="text-align: right;">1.710</td> <td style="text-align: right;">1.956</td> <td></td> <td></td> </tr> <tr> <td>Total Adjustments</td> <td style="text-align: right; border-top: 1px solid black;">-0.025</td> <td style="text-align: right; border-top: 1px solid black;">1.956</td> <td style="text-align: right; border-top: 1px solid black;">0.000</td> <td style="text-align: right; border-top: 1px solid black;">0.000</td> </tr> <tr> <td colspan="5" style="padding-top: 10px;">Summary of Adjustments</td> </tr> <tr> <td>    Congressional program reductions</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>    Congressional undistributed reductions</td> <td></td> <td style="text-align: right;">-0.012</td> <td></td> <td></td> </tr> <tr> <td>    Congressional rescissions</td> <td style="text-align: right;">-0.004</td> <td></td> <td></td> <td></td> </tr> <tr> <td>    SBIR/STTR Transfer</td> <td style="text-align: right;">-0.020</td> <td></td> <td></td> <td></td> </tr> <tr> <td>    Economic Assumptions</td> <td style="text-align: right;">-0.005</td> <td style="text-align: right;">-0.032</td> <td></td> <td></td> </tr> <tr> <td>    Reprogrammings</td> <td style="text-align: right;">0.004</td> <td></td> <td></td> <td></td> </tr> <tr> <td>    Congressional increases</td> <td></td> <td style="text-align: right;">2.000</td> <td></td> <td></td> </tr> <tr> <td>    Subtotal</td> <td style="text-align: right; border-top: 1px solid black; border-bottom: 1px solid black;">-0.025</td> <td style="text-align: right; border-top: 1px solid black; border-bottom: 1px solid black;">1.956</td> <td style="text-align: right; border-top: 1px solid black; border-bottom: 1px solid black;">0.000</td> <td style="text-align: right; border-top: 1px solid black; border-bottom: 1px solid black;">0.000</td> </tr> </tbody> </table> <p style="margin-top: 20px;">(U) Schedule: Not Applicable</p> <p style="margin-top: 20px;">(U) Technical: Not Applicable</p>						FY 2002	FY 2003	FY 2004	FY 2005	(U) Funding:					Previous President's Budget:	1.735	0.000			Current BES/President's Budget	1.710	1.956			Total Adjustments	-0.025	1.956	0.000	0.000	Summary of Adjustments					Congressional program reductions					Congressional undistributed reductions		-0.012			Congressional rescissions	-0.004				SBIR/STTR Transfer	-0.020				Economic Assumptions	-0.005	-0.032			Reprogrammings	0.004				Congressional increases		2.000			Subtotal	-0.025	1.956	0.000	0.000
	FY 2002	FY 2003	FY 2004	FY 2005																																																																						
(U) Funding:																																																																										
Previous President's Budget:	1.735	0.000																																																																								
Current BES/President's Budget	1.710	1.956																																																																								
Total Adjustments	-0.025	1.956	0.000	0.000																																																																						
Summary of Adjustments																																																																										
Congressional program reductions																																																																										
Congressional undistributed reductions		-0.012																																																																								
Congressional rescissions	-0.004																																																																									
SBIR/STTR Transfer	-0.020																																																																									
Economic Assumptions	-0.005	-0.032																																																																								
Reprogrammings	0.004																																																																									
Congressional increases		2.000																																																																								
Subtotal	-0.025	1.956	0.000	0.000																																																																						

R-1 SHOPPING LIST - Item No. 115

UNCLASSIFIED

**UNCLASSIFIED**

**CLASSIFICATION:**

EXHIBIT R-2a, RDT&E Project Justification							DATE:			
							February 2003			
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT NUMBER AND NAME			PROJECT NUMBER AND NAME				
RDT&E, N / BA-5			0604512N Shipboard Aviation Systems			W9071 Aviation Shipboard Information Technology				
(U) D. OTHER PROGRAM FUNDING SUMMARY:										
<u>Line Item No. &amp; Name</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	To <u>Complete</u>	Total <u>Cost</u>
Not Applicable										
(U) E. ACQUISITION STRATEGY:										
NAWCAD Lakehurst activity defined requirements and system architecture with engineering support from industry as required. FY03 strategy to develop prototype software architecture and prototype flight deck management applications. Follow on strategy to develop, test, and produce system will be determined upon identification of follow on funding.										

R-1 SHOPPING LIST - Item No. 115

**UNCLASSIFIED**



# UNCLASSIFIED

## CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 1)								DATE: <b>February 2003</b>				
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-5</b>			PROGRAM ELEMENT 0604512N Shipboard Aviation Systems			PROJECT NUMBER AND NAME W9071 Aviation Shipboard Information Technology						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 03 Cost	FY 03 Award Date	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Systems Engineering	WX	NAWCAD Lakehurst, NJ	1.710	1.956	01/03						3.666	
Subtotal Product Development			1.710	1.956		0.000		0.000		0.000	3.666	
Remarks:												
Development Support												
Software Development												
Integrated Logistics Support												
Configuration Management												
Technical Data												
Studies & Analyses												
GFE												
Award Fees												
Subtotal Support			0.000	0.000		0.000		0.000		0.000	0.000	
Remarks:												

UNCLASSIFIED

CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 2)								DATE: February 2003				
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
RDT&E, N / BA-5			0604512N Shipboard Aviation Systems			W9071 Aviation Shipboard Information Technology						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 03 Cost	FY 03 Award Date	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation												
Operational Test & Evaluation												
Live Fire Test & Evaluation												
Test Assets												
Tooling												
GFE												
Award Fees												
Subtotal T&E			0.000	0.000		0.000		0.000		0.000	0.000	
Remarks:												
Contractor Engineering Support												
Government Engineering Support												
Program Management Support												
Travel												
Transportation												
SBIR Assessment												
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	
Remarks:												
Total Cost			1.710	1.956		0.000		0.000		0.000	3.666	
Remarks:												

R-1 SHOPPING LIST - Item No. 115

UNCLASSIFIED