CLASSIFICATION:

UNCLASSIFIED

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EXHIBIT R-2, RDT&E Budget Item Justification	n					DATE:	
						Febru	uary 2004
APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMEN	NCLATURE		
RESEARCH DEVELOPMENT TEST & EVALU	JATION, NAVY / BA	A-4		Combat Systems	Integration/Battle F	orce Interoperability	0603582N
COST (\$ in Millions)	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Total PE Cost	57.957	97.969	80.840	40.396	37.330	33.099	33.465
Combat Systems Integ 0164/9356/9357	57.957	97.969	80.840	40.396	37.330	33.099	33.465

Defense Emergency Response Funds (DERF) Funds: Not Applicable.

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

Project 0164/9356/9357: Combat Systems Integration/Battle Force Interoperability:

COMNAVSEASYSCOM (SEA 06) was assigned central responsibility for interoperability by CNO MSG DTG 021648Z May 1998 to develop policy and architecture for Strike Force warfare systems engineering, implement a common warfare systems engineering process and provide top level direction for fielding and support of balanced combat systems for ships and submarines. SEA 06 has responded with processes and tools to include: establishment of a force-level warfare systems engineering process, stewardship of the Fleet Response Plan configuration management and certification process per CINCLANTFLT/CINCPACFLT Inst. 4720.3A, and force-level interoperability assessment efforts using the Distributed Engineering Plant (DEP) land-based testing tool. This project funds the core elements needed to execute CINC direction.

This project funds: Strike Force (SF) requirements engineering and analysis. SF configuration management through the Fleet Response Plan (FRP), shore based testing and Combat System Integration Testing (CSIT) certification of operational computer systems in a test environment similar to their ultimate shipboard operational environment, and Strike Force interoperability testing (SFIT) which is a prerequisite for operational Certification of the Sstrike Force configuration prior to deployment. SFIT Certification of deploying Strike Force configurations is accomplished through the utilization of the Navy's Distributed Engineering Plant (DEP), which provides operational configurations for all combat system configurations located at multiple Navy land-based sites located across the country and connected via ATM networking technology. The DEP provides the only opportunity for comprehensive interoperability testing of combat system and C4I configuration items prior to shipboard delivery for operational use in surface combatant platforms and battle group units. It is a CINC requirement that all Battle Forces undergo Strike Force Interoperability Testing (SFIT) in the DEP prior to deployment.

Through the implementation of CINCLANTFLT/CINPACFLT Instruction 4720.3A, the Navy has made considerable improvements in Battle Force Interoperability. A key milestone in the Fleet Response Plan (FRP) is the Strike Force Interoperability Testing (SFIT) that occurs 10-12 months prior to deployment. By utilizing the Distributed Engineering Plant, SEA 06 has been able to identify recurring interoperability problems, which have then been prioritized into 21 main categories by Strike Group Commanders and their staffs. SEA 06 has prioritized possible interoperability fixes and coordinated with combat system managers to identify the fix path to resolve the interoperability problems. DEPSECDEF Guidance issued in October 2001 directs the Services to resolve interoperability problems in legacy combat systems by FY08 and develop metrics to evaluate operational improvements associated to those corrections.

Additionally, this project funds Navy's implementation of improvements to specific combat systems as required to correct interoperability problems as necessary to achieve a Single Integrated Air Picture (SIAP). The Joint community has established guideliness for problem corrections, to be addressed in incremental Blocks designed to improve the SIAP. A SIAP is the product of fused, near-real-time and real-time data from multiple sensors to allow development of common, continuous, and unambiguous tracks of all airborne objects in the surveillance area.

R-1 SHOPPING LIST - Item No.

54

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE:
			February 2004
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAM	ME
RDT&E, N/BA-4	0603582N CSI/BFI	0164/9356/9357 CSI/BFI	

B. Accomplishments/Planned Program

FRP	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	6.696	7.391	7.159
RDT&E Articles Quantity	N/A	N/A	N/A

Continue execution of the FRP for all Strike Groups in the deployment cycle, including: SFAO efforts, SG Change Control Process, SG Capabilities and Limitations Report and Engineering assessments. Continue configuration management for all strike groups. Continue development of AMPS and Electronic Configuration Control Board (ECCB). In any given year, 12+ Strike Forces are being evaluated in some phase of the Fleet Response Plan (FRP), 27 Capabilties and Limitations Documents are delivered, and 6000 configuration change requests are processed.

CSIT	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	11.028	11.285	10.885
RDT&E Articles Quantity	N/A	N/A	N/A

Conducted Combat System Integration Testing (CSIT) of Advanced Combat Direction System (ACDS) Block-0, level 10.24.X, ACDS Block-1 2.1.8, Combat Direction System (CDS) level 12.X/13.X in CV/CVN, LSD, and LHD ship classes, SSDS MK-2, Mod 0, and Command and Control Processor (C2P) upgrade. Continued planning for out-year Combat System Integration Testing (CSIT). Conduct Combat System Integration Testing (CSIT) of Ship Self Defense System (SSDS) MK-2 Mods 1-2 combat systems and associated elements for CV/LHD/LHA/LPD ship classes and Test Bed Validation. Continue planning for out-year Combat System Integration Testing (CSIT).

JDEP	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	5.100	4.697	5.331
RDT&E Articles Quantity	N/A	N/A	N/A

Funds Navy participation in Joint Distributed Engineering Plant (JDEP) and related land-based test events. The Defense Planning Guidance (DPG) updated for FY 2002-2007 states: the JDEP program was established as a DoD-wide effort to link existing service and joint combat system engineering and test sites. The JDEP is the lead infrastructure used for the evaluation of coordinated, joint engineering events, which include the validation of next-generation algorithms implementing the Single Integrated Air Picture (SIAP). Funds support Navy participation in JDEP approved test events and test bed improvements needed to conduct testing. In FY2004-2005, modelling and simulation improvements are also planned events include Integrated Fire Control, Defense of Korea, and SIAP Combined events.

SFIT/DEP	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	12.281	18.008	16.814
RDT&E Articles Quantity	N/A	N/A	N/A

Provided Distributed Engineering Plant (DEP) Testbed to support land based testing of complex computer program configurations for the Strike Force. Conduct Strike Group Interoperability Testing (SGIT) for ABRAHAM LINCOLN, GEORGE WASHINGTON, KITTY HAWK, HARRY S. TRUMAN, NIMITZ, and CONSTELLATION Strike Groups. Conducted Interoperability Systems Engineering Tests (ISETs) for root cause determination of key interoperability trouble report observation. Funded Navy participation in Joint Distributed Engineering Plant (JDEP). Provide Distributed Engineering Plant (DEP) testbed to support land-based testing of complex computer program configurations for the Strike Force. Conduct Strike Force Interoperability Testing (SFIT) in FY03 for ENTERPRISE, CARL VINSON, GEORGE WASHINGTON, HARRY S. TRUMAN, JOHN F. KENNEDY and THEODORE ROOSEVELT Strike Groups; in FY04 for JOHN C. STENNIS, ABRAHAM LINCOLN, HARRY S. TRUMAN, and RONALD REAGAN Strike Groups; in FY05 NIMITZ, THEODORE ROOSEVELT, and ENTERPRISE, DWIGHT EISENHOWER and JOHN F. KENNEDY Strike Groups.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE:
		February 2004
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E,N/BA-4	0603582N CSI/BFI	0164/9356/9357 CSI/BFI

B. Accomplishments/Planned Program (Cont.)

SF Requirements Engineering and Analysis	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	3.892	4.188	3.856
RDT&E Articles Quantity	N/A	N/A	N/A

Continued to develop Design Reference Mission (DRM) to communicate requirements in their operational context. Continue to evolve Strike Force Interoperability Requirements (SFIR) to ensure the ability of the Strike Force to evaluate progressive levels of operational performance and system interoperability. Continue to test and evaluate interoperability of deploying Battle Forces to assess performance improvements. Develop data sets that can be used to apply quantifiable and measurable Strike Force Interoperability Requirements to an Over-Arching Requirements Document or Capstone Requirements Document (CRD) for use by combat system and C4I acquisition programs.

Interoperability Fixes	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	0.000	13.841	1.795
RDT&E Articles Quantity	N/A	N/A	N/A

There are currently 558 unresolved unique interoperability problems identified through SFIT and SGSIT testing and prioritized by the Fleet into 21 categories. Funding is dedicated to develop and implement interoperability fixes to AEGIS and ACDS combat systems, and to validate and certify completed ACDS and AEGIS fixes at the platform and Stike Force level through land-based testing. In accordance with DEPSECDEF Guidance of Oct 2001, interoperability problem corrections are evaluated according to their ability to improve the operational performance of deploying Strike Forces. In FY04 the HARRY S. TRUMAN, NIMITZ, and ENTERPRISE Strike Groups will receive fixes addressing approximately 130 of the Fleet's top issues. Systems impacted include C2P, CEC 2.1, ACDS Block 0, FFG CDS, Auto ID, and AWS 6.3.

Navy SIAP Improvements	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	0.000	1.698	0.000
RDT&E Articles Quantity	N/A	N/A	N/A

Navy implementation of combat system corrections as needed to affect a Single Integrated Air Picture (SIAP). Combat systems includes AEGIS.

CLASSIFICATION:

analysis, and conceptual operation/design of MDTEC.

			DATE: February 2004
PROGRAM ELEMENT NUMBER	R AND NAME	PROJECT NUMBER AND	
0603582N CSI/BFI		0164/9356/9357	
	EV 03	EV 04	FY 05
		l .	35.000
	N/A	N/A	N/A
	FY 03	FY 04	FY 05
	0.000	0.000	0.000
l 	N/A	N/A	N/A
			5/05
	FY 03 0.489	FY 04 0.000	FY 05
			0.000
	N/A	0.000 N/A	0.000 N/A
extitute.			
ititute.	N/A FY 03	N/A FY 04	N/A FY 05
ititute.	N/A	N/A	N/A
		P Common Network Interface Capabilities for theater and air FY 03 N/A P Common Network Interface Capabilities for theater and air FY 03 0.000 N/A Multiplexed Beamformer.	FY 03

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification					DATE:	
						February 2004
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NU	MBER AND NAME		PROJECT NUMBER		
RDT&E,N/BA-4	0603582N CSI/BFI		(164/9356/9357 CSI/	/BFI	
C. PROGRAM CHANGE SUMMARY:						
Funding:		FY 2003	FY 2004	FY 2005		
Previous President's Budget: (FY 04 Pres Con		57.048	86.836	48.439		
Current BES/President's Budget: (FY05 President's Budget: (FY05 Presid	lent's Controls)	57.957	97.969	80.840		
Total Adjustments		0.909	11.133	32.401		
Summary of Adjustments						
Economic Rescission						
Programmatic Adjustements				33.235		
Congressional Action			11.133			
Reprogrammings		-0.909				
Rate Changes				-0.687		
Inflation Adjustments				-0.147		
Subtotal		-0.909	11.133	32.401		
Schedule:						
See R4/R4A Schedule.						
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R-1 SHOPPING LIST - Item No. 54

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE:
			February 2004
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND N	AME
RDT&E,N/BA-4	0603582N CSI/BFI	0164/9356/9357 CSI/BFI	

D. OTHER PROGRAM FUNDING SUMMARY:

Not Applicable

Related RDT&E: Computer programs developed under these programs are tested in their integrated configuration.

PE 0204571N (Consolidated Training Systems Development)

PE 0205620N (Surface ASW Combat System Technology)

PE 0603382N (Advanced Combat System Technology)

PE 0603755N (Ship Self Defense Dem/Val)

PE 0603658N (Cooperative Engagement Capability)

PE 0604307N (AEGIS Combat Systems Engineering)

PE 0604755N (Ship Self Defense - EMD)

PE 0604518N (CIC Conversion/Common Command and Decision)

PE 0603879N (Single Integrated Air Picture)

PE 0605853N (CHENG)

E. ACQUISITION STRATEGY:

Not Applicable

F. MAJOR PERFORMERS:

Naval Surface Warfare Center, Port Hueneme, CA - Combat System Integration Testing/Strike Force Interoperability effort.

Naval Surface Warfare Center, Dahlgren Division, VA - Distributed Engineering Plant (DEP), Strike Force Interoperability Requirements (SFIR), and Strike Force Interoperability Operational Advisory Group (SFI OAG) efforts.

Digital Systems Resources, Inc. (DSR), Fair Lakes, VA- Prime contractor for Common Command and Decision (CC&D)

R-1 SHOPPING LIST - Item No. 54

CLASSIFICATION:

								DATE:									
Exhibit R-3 Cost Analysis (pa							February 2004										
APPROPRIATION/BUDGET ACTIVITY						PROJECT N	UMBER AND	NAME									
RDT&E,N/BA-4						0164/9356/9											
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					
Combat Sys Integ Testing/SQI	WR/RC	NSWC PHD	7.250	6.909	10/02	8.600	10/03	7.930	10/04	CONT.	CONT.						
Combat Sys Integ Testing/SQI	WR/RC	NSWC DD								CONT.	CONT.						
Combat Sys Integ Testing/SQI	WR/RC	VARIOUS	1.778	1.741	10/02	1.914	10/03	1.930	10/04	CONT.	CONT.						
FRP	WR/RC	NSWC PHD	4.390	2.520	10/02	5.654	10/03	5.281	10/04	CONT.	CONT.						
FRP	WR/RC	NSWC DD								CONT.	CONT.						
FRP	WR/RC/PD	VARIOUS	1.308	1.380	10/02	1.737	10/03	1.666	10/04	CONT.	CONT.						
JDEP	WR/RC	NSWC DD		4.400	10/02	3.250	10/03	3.331	10/04	CONT.	CONT.						
JDEP	WR/RC	VARIOUS		0.700	10/02	1.447	10/03	2.000	10/04	CONT.	CONT.						
DEP/BGIT Cert	WR/RC	NSWC DD	20.331	10.325	10/02	15.302	10/03	11.447	10/04	CONT.	CONT.						
DEP/BGIT Cert	WR/RC/PD	VARIOUS	2.204	1.395	10/02	2.390	10/03	1.890	10/04	CONT.	CONT.						
WOMBAT	WR/RC	NSWC CRANE	1.948	0.000		0.000		0.000		CONT.	CONT.						
SFI Requirements	WR/RC	NSWC DD	1.052	1.686	10/02	2.446	10/03	1.949	10/04	CONT.	CONT.						
SFI Requirements	WR/RC/PD	VARIOUS	1.616	1.513	10/02	1.742	10/03	1.653	10/04	CONT.	CONT.						
Combat System Fixes	WR/RC	NSWC DD	N/A	N/A		7.273	10/03	0.795	10/04	CONT.	CONT.						
Combat System Fixes	WR/RC	VARIOUS	N/A	N/A		0.000		0.000		CONT.	CONT.						
Combat System Fixes	WR/RC	NSWC DD-CDSA D	ı N/A	N/A		1.000	10/03	0.500	10/04	CONT.	CONT.						
Combat System Fixes	WR/RC	VARIOUS	N/A	N/A		0.000		0.000		CONT.	CONT.						
Fix Validation Testing	WR/RC	NSWC DD	N/A	N/A		1.500	10/03	0.500	10/04	CONT.	CONT.						
CNI	WR/RC	NSWC DD	0.000	0.000		0.000		4.000		CONT.	CONT.						
CNI Contract	VARIOUS	VARIOUS	16.320	15.230	11/02	24.742	11/03	31.000	11/04	CONT.	CONT.						
Contract Engineering Support	VARIOUS	VARIOUS	4.157	5.119	11/02	3.738	11/03	3.618	11/04	CONT.	CONT.						
Contract Program Mgt Support	VARIOUS	VARIOUS	1.450	1.109	11/02	1.167	11/03	1.100	11/04	CONT.	CONT.						
Single Integrated Air Picture	VARIOUS	VARIOUS	0.000	0.000		1.698	12/03	0.000		CONT.	CONT.						
HEL Activities	VARIOUS	VARIOUS	0.000	1.567	02/03	4.405	03/04	0.000		CONT.	CONT.						
HEL Contracts	VARIOUS	VARIOUS	0.000	1.674	02/03	7.714	03/04	0.000		CONT.	CONT.						
USMC	VARIOUS	VARIOUS	0.000	0.489		0.000		0.000		CONT.	CONT.						
Travel		NAVSEA TRAVEL	0.100	0.200	09/03	0.250	09/04	0.250	09/05	CONT.	CONT.						
										CONT.	CONT.						
Subtotal Product Development			63.904	57.957		97.969		80.840		CONT.	CONT.						

Remarks:

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Exhibit R-4a, Schedule Detail					DATE:	Cobrus	om. 2004				
APPROPRIATION/BUDGET ACTIVITY	IDDOCDAA	I ELEMENT		IDDO IECT	February 2004						
				PROJECT NUMBER AND NAME S0164/S2865/S2763 CSI/BFI							
RDT&E,N/BA-4	0603582N		EV 000E			F)/ 0000					
Schedule Profile	FY 2003		FY 2005	FY 2006	FY 2007	FY 2008	FY 2009				
ABRAHAM LINCOLN FIT	20	2/3Q									
GEORGE WASHINGTON FIT	3Q 3Q										
KITTY HAWK FIT	3Q	0/00									
HARRY S. TRUMAN FIT		2/3Q									
NIMITZ FIT		3Q									
CONSTELLATION FIT	10										
THEODORE ROOSEVELT FIT	1Q		3Q								
ENTERPRISE FIT	2Q	4Q									
CARL VINSON FIT	1Q										
JOHN F. KENNEDY FIT		1Q	4Q								
JOHN C. STENNIS FIT	3Q										
RONALD REAGAN FIT			2Q								
DWIGHT EISENHOWER FIT											
LHA 1/5 CSIT		1Q									
FFG 7 CSIT	2Q/3Q										
CVN 76 CSIT	4Q	1/2/3/4Q	1Q/2Q								
LSD 41/49 CSIT		2Q	3Q/4Q								
LPD 17 CSIT		3Q/4Q	1Q/2Q								
FFG 7 LEVEL 13 CSIT		1Q/2Q									
CVN 72 CSIT	4Q	2Q									
FFG 7 LEVEL 12 CSIT		2Q/3Q									
LHD 4/5 CSIT		2Q/3Q									
SSDS MK2 MOD1 CSIT(CVN 68)		3Q									
LHA 2/4 CSIT			2Q/3Q								
CVN 74 CSIT			1Q								
CV67 CSIT			2Q								
CV63, CVN 65/71/73 CSIT		3Q/4Q									
CV 63/CVN 72			3Q								
SSDS MK2 MOD 1 CSIT (CVN 69)			1Q								
LHD 7 CSIT		1Q									
LHD 2/3/6 CSIT			2Q/3Q								
CVN 75 SSDS MK2 MOD 1A CSIT			4Q	1Q							
LHD 1/5 CSIT				1Q							
LPD 17/18/19/20 CSIT				2Q/3Q							
LHD 8 CSIT				3Q/4Q	4Q	1Q/2Q					
NAVY JOINT TEST	4Q	1Q/4Q	4Q								

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EXHIBIT R4, Schedule Profile							DATE:	Fahrus	arv 200	1				
APPROPRIATION/BUDGET ACTIVITY	l P	PROGRAM ELEMENT NUMBER AND NAME PROJECT NUMBER AND NAME												
RDT&E,N/BA-4		0603582N CSI/BFI S0164/S2865/S2763 CSI/BFI												
		2000								201				
Fiscal Year		2003					200)4		2005				
Quarter		1	2	3	4	1	2	3	4	1	2	3	4	
LSD 41/49 CSIT														
LPD 17 CSIT										<u> </u>				
FFG 7 LEVEL 13 CSIT														
CVN 72 CSIT							\triangle							
FFG 7 LEVEL 12 CSIT														
LHD 4/5 CSIT														
SSDS MK2 MOD1 CSIT(CVN 68)														
LHA 2/4 CSIT														
CV 63 - CVN 65/71/73														
CVN 74 CSIT										\triangle				
CV63/CVN72 CSIT												\triangle		
SSDS MK2 MOD 1 CSIT (CVN 69)														
CV 67 CSIT														
LHD 7 CSIT														
LHD 2/3/6 CSIT														
CVN 75 SSDS MK2 MOD 1A CSIT							T Itom I		5 1		1-11-14			

UNCLASSIFIED

54 **Exhibit R-4 RDTEN** (Exhibit R-4, page 9 of 10)

EXHIBIT R4, Schedule Profile							DATE:							
APPROPRIATION/BUDGET ACTIVITY RDT&E,N/BA-4		PROGRAM ELEMENT NUMBER AND NAME 0603582N CSI/BFI PROJECT NUMBER AND NAME S0164/S2865/S2763 CSI/BFI												
				03			200			2005				
Fiscal Year	 			Ι								<u> </u>		
Quarter		1	2	3	4	1	2	3	4	1	2	3	4	
Lincoln FIT							۷							
GW FIT														
Kitty Hawk FIT														
Truman FIT							_	ightharpoons						
Constellation FIT														
Nimitz FIT														
Roosevelt FIT														
Enterprise FIT														
Vinson FIT														
JFK FIT														
Stennis FIT														
Reagan FIT											\triangle			
Eisenhower FIT														
LHA 1/3/5 CSIT														
FFG 7 CSIT														
CVN 76 CSIT						<u> </u>		I	<u> </u> 					
NAVY JOINT TEST						ING LIS		<u> </u>	54				\triangle	

UNCLASSIFIED

Exhibit R-4 RDTEN (Exhibit R-4,page10 of 10)