Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Navy

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

1319: Research, Development, Test & Evaluation, Navy

PE 0603582N: Combat System Integration

BA 4: Advanced Component Development & Prototypes (ACD&P)

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	62.472	22.444	24.344	0.000	24.344	26.181	25.516	25.267	23.942	Continuing	Continuing
0164: Combat System Integration	62.472	22.444	24.344	0.000	24.344	26.181	25.516	25.267	23.942	Continuing	Continuing

A. Mission Description and Budget Item Justification

A. MISSION DESCRIPTION:

Project 0164: Combat System Integration:

COMNAVSEASYSCOM (SEA 05H) is assigned central Navy responsibility for interoperability, directing the development of policy and architecture for Strike Force (SF) warfare systems engineering and implementation of a common warfare systems engineering process. Furthermore, SEA 05H provides top level direction and execution for certification and assessments which support capability and quality for ships and submarines. SEA 05H has developed processes and tools including the establishment of a force-level warfare systems engineering process, stewardship of the introduction of Combat Systems, Command, Control, Computers, Communications and Intelligence (C5I) modernization and improvement into the Fleet Response Plan (FRP), Command & Control, Communications, Computers, & Combat Systems Integration Modernization Process (C5IMP), configuration management and certification processes, and force-level interoperability assessments using the Distributed Engineering Plant (DEP) land-based testing tool. This project funds the core elements required to conduct Warfare Systems Integration and Interoperability Testing (WSI2T) in accordance with the Naval Warfare Systems Certification Policy (NWSCP), Joint NAVSEA, NAVAIR, and SPAWAR SYSCOM Instruction.

This project funds SF configuration management through the FRP, shore based testing and WSI2T certification of operational computer systems in a test environment similar to their ultimate shipboard operational environment, and interoperability assessments (IA) which are a prerequisite for operational certification of the ships in SF configurations prior to deployment. Force Certification of deploying ships in SF configurations is accomplished through the utilization of the Navy's DEP, which provides operational configurations for all Naval combat systems located at multiple Navy land-based sites located across the country and connected via networking technology. The DEP provides the only opportunity for comprehensive interoperability testing of combat system and C5I configuration items prior to shipboard delivery for operational use in surface combatant platforms and strike group units. It is a U.S. Fleet Forces Command requirement that all SFs undergo IA testing in the DEP prior to deployment. Further, the DEP provides the mechanism to support the Navy's participation in the Joint testing environments as well as the coalition forces through the Combined Forces Battle Laboratories (CFBL) network to allow for assessments of both Joint and Coalition interoperability. Program focus is on new systems and platforms under development.

Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Navy

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

1319: Research, Development, Test & Evaluation, Navy

PE 0603582N: Combat System Integration

BA 4: Advanced Component Development & Prototypes (ACD&P)

As the Navy embarks on Navy Open Architecture (OA), Common Network Interface (CNI) has been selected for upgrade on the LHA, LHD, and LSD ship classes. CNI is an open interface system that modernizes legacy amphibious ships that support the Expeditionary Strike Group (ESG). CNI uses Commercial Off The Shelf (COTS) hardware and common interoperable

software compliant with the Navy's OA standards to integrate the data from ship's sensors, external links, and FORCEnet sources into an operational picture to the warfighter. CNI provides rapid operational capability upgrades via a Rapid Capability Insertion Process (RCIP) using primarily software upgrades. CNI allows for the implementation of the

Integrated Architecture Behavior Model (IABM), FORCEnet and Network centric connectivity by providing the necessary fleet support activities which include: systems engineeringsupport, software support, and integrated logistics support (ILS) to ensure proper coordination and connectivity of hardware and software components for accurate operation.

Funding for CNI development was completed in FY09.

The Navy has also approved the Amphibious Air Warfare (AAW) and Amphibious Improvement Program (AIP) which will integrate Close-In Weapon System (CIWS) radar into the combat system. This is a significant change in how the combat system operates and requires modification of existing test beds to prove this concept and certify it for development.

Additional capabilities that also require certification for deployment are Adaptive Engage Control (AEC), next generation Command and Control Processor (C2P) with Joint Range Extension (JRE) and the introduction of Mode 5, Identification, Friend or Foe (IFF) system.

The Navy, through Automated Test and Retest (ATRT), is developing an automated test capability applicable at each phase of software development that provides reproducible, quantitative evaluation of software performance in a cost and time effective manner. ATRT capability will enable acceleration for testing and re-testing of open architecture software and reinforce a requirement to expedite software implementations and upgrades. ATRT implementations target AEGIS Combat System and the Joint Single Integrated Air Picture (SIAP) Programs within development, and the Ship Self Defense System (SSDS) Program within production, to demonstrate savings for test and evaluation evolutions throughout the acquisition life cycle. Funding for ATRT was completed in FY09.

Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Navy

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

1319: Research, Development, Test & Evaluation, Navy

PE 0603582N: Combat System Integration

BA 4: Advanced Component Development & Prototypes (ACD&P)

B. Program Change Summary (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Previous President's Budget	64.172	22.558	0.000	0.000	0.000
Current President's Budget	62.472	22.444	24.344	0.000	24.344
Total Adjustments	-1.700	-0.114	24.344	0.000	24.344
 Congressional General Reductions 		-0.094			
 Congressional Directed Reductions 		0.000			
 Congressional Rescissions 	0.000	-0.020			
 Congressional Adds 		0.000			
 Congressional Directed Transfers 		0.000			
 Reprogrammings 	0.000	0.000			
 SBIR/STTR Transfer 	-1.700	0.000			
 Program Adjustments 	0.000	0.000	24.344	0.000	24.344

Change Summary Explanation

FY11 from previous President's Budget is shown as zero because no FY11-15 data was presented in President's Budget 2010.

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY R-1 ITEM NOMENCLATURE PROJECT

1319: Research, Development, Test & Evaluation, Navy

PE 0603582N: Combat System Integration

O164: Combat System Integration

BA 4. Advanced Component Develo	pinent a ric	notypes (Ac	Dui)								
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
0164: Combat System Integration	62.472	22.444	24.344	0.000	24.344	26.181	25.516	25.267	23.942	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

Project 0164: Combat System Integration:

COMNAVSEASYSCOM (SEA 05H) is assigned central Navy responsibility for interoperability, directing the development of policy and architecture for Strike Force (SF) warfare systems engineering and implementation of a common warfare systems engineering process. Furthermore, SEA 05H provides top level direction and execution for certification and

assessments which support capability and quality for ships and submarines. SEA 05H has developed processes and tools including the establishment of a force-level warfare systems engineering process, stewardship of the introduction of Combat Systems, Command, Control, Computers, Communications and Intelligence (C5I) modernization and

improvement into the Fleet Response Plan (FRP), Command & Control, Communications, Computers, & Combat Systems Integration Modernization Process (C5IMP), configuration management and certification processes, and force-level interoperability assessments using the Distributed Engineering Plant (DEP) land-based testing tool. This project funds

the core elements required to conduct Warfare Systems Integration and Interoperability Testing (WSI2T) in accordance with the Naval Warfare Systems Certification Policy (NWSCP), Joint NAVSEA, NAVAIR, and SPAWAR SYSCOM Instruction.

This project funds SF configuration management through the FRP, shore based testing and WSI2T certification of operational computer systems in a test environment similar to their ultimate shipboard operational environment, and interoperability assessments (IA) which are a prerequisite for operational certification of the ships in SF configurations prior to their deployment. Force Certification of deploying ships in SF configurations is accomplished through the utilization of the Navy's DEP, which provides operational configurations for all Naval combat systems located at multiple Navy land-based sites located across the country and connected via networking technology.

The DEP provides the only opportunity for comprehensive interoperability testing of combat system and C5I configuration items prior to shipboard delivery for operational use in surface combatant platforms and strike group units. It is a U.S. Fleet Forces Command requirement that all SFs undergo interoperability assessment testing in the DEP

prior to deployment. Further, the DEP provides the mechanism to support the Navy's participation in the Joint testing environments as well as the coalition forces through the Combined Forces Battle Laboratories (CFBL) network to allow for assessments of both Joint and Coalition interoperability. Program focus is on new systems and platforms

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy **DATE:** February 2010 **PROJECT** APPROPRIATION/BUDGET ACTIVITY R-1 ITEM NOMENCLATURE 0164: Combat System Integration

1319: Research, Development, Test & Evaluation, Navy PE 0603582N: Combat System Integration

BA 4: Advanced Component Development & Prototypes (ACD&P)

under development.

As the Navy embarks on Navy Open Architecture (OA), Common Network Interface (CNI) has been selected for upgrade on the LHA, LHD, and CNI is an open interface system that modernizes legacy amphibious ships that support the Expeditionary Strike Group (ESG). CNI uses Commercial Off The Shelf (COTS) hardware and common interoperable software compliant with the Navy's OA standards to integrate the data from ship's sensors, external links, and FORCEnet sources into an operational picture to the warfighter. CNI provides rapid operational capability upgrades via a Rapid Capability Insertion Process (RCIP) using primarily software upgrades. CNI allows for the implementation of the

Integrated Architecture Behavior Model (IABM), FORCEnet and Network centric connectivity by providing the necessary fleet support activities which include: systems engineering support, software support, and integrated logistics support (ILS) to ensure proper coordination and connectivity of hardware and software components for accurate operation. Funding for CNI development was completed in FY09.

The Navy has also approved the Amphibious Air Warfare (AAW) and Amphibious Improvement Program (AIP) which will integrate Close-In Weapon System (CIWS) radar into the combat system. This is a significant change in how the combat system operates and requires modification of existing test beds to prove this concept and certify it for development. Additional capabilities that also require certification for deployment are Adaptive Engage Control (AEC), next generation Command and Control Processor (C2P) with Joint Range Extension (JRE) and the introduction of Mode 5, Identification, Friend or Foe (IFF) system.

The Navy, through Automated Test and Re-Test (ATRT), is developing an automated test capability applicable at each phase of software development that provides reproducible, quantitative evaluation of software performance in a cost and time effective manner. ATRT capability will enable acceleration for testing and re-testing of open architecture

software and reinforce a requirement to expedite software implementations and upgrades. ATRT implementations target AEGIS Combat System and the Joint Single Integrated Air Picture (SIAP) Programs within development, and the Ship Self Defense System (SSDS) Program within production, to demonstrate savings for test and evaluation evolutions

throughout the acquisition life cycle. Funding for ATRT was completed in FY09.

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Strike Force Requirements Engineering and Analysis (SF)	3.000	0.000	0.000	0.000	0.000
This program maps current interoperability requirements to new ships, such as CVN 21, DDG 1000 and LCS.					

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy

APPROPRIATION/BUDGET ACTIVITY

1319: Research, Development, Test & Evaluation, Navy
BA 4: Advanced Component Development & Prototypes (ACD&P)

PE 0603582N: Combat System Integration

OATE: February 2010

PROJECT

0164: Combat System Integration

B. Accomplishments/Planned Program (\$ in Millions)

B: Accomplishments/riamica r regram (\$\psi\ minnens/					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: In FY09, the program implemented multi-mission scenarios and interoperability test requirements, evaluated interoperability performance, and advised the Fleet of critical interoperability capabilities and limitations. Implementation of these standards is essential to evaluate emerging combat system capabilities, such as in CG/DDG modernization, LCS and CVN 21.					
DAWDF	0.311	0.000	0.000	0.000	0.000
FY 2009 Accomplishments: N/A					
Platform/Strike Force Certification	14.381	11.535	12.117	0.000	12.117
This program conducts Interoperability Assessments (IA) in support of the Naval Warfare System Certification Plan (NWSCP) using the Distributed Engineering Plant (DEP).					
FY 2009 Accomplishments: Five (5) Systems Engineering Events (SEEs) were conducted for root-cause determination of key interoperability problems and to support development of new force-level warfare system capabilities such as Shipboard Gridlock System (SGS), Fleet requirements and Global Command and Control System (GCCS).					
FY 2010 Plans: The program will support two (2) IAs per year (new ships have priority) and no SEEs.					
FY 2011 Base Plans: The program will conduct two (2) IAs while expanding the number of SEE events from two (2) to three (3) in order to continue support for GCCS, SGS, Fleet and other associated programs under development.					

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy

APPROPRIATION/BUDGET ACTIVITY

1319: Research, Development, Test & Evaluation, Navy
BA 4: Advanced Component Development & Prototypes (ACD&P)

PROJECT

0164: Combat System Integration

0164: Combat System Integration

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Fleet Response Plan (FRP)	7.119	4.240	4.875	0.000	4.875
FY 2009 Accomplishments: Efforts focused on transitioning work to support minimum sustainability of Capabilities and Limitations (C&L) documentation, Strike Force Interoperability Officers (SFIOs), and on-site Project Engineers (PEs). The FY09 efforts decreased evaluation from 27 originally planned to 14 Strike Groups within the D-6 window in order to continue development and distribution of Strike Group C&L documentation. This includes support to meet Emergency Surge, Surge, Normal Deployment, and includes Center for Surface Combat Systems (CSCS) training events with updated material from documented findings/ results of underway and Interoperability Certification test events and will support seven (7) SFIOs and four (4) PEs.					
FY 2010 Plans: The program will support four (4) SFIOs, two (2) on-site PEs and C&L documentation each year. FY 2011 Base Plans:					
The program will support four (4) SFIOs, two (2) on-site PEs and C&L documentation each year.					
Combat Systems Certification Support of Platform Certification	5.500	2.169	2.440	0.000	2.440
FY 2009 Accomplishments: The program conducted 9 WSI2Ts, 11 Platform Certification Decisions (PCDs) and 11 Initial Platform Certification Decisions (IPCDs).					
FY 2010 Plans: The program will conduct 16 WSI2Ts, 23 Platform Certification Decisions (PCDs) and 17 Initial Platform Certification Decisions (IPCDs).					

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

PROJECT

PROJECT

1319: Research, Development, Test & Evaluation, Navy

BA 4: Advanced Component Development & Prototypes (ACD&P)

PE 0603582N: Combat System Integration 0164: Combat System Integration

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 Base Plans: The program will conduct 16 WSI2Ts, 23 Platform Certification Decisions (PCDs) and 17 Initial Platform Certification Decisions (IPCDs).					
Navigation System Certification (NAVCERT) NAVSEAINST 9420.4 dated May 02 requires that a Navigation System Certification (NAVCERT) be performed as a result of: initial installation/new construction, major system overhaul/modification/ repair when it is determined to impact the accuracy of navigation data, changes to the navigation baseline configuration, or elapsed time of more than five (5) years since previous NAVCERT. A NAVCERT certifies to NAVSEA, Ship Program Managers (SPMs), Type Commanders (TYCOMs), and Fleet that the Shipboard Navigation Systems are: properly installed and in good physical condition, operating to specified accuracy and requirements under both dockside (static) and at-sea (dynamic) conditions, calibrated and operating to required performance specifications, and that analog and digital navigation data is transmitted and received within specified limits to all shipboard users, specifically combat, aircraft landing and weapon systems. A successful NAVCERT, indicating the Integrated Navigation Suite is certified, is required for Platform Certification Decision (PCD) Milestones and	1.500	1.500	1.500	0.000	1.500
Tactical Tomahawk Weapons Control System (TTWCS), Precision Approach and Landing Systems (PALS), and the Electronic Charting and Display System (ECDIS-N)Certification Test Program. Fleet Message CNSF 211506Z, dated Nov 05 highlights the need to validate safety of navigation as critical to assurance of operational readiness. FY 2009 Accomplishments: 31 ships required NAVCERT, specifically 20 CRUDES, five (5) aircraft carriers, and six (6) amphibious ships.					
FY 2010 Plans: 27 ships require NAVCERT, specifically 21 CRUDES, two (2) aircraft carriers, and four (4) amphibious ships.					

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy **DATE:** February 2010 **PROJECT** APPROPRIATION/BUDGET ACTIVITY R-1 ITEM NOMENCLATURE 0164: Combat System Integration 1319: Research, Development, Test & Evaluation, Navy PE 0603582N: Combat System Integration BA 4: Advanced Component Development & Prototypes (ACD&P) B. Accomplishments/Planned Program (\$ in Millions) FY 2011 FY 2011 FY 2011 **FY 2009 FY 2010** Base OCO Total FY 2011 Base Plans: 28 ships require NAVCERT, specifically 20 CRUDES, three (3) aircraft carriers, and five (5) amphibious ships. 7.161 3.412 **DEP Engineering and Operations** 3.000 0.000 3.412 Distributed Engineering Plant (DEP) engineering and operations performs systems engineering, and operations functions to ensure (DEP) infrastructure supports testing of combat system baselines. The program conducts systems engineering to identify simulation/stimulation requirements necessary to achieve required fidelity for DEP testing at Navy laboratory sites through Verification, Validation and Accreditation (VV&A).

FY 2009 Accomplishments:

The new projected nodes included upgrading Surface Combat Systems Center (SCSC) node.

FY 2010 Plans:

The one (1) node (CSEDS Moorestown, NJ) that has legacy baselines will no longer be supported, the remaining DEP infrastructure can meet requirements with existing nodes. Tests will focus on new systems under development.

FY 2011 Base Plans:

The program will support one VV&A event per year.

ATRT Automated Test and Re-Test

Automated Test and Re-Test (ATRT) capability implementations target AEGIS combat System, the Joint Single Integrated Air Picture (SIAP) Programs with development and the Ship Self Defense System (SSDS) Program within production to demonstrate savings for test and evaluation evolutions throughout the acquisition life cycle.

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

PROJECT

1319: Research, Development, Test & Evaluation, Navy

BA 4: Advanced Component Development & Prototypes (ACD&P)

PE 0603582N: Combat System Integration

0164: Combat System Integration

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: Targeted demonstrations for AEGIS Combat Systems, SIAP and SSDS to demonstrate capability and savings for test evolutions throughout the acquisition life cycle.					
CNI/OA Transformation Road Map	13.500	0.000	0.000	0.000	0.000
Common Network Interface/Open Architecture (CNI/OA) Transformation Road Map					
FY 2009 Accomplishments: FY09: Continued systems engineering support, software support, and integrated logistics support (ILS) to ensure proper coordination and connectivity of hardware and software components for accurate operation.					
Accomplishments/Planned Programs Subtotals	62.472	22.444	24.344	0.000	24.344

C. Other Program Funding Summary (\$ in Millions)

			FY 2011	FY 2011	FY 2011					Cost To	
<u>Line Item</u>	FY 2009	FY 2010	<u>Base</u>	OCO	<u>Total</u>	FY 2012	FY 2013	FY 2014	FY 2015	Complete	Total Cost
• OPN 2960: (ICSTD/DEP):	4.545	4.410	4.445	0.000	4.445	4.472	4.532	4.597	4.664	Continuing	Continuing
Integrated Combat System Test											

Division/Distributed Engineering

Plant

D. Acquisition Strategy

RDTEN funding under this line supports independent certification of the integration of major capability upgrades acquired by Program Executive Offices (PEOs) into host Navy Platforms and Strike Forces. The RDTEN engineering and certification activities at field sites does not involve direct procurement of equipment or engineering services, and hence no acquisition strategy is required. The major capability upgrades evaluated under this program fall under their associated PEOs' acquisition strategies.

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)	R-1 ITEM NOMENCLATURE PE 0603582N: Combat System Integration	PROJECT 0164: Combat System Integration
E. Performance Metrics		
TBD		

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

PROJECT

1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)

PE 0603582N: Combat System Integration

0164: Combat System Integration

Product Development (\$ in Millions)

				FY 2	2010	FY 2 Ba	-	FY 2		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
SF Requirements Engineering & Analysis	WR	NSWC DN/PHD/Corona	5.157	0.000		0.000		0.000		0.000	0.000	5.157	Continuing
SF Requirements Engineering & Analysis	WR	Non-NSWCs Various	5.295	0.000		0.000		0.000		0.000	0.000	5.295	Continuing
Platform/Strike Force Certification	WR	NSWC DD/ICSTD/DN	27.550	6.000	Nov 2009	6.000	Nov 2010	0.000		6.000	Continuing	Continuing	Continuing
Platform/Strike Force Certification	WR	Non-NSWCs Various	19.597	3.935	Dec 2009	4.411	Dec 2010	0.000		4.411	Continuing	Continuing	Continuing
Fleet Response Plan (FRP)	WR	NSWC PHD/DN	21.101	3.000	Nov 2009	2.980	Nov 2010	0.000		2.980	Continuing	Continuing	Continuing
Fleet Response Plan (FRP)	WR	Non-NSWCs Various	1.850	1.000	Dec 2009	1.000	Dec 2010	0.000		1.000	Continuing	Continuing	Continuing
Combat Systems Cert ISO Platform Cert	WR	NSWC DN/DD/PHD/ Corona	20.055	2.169	Jan 2010	2.440	Jan 2011	0.000		2.440	Continuing	Continuing	Continuing
Combat Systems Cert ISO Platform Cert	WR	Non-NSWCs Various	1.883	0.000		0.000		0.000		0.000	0.000	1.883	Continuing
Navigation System Certification	WR	SPAWAR Charleston	1.500	1.500	Jan 2010	1.500	Jan 2011	0.000		1.500	Continuing	Continuing	Continuing
DEP Engineering and Operations	WR	NSWC DD/SPAWAR/ San Diego/SCSC/ Wallops	14.371	1.300	Apr 2010	1.500	Apr 2011	0.000		1.500	Continuing	Continuing	Continuing
DEP Engineering and Operations	WR	Non-NSWCs Various	10.152	1.300	May 2010	1.213	May 2011	0.000		1.213	Continuing	Continuing	Continuing
CNI/Design Agent	SS/CPAF		47.926	0.000		0.000		0.000		0.000	0.000	47.926	Continuing

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R-1 Line Item #49 Page 12 of 18

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

PROJECT

1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)

PE 0603582N: Combat System Integration

0164: Combat System Integration

Product Development (\$ in Millions)

				FY 2	2010	FY 2 Ba	2011 ise	FY 2		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
		General Dynamics Not Specified											
CNI/Software Engineering	WR	NSWC Dahlgren	8.383	0.000		0.000		0.000		0.000	0.000	8.383	Continuing
CNI/Test and Evaluation	WR	CDSA Not Specified	3.922	0.000		0.000		0.000		0.000	0.000	3.922	Continuing
CNI/Systems Engineering	WR	NSWC PHD	2.645	0.000		0.000		0.000		0.000	0.000	2.645	Continuing
CNI/Miscellaneous	WR	Various Various	7.529	0.000		0.000		0.000		0.000	0.000	7.529	Continuing
OA Automated Test and Retest	WR	NSWCs Various	17.500	0.000		0.000		0.000		0.000	0.000	17.500	Continuing
Contract Engineering Support	C/CPFF	Gryphon Technology VA	10.159	1.000	Dec 2009	1.500	Dec 2010	0.000		1.500	Continuing	Continuing	Continuing
Contract Program Management Support	C/CPFF	Delta Resources Inc. VA	5.641	1.000	Dec 2009	1.500	Dec 2010	0.000		1.500	Continuing	Continuing	Continuing
Travel	Allot	NAVSEA HQ Washington, DC	1.050	0.240	Sep 2010	0.300	Sep 2011	0.000		0.300	Continuing	Continuing	Continuing
Interoperability Fixes	WR	NSWCs Various	1.500	0.000		0.000		0.000		0.000	0.000	1.500	Continuing
		Subtotal	234.766	22.444		24.344		0.000		24.344			

Remarks

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R-1 Line Item #49 Page 13 of 18

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

1319: Research, Development, Test & Evaluation, Navy

BA 4: Advanced Component Development & Prototypes (ACD&P)

R-1 ITEM NOMENCLATURE

PE 0603582N: Combat System Integration

PROJECT

0164: Combat System Integration

Management Services (\$ in Millions)

			FY 2010			FY 2 Ba		FY 2		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
DAWDF	C/TBD	Not Specified Not Specified	0.311	0.000		0.000		0.000		0.000	0.000	0.311	Continuing
		Subtotal	0.311	0.000		0.000		0.000		0.000	0.000	0.311	

Remarks

	Total Prior Years Cost	FY 2010		2011 ise	FY 2	-	FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	235.077	22.444	24.344		0.000		24.344			

Remarks

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

DATE: February 2010 **R-1 ITEM NOMENCLATURE**

APPROPRIATION/BUDGET ACTIVITY

1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P) PE 0603582N: Combat System Integration

PROJECT

0164: Combat System Integration

	CLAS	SIFICATI	ON:						UNCLA	ASSIFIE	D																	
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RDTEN/BA 4																	0164/C					M						
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Fiscal Year		20	103		1	20				21	ï			20				20								20	13	
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Quarter	1	2	3	4	1	2	3	4	1	2	3		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	
Months	Oct-Dec	c Jan-Ma	r Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mai	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mai	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mai	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-
CVN 70/77 WSI2T (PSA) @ ICSTF	1																											
.HA 5 WSI2T RETEST @ DN	1																											
LHD 7/8 WSI2T @ ICSTF	1	2																										
LPD 17/18/20 WSI2T @ ICSTF	1																											
CVN 76 WSI2T @ WI		2	3																									
CVN 76 WSI2T @ ICSTF (NAV ONLY TEST)			3																									
LSD 41/49 CLASS WSI2T @ WI			3																						Γ			
PD 21/22/23 w/GIG-E WSI2T @ ICSTF			3	4																								
.PD 21/22/23 w/GIG-E WSI2T GIG-E TEST @ WI			3	4																								
LCS 1 CORE AD WSI2T			3	4	1																					-		
CVN 74 WSI2T @ ICSTF				4	1																					-	$\overline{}$	1
CVN 68/69/75 @ VM				4	1		3	4																		_		\vdash
LCS 1 CORE SW WSI2T		1		4	1					<u> </u>																-	-	
LCS 2 CORE AD WSI2T				4	1	2			 																	-	-	1
CVN 73 WSI2T @ ICSTF		1		4					_			 	_										 		_	-	-	\vdash
LCS 2 CORE SW/WSI2T				-	1	2			-	_			-												_	+	_	\vdash
CVN 73 @ ICSTF						2	3		-			 											 		_	+	\vdash	+
LHD 1 @ ICSTF					1		3	4	-	_			-												_	+	_	+
LPD 17/20 @ ICSTF		+	1		_	 	J	4		+		 											 			+		+
LSD 50 AIP WSI2T @ WI					Н—			4	-1	_			_														-	\vdash
LSD 30 AIF WSI21 (@ WI LHD 8 WSI2T (@ WI								4	1	_			_													 	_	\vdash
					-			4	1	_			-													+	-	+
LHA 5 WSI2T @ DN					-			4	1	_			4													+'		+-
LHA 5 Annual Event WSI2T @ DN		+	+		-		-	-	1		<u> </u>					-	\vdash							_	 '			+
LCS 1 MCM VVSI2T		+	+	-	-	-	-	-		_	-	-			-	-	-				—	-	-	\vdash	└	₩		\leftarrow
LCS 2 MCM VVSI2T		1	1		├		-		1		-														 '		 	\vdash
LHD 3/4 @ DN		_			-				—	2	-	_																1
CVN 77/70 WSI2T @ WI		1	-							2	3														 '	 '		\vdash
LHD 2/5/6 WSI2T @ DN											3	4													<u> </u>		<u> </u>	1
CVN 76 WSI2T @ WI			1		-	-				-	3	4					\blacksquare						-	\vdash	<u> </u>	 '		1
LPD 24/25 OA forward fit WSI2T @ WI											3	4															L	\vdash
CVN 71 WSI2T @ WI (RCOH/CIA)											3	4	L				1								'	<u> </u>	L	\vdash
LCS 1 ASW WSI2T											3															'	L	1
PD 18 OA Backfit WSI2T @ WI											<u> </u>	4	1	2	3										'	<u> </u>	L	\vdash
LCS 2 ASW WSI2T												4	1															
LHD 7 VVSI2T @ NSVVC DD												4	1															
LCS 1 SUW WSI2T													1															
LCS 2 SUW WSI2T													1															
CVN 69 WSI2T @ NSWC DD														2	3	4									Γ			
CVN 78 CSITAVSI2T @ WI / NSWC DD															3	4	1	2	3	4						2	3	4
LHA 6 WSI2T @ NSWC DD			1			1						1					1	2	3				1		-			
CVN 70/72 WSI2T @ NSWC DD		1	1			1		1		1													3	_	_	_	-	-

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

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

PROJECT

1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)

PE 0603582N: Combat System Integration

0164: Combat System Integration

Schedule Details

	Sta	Start					
Event	Quarter	Year	Quarter	Year			
CVN 70/77 WSI2T (PSA) @ ICSTD	1	2009	1	2009			
LHA 5 WSI2T RETEST @ Dam Neck (DN)	1	2009	1	2009			
LHD 7/8 WSI2T @ ICSTD	1	2009	2	2009			
LPD 17/18/20 WSI2T @ ICSTD	1	2009	1	2009			
CVN 76 WSI2T @ Wallops Island (WI)	2	2009	3	2009			
CVN 76 WSI2T @ ICSTD (NAV ONLY TEST)	3	2009	3	2009			
LSD 41/49 CLASS WSI2T @ Wallops Island	3	2009	3	2009			
LPD 21/22/23 w/GIG-E WSI2T @ ICSTD	3	2009	4	2009			
LPD 21/22/23 w/GIG-E WSI2T GIG-E Test @ WI	3	2009	4	2009			
LCS 1 CORE AD WSI2T	3	2009	1	2010			
CVN 74 WSI2T @ ICSTD	4	2009	1	2010			
CVN 68/69/75 @ Wallops Island	4	2009	3	2010			
LCS 1 CORE SW WSI2T	4	2009	1	2010			
LCS 2 CORE AD WSI2T	4	2009	2	2010			
CVN 73 WSI2T @ ICSTD	4	2009	4	2009			
LCS 2 CORE SW WSI2T	1	2010	2	2010			
CVN 73 @ ICSTD	2	2010	3	2010			
LHD 1 @ ICSTD	3	2010	4	2010			

UNCLASSIFIED

R-1 Line Item #49 Page 16 of 18

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

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

PROJECT

1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)

PE 0603582N: Combat System Integration

0164: Combat System Integration

	Sta	Start					
Event	Quarter	Year	Quarter	Year			
LPD 17/20 @ ICSTD	4	2010	4	2010			
LSD 50 AIP WSI2T @ Wallops Island	4	2010	1	2011			
LHD 8 WSI2T @ Wallops Island	4	2010	1	2011			
LHA 5 WSI2T @ DN	4	2010	1	2011			
LHA 5 Annual Event WSI2T @ DN	1	2011	1	2012			
LCS 1 MCM WSI2T	1	2011	1	2011			
LCS 2 MCM WSI2T	1	2011	1	2011			
LHD 3/4 @ DN	2	2011	2	2011			
CVN 77/70 @ Wallops Island	2	2011	3	2011			
LHD 2/5/6 WSI2T @ DN	3	2011	4	2011			
CVN 76 WSI2T @ Wallops Island	3	2011	4	2011			
LPD 24/25 OA Forward Fit WSI2T @ Wallops Island	3	2011	4	2011			
CVN 71 WSI2T @ WI (RCOH/CIA)	3	2011	1	2013			
LCS 1 ASW WSI2T	3	2011	3	2011			
LPD 18 OA Backfit WSI2T @ WI	4	2011	2	2012			
LCS 2 ASW WSI2T	4	2011	1	2012			
LHD 7 WSI2T @ NSWC/ DD	4	2011	1	2012			
LCS 1 SUW WSI2T	1	2012	1	2012			
LCS 2 SUW WSI2T	1	2012	1	2012			
CVN 69 WSI2T @ NSWC /DD	2	2012	3	2012			

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

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

1319: Research, Development, Test & Evaluation, Navy

BA 4: Advanced Component Development & Prototypes (ACD&P)

R-1 ITEM NOMENCLATURE

PE 0603582N: Combat System Integration

PROJECT

0164: Combat System Integration

	St	End			
Event	Quarter	Year	Quarter	Year	
CVN 78 CSIT/WSI2T @ WI/ NSWC/ DD	3	2012	3	2015	
LHA 6 WSI2T @ NSWC/ DD	1	2013	2	2013	
CVN 70/72 WSI2T @ NSWC /DD	3	2014	1	2015	