EXHIBIT R-2, RDT&E Budget Item Justification							DATE: **FEBRUARY 2007**	
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-05**					R-1 ITEM NOMENCLATURE 0604518N Combat Information Center Conversion			
COST ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Total PE Cost	**10.940**	**7.679**	**17.139**	**12.769**	**12.080**	**5.123**	**5.087**	**5.155**
3094 / USW-Decision Support System (USW-DSS)	**6.603**	**6.683**	**17.139**	**12.769**	**12.080**	**5.123**	**5.087**	**5.155**
9999 / Congressional Adds	**4.337**	**0.996**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

The objective of this Program Element (PE), under Project 3094, is to develop a net-centric Undersea Warfare Decision Support System (USW-DSS) capability to support the Theater Anti-Submarine Warfare (ASW) Commander (TASWC), Sea Combat Commander (SCC), Anti-Submarine Warfare Commander (ASWC) and the Mine Warfare Commander (MIWC). USW-DSS will consist primarily of computer software components that will be developed and implemented to comply with FORCEnet and Open Architecture Computing Environment (OACE) architecture standards and guidance. The resultant system will yield a single software architecture for afloat ASW Combat Command and Control (C2) that will bridge the Command, Control, Communications, Computers, & Intelligence (C4I) domain and the combat systems, to achieve the capabilities described in USW-DSS Increment 1 Capabilities Production Document (CPD). USW-DSS will provide the following integrated capabilities on board selected Carrier Strike groups: plan, conduct, and coordinate USW operations with multiple ASW and MIW platforms; rapidly receive and implement the directions of the SCC, respond to the actions of other assigned platforms and make inputs to the SCC and other platforms concerning the current state of the tactical situation; encompass other assets that may be available in the form of deployed sensor fields, autonomous vehicles and other similar capabilities; communicate intentions, on-going actions, requirements, and results to peer-level warfare commanders, supporting commands and higher authority; Integrate functionality and interoperate with the needs of the TASWC and capabilities already available at theater commands; receive and distribute contact/track data, Tactical Decision Aid (TDA) data, and other information necessary for data fusion and providing coordinated situational awareness. Assets assigned to the TASWC and the SCC may include surface combatants; ASW aircraft; dedicated Mine Countermeasure (MCM) platforms; submarines; undersea surveillance platforms; shore processing facilities; supporting commands. These form a hierarchy of participants that will each be provided with varying levels of net-centric USW-DSS functionality.

This PE, under Project 9844 (established via FY06 C2 Web-Based Architecture Congressional Add and continued in FY07), developed preliminary network accessible data services that can be used to gain a strategic advantage. This capability will serve threat/force information and other USW services on-demand to other participants in the network as independent services that are accessed in a standardized manner, providing more reliable, consistent data sets across programs with easier and timelier updates to data sets.

This PE, under Project 9566 (established via FY06 Integrated Display and Enhanced Architecture Congressional Add) , developed the Integrated Tactical Command and Control Console (ITC3), the horizontal display variant of the new family of data processing and display components in the Future Common Display and Multi-Modal Workstation family of products. The ITC3 is the first data processing and display system designed from the deck plate up, in accordance with OACE and Human Systems Integration (HSI) standards. ITC3 combines the processing plant and the horizontal display tier into a single element, enabled by Commercial Off-The-Shelf (COTS) technology, resulting in a reduction in space, power, and weight requirements.

B. PROGRAM CHANGE SUMMARY:

Funding:	FY 2006	FY 2007	FY 2008	FY 2009
FY 2007 President's Budget Controls	7.805	6.708	6.334	4.384
FY 2008 President's Budget Controls	10.940	7.679	17.139	12.769
Total Adjustments	3.135	0.971	10.805	8.385
Undistributed General/Congressional Adjustments	-0.068	-0.029	-0.002	0.058
Congressional Increases	3.400	1.000		
SBIR/STTR Transfer	-0.197		0.107	0.095
Program Adjustments			10.700	8.232
Subtotal	3.135	0.971	10.805	8.385
Schedule: Not Applicable				
Technical: Not Applicable				

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE: **FEBRUARY 2007**	
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-05**	PROGRAM ELEMENT NUMBER AND NAME 0604518N Combat Information Center Conversion				PROJECT NUMBER AND NAME 3094 / USW-Decision Support System (USW-DSS)			
COST ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Project Cost	**$6.603**	**$6.683**	**$17.139**	**$12.769**	**$12.080**	**$5.123**	**$5.087**	**$5.155**
RDT&E Articles Qty								

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:
Project 3094 will develop the Undersea Warfare Decision Support System (USW-DSS) that will:

1) Provide a critical Command & Control (C2) capability package that includes improvements in battle group vulnerability assessments, sensor performance predictions, mission planning and execution improvements, and optimized search planning and collaboration capabilities for the SCC, TASWC, MIW Commander and ASW Commander;
2) Provide full capability to plan and conduct USW operations through functional alignment of platforms/sensors to exploit the environment and improved allocation of resources; and
3) Increase lethality and survivability through improved asset allocation, optimized platform/sensor placement, and increased situational awareness.

These capabilities will provide a consistent, accurate, and timely situational understanding of the underwater battle space and the various entities that may influence it, including force disposition and the environment (atmospheric, oceanographic and geographic), to all participants that are in the process of conducting either ASW, MIW or other warfare operations. USW-DSS capabilities will be developed and integrated in a build-test-build process with each build improving on the previous delivery and/or adding additional capabilities.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **FEBRUARY 2007**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-05	0604518N Combat Information Center Conversion	3094 / USW-Decision Support System (USW-DSS)

B. Accomplishments/Planned Program

	FY 06	FY 07	FY 08	FY 09
USW-DSS Build 0.3 Development / Integration / Test	0.500	0.000	0.000	0.000
RDT&E Articles Quantity				

Build 0.3 provides an initial capability for USW mission planning, monitoring, mission, executing and maintaining the undersea tactical picture.
FY06 - Completed the integration, testing and security accreditation of USW-DSS Build 0.3.

	FY 06	FY 07	FY 08	FY 09
USW-DSS Build 1 Development / Integration / Test	2.909	0.600	0.000	0.000
RDT&E Articles Quantity				

Integrate and test additional USW-DSS tools/capabilities, including Manual ASW Mission, Asset and Threat definition, Acoustic Performance Prediction Web Services, Improved Mission Planning including vulnerability analysis, improved ASW Search Planning/Performance Analysis and Mission Collaboration, and Improved Mission Monitoring and manual re-planning

FY06 - Continued development, integration, and testing of Build 1 for use as permanent Ship Alteration (SHIPALT) installation. Completed requirements analysis and design, interface definition, system specifications and security accreditation.
Installations of USW-DSS to commence mid FY07, following successful completion of OA. Conduct development, integration, testing, and evaluation of Build 1 upgrades and correct deficiencies identified during OAs.

	FY 06	FY 07	FY 08	FY 09
USW-DSS Build 2 Development / Integration / Test	1.894	3.100	0.900	0.000
RDT&E Articles Quantity				

Integrate and test additional USW-DSS tools/capabilities, including Improved ASW track management, automated asset allocation, automated re-planning, battle management capabilities including engagement target pairing, cross platform data fusion, improved theater USW capabilities, and Global Command and Control System-Maritime (GCCS-M) integration. Incorporate visualization/display service currently demonstrated as Theater ASW CFN prototype.

FY06 - Initiated Build 2 requirements analysis and system development efforts, including Operator-Machine Interface (OMI) design, environmental analysis capabilities, and embedded training. Conducted Fleet liaison.

FY07/08 - Complete integration, testing, and evaluation of new functionality in USW-DSS incremental Build 2.0. Develop and implement upgrades based upon Operational Testing.

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EXHIBIT R-2a, RDT&E Project Justification		DATE: **FEBRUARY 2007**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-05	0604518N Combat Information Center Conversion	3094 / USW-Decision Support System (USW-DSS)

B. Accomplishments/Planned Program

	FY 06	FY 07	FY 08	FY 09
USW-DSS Build 3 Development / Integration / Test	0.000	0.408	3.534	3.318
RDT&E Articles Quantity				

Integrate and test additional USW-DSS tools/capabilities including improved integrated mission planning/execution tools, additional ASW track management improvement, improved situational awareness capabilities, improved data management including automated recommendations and extended use of intelligent agents, additional interfaces with tactical and environmental sensors, and MPRA ASW C2 toolset.
FY07 - Initiate specification and architecture for USW-DSS Build 3.0.
FY08/09 - Complete development, integration, and testing of USW-DSS incremental Build 3.0. Integrate USW-DSS with overall Navy FORCEnet framework. Complete migration to GCCS-M .

	FY 06	FY 07	FY 08	FY 09
Mission Planning Development	1.300	1.375	3.605	2.151
RDT&E Articles Quantity				

Develop and test integrated mission planning tools, including necessary TDAs and C2 tools, to optimize the use of all available platform and distributed sensors. Develop multi-static TDAs/tools for enhanced detection and interference prevention. Develop asset allocation tools. Incorporate real-time sensor performance and develop common display standards for maximum information sharing. Provide Mission Planning capabilities/tools for integration into the appropriate USW-DSS incremental builds.

	FY 06	FY 07	FY 08	FY 09
ASW Track Management Development	0.000	0.000	4.700	2.200
RDT&E Articles Quantity				

Develop C2 tools to support new automated No Attack (NOTACK) concepts. Establish new track-structure in cooperation with GCCS-M, which allows sharing of ASW “collaborative-level” contacts and includes amplifying contact information. Develop scaleable track sharing capabilities, including intermittent operations with submarines and MPRAs. Develop an ASW threat prioritization and ASW target asset pairing TDA. Define and develop all sensor data fusion services. Provide capabilities for implementation into the appropriate USW-DSS incremental builds.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **FEBRUARY 2007**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-05	0604518N Combat Information Center Conversion	3094 / USW-Decision Support System (USW-DSS)

B. Accomplishments/Planned Program (Cont.)

	FY 06	FY 07	FY 08	FY 09
Improved Situational Awareness Development	0.000	0.000	1.000	2.500
RDT&E Articles Quantity				

Develop the necessary capabilities to exchange data between C2 and Combat Systems to support enhanced ASW situational awareness. Develop improved force planning and status tools to access database and systems to obtain the status of platforms and combat systems (fuel, weapon inventory, readiness, etc.). Incorporate this information into planning system models. Provide capabilities for implementation into the appropriate USW-DSS incremental builds.

	FY 06	FY 07	FY 08	FY 09
MPRA ASW C2 Toolset Development	0.000	0.000	1.500	1.500
RDT&E Articles Quantity				

Develop a P-3/Multi-Mission Maritime Aircraft (MMA) C2 toolset to include an integrated GCCS-M and USW-DSS capability with the P-3 Integrated Tactical Picture. Capabilities will include: Common Operation Picture (COP) collaboration toolset, track management, in-situ mission planning tools and automated aircraft status data broadcasts. Provide capabilities for implementation into the appropriate USW-DSS incremental build.

	FY 06	FY 07	FY 08	FY 09
Battle Management Capability Development	0.000	1.200	1.900	1.100
RDT&E Articles Quantity				

Develop TDA/tools for the engagement phase of an operation. These capabilities will include asset allocation; dynamic vulnerability analysis; dynamic re-planning; rapid access to rules of engagement; engagement target pairing; cross platform data fusion; reconstruction; improved Geographic Information System (GIS) functionality, and environmental data ingest and analysis. Provide capabilities for implementation into the appropriate USW-DSS incremental build.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **FEBRUARY 2007**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-05	0604518N Combat Information Center Conversion	3094 / USW-Decision Support System (USW-DSS)

C. OTHER PROGRAM FUNDING SUMMARY:

Line Item No. & Name	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Complete	Total Cost
OPN BLI 2176/ USW Support Equipment (Related N61 Portion)	7.274	4.460	6.152	6.786	6.989	7.403	7.514	7.624	Continuing	Continuing

Specific Sub Procurement Item:
Space Information Command and Control Programs (N61), Undersea Warfare-Decision Support System (USW-DSS)

D. ACQUISITION STRATEGY:

- Build 1 integration contractor funded through SPAWAR Systems Command (SSC)/Charleston contract.
- Competive Award for system integration - planned award 3Q FY07.
- Competitive Awards for individual tool development - planned awards to begin in FY07 .

E. MAJOR PERFORMERS:

- Johns Hopkins University Applied Physics Laboratory (JHU/APL), MD - USW-DSS OMI/HSI support, test & evaluation support
- Naval Air Warfare Center (NAWC), Patuxent River, MD - USW-DSS interface design and documentation, software management, test & evaluation
- NAVSEA, Carderock, MD - USW-DSS interface design and documentation, software management, test & evaluation
- NAVSEA, Keyport, WA - USW-DSS Carrier integration, track management
- NAVSEA, Newport, RI - USW-DSS Technical Design Agent (TDA), CHENG, submarine integration.
- SSC, San Diego, CA - GCCS-M, C2 collaboration tools, network and security certifications, mission planner development
- Progeny Systems Corporation, Manassas, VA - USW-DSS hardware/software integration (Build 1)
- TBD - USW-DSS hardware/software integration (Build 2)
- SYS Technologies, San Diego, CA - USW-DSS Mission Planning System (MPS)

CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 1)												DATE: **FEBRUARY 2007**		
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-05**		PROGRAM ELEMENT 0604518N Combat Information Center Conversion			PROJECT NUMBER AND NAME 3094 / USW-Decision Support System (USW-DSS)									
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	FY 08 Cost	FY 08 Award Date	FY 09 Cost	FY 09 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Primary H/W & S/W Development	C/CPFF	JHU/APL, MD	1.316	0.801	01/06	0.300	02/07	0.208	11/07	0.100	11/08	Continuing	Continuing	
Primary H/W & S/W Development	WX	NAWC Patuxent River, MD	0.705	0.632	02/06	0.000		0.492	10/07	0.330	10/08	Continuing	Continuing	
Primary H/W & S/W Development	WX	NAVSEA Carderock, MD	0.967	0.602	12/05	0.350	11/06	2.000	10/07	2.000	10/08	Continuing	Continuing	
Primary H/W & S/W Development	WX	NAVSEA Dahlgren, VA	0.159	0.055	12/05	0.000		0.000		0.000		0.000	0.214	
Primary H/W & S/W Development	WX	NAVSEA Keyport, WA	0.343	0.486	11/05	0.600	11/06	2.000	10/07	2.000	10/08	Continuing	Continuing	
Primary H/W & S/W Development	WX	NAVSEA Newport, RI	0.694	1.630	12/05	1.900	11/06	4.425	10/07	4.120	10/08	Continuing	Continuing	
Primary H/W & S/W Development	WX	SSC San Diego, CA	0.381	0.000	02/06	0.525	01/07	0.000		0.000		Continuing	Continuing	
Primary H/W & S/W Development	Var.	Var.	0.450	0.571	11/05	0.533	01/07	0.139	10/07	0.134	10/08	Continuing	Continuing	
Primary H/W & S/W Development	WX/CPFF	SYS Technologies	1.760	1.106	11/05	0.000		0.000		0.000		Continuing	Continuing	
Primary H/W & S/W Development	C/CPFF	TBD/Development Contracts	0.000	0.000	N/A	0.685	03/07	3.855	11/07	1.697	11/08	Continuing	Continuing	
Primary H/W & S/W Development	C/CPFF	TBD/Integration Contract	0.000	0.000	N/A	1.070	03/07	2.600	11/07	1.668	11/08	Continuing	Continuing	
Subtotal Product Development			7.297	5.883		5.963		15.719		12.049		Continuing	Continuing	
Subtotal Support			0.000	0.000		0.000		0.000		0.000		0.000	0.000	

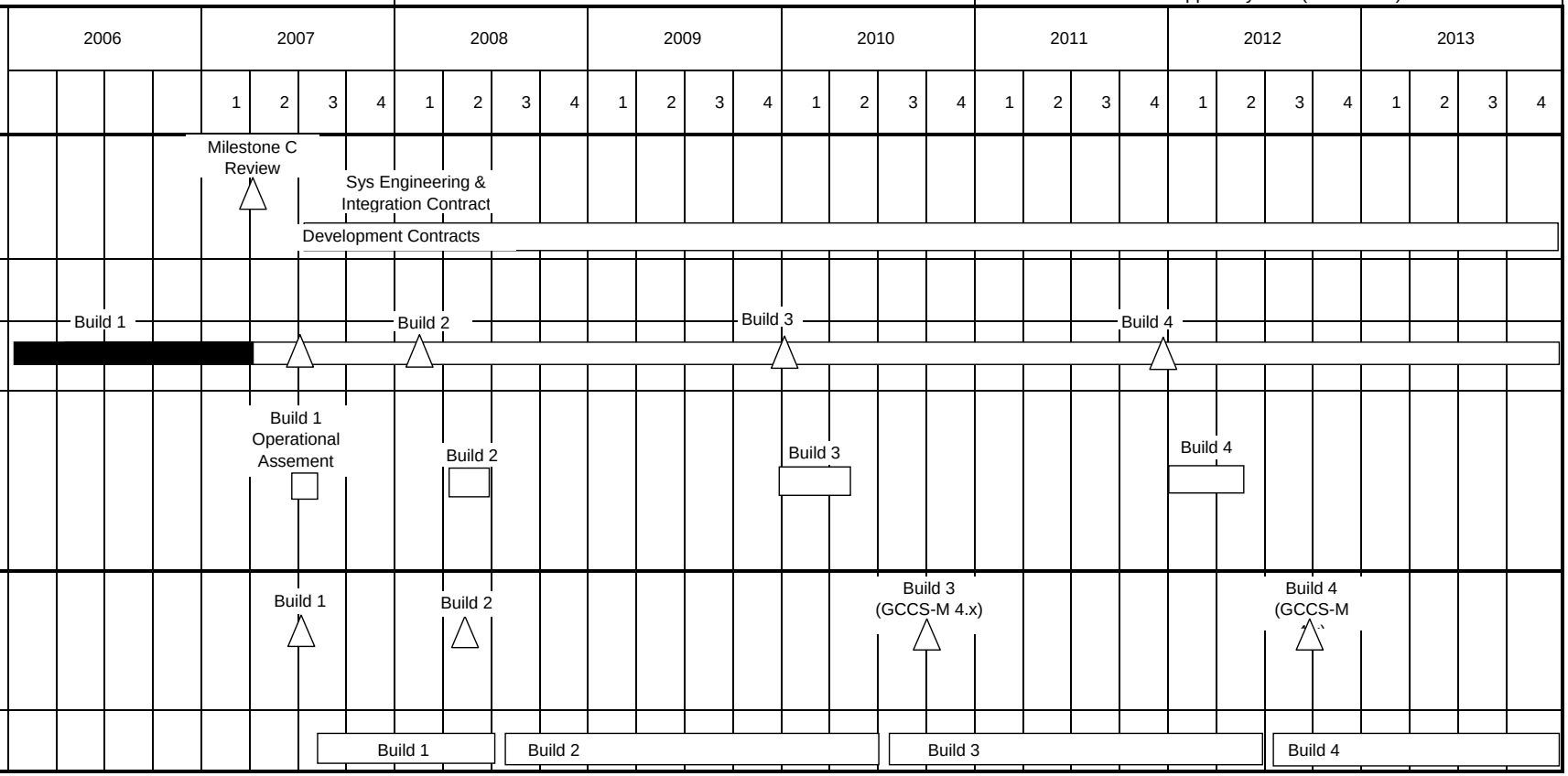
Remarks:

CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 2)								DATE: **FEBRUARY 2007**						
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-05**			PROGRAM ELEMENT 0604518N Combat Information Center Conversion			PROJECT NUMBER AND NAME 3094 / USW-Decision Support System (USW-DSS)								
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	FY 08 Cost	FY 08 Award Date	FY 09 Cost	FY 09 Award Date	Cost to Complete	Total Cost	Target Value of Contract
At-Sea Test & Evaluation	Var.	Var.	0.300	0.300	09/06	0.300	01/07	1.000	12/07	0.300	12/08	Continuing	Continuing	
Subtotal T&E			0.300	0.300		0.300		1.000		0.300		Continuing	Continuing	
Remarks:														
Program Management Support	Var.	Var.	0.420	0.420	02/06	0.420	01/07	0.420	11/07	0.420	11/08	Continuing	Continuing	
Subtotal Management			0.420	0.420		0.420		0.420		0.420		Continuing	Continuing	
Remarks:														
Total Cost			8.017	6.603		6.683		17.139		12.769		Continuing	Continuing	
Remarks:														

CLASSIFICATION:

EXHIBIT R4, Schedule Profile			DATE: **FEBRUARY 2007**
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-05**	PROGRAM ELEMENT NUMBER AND NAME 0604518N Combat Information Center Conversion	PROJECT NUMBER AND NAME 3094 / USW-Decision Support System (USW-DSS)	



CLASSIFICATION:

Exhibit R-4a, Schedule Detail					DATE: **FEBRUARY 2007**			
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-05**	PROGRAM ELEMENT 0604518N Combat Information Center Conversion				PROJECT NUMBER AND NAME 3094 / USW-Decision Support System (USW-DSS)			
Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
USW-DSS Build 1 Complete		2Q						
USW-DSS Operational Assement (lab-based) - Build 1		2Q						
USW-DSS Build 1 S/W Delivery to GCCS-M		2Q						
USW-DSS Delivery to CSGs		3Q-4Q						
Contract Award (Build 2)		3Q						
USW-DSS Build 2 Complete			1Q					
USW-DSS At-Sea Test - Build 2			1Q-2Q					
USW-DSS Delivery to CSGs			3Q-4Q					
USW-DSS Build 2 Delivery to CSGs				3Q-4Q				
USW-DSS Build 3 Complete					1Q			
USW-DSS At-Sea Test - Build 3					1Q-2Q			
USW-DSS Build 3 S/W Delivery to GCCS-M for Prdtn Build					3Q			
USW-DSS Delivery to CSGs					3Q-4Q			
USW-DSS Delivery to CSG/ Non CSG Platforms						3Q-4Q		
USW-DSS Build 4 Complete							1Q	
USW-DSS At-Sea Test - Build 4							1Q-2Q	
USW-DSS Build 4 S/W Delivery to GCCS-M for Prdtn Build							3Q	
USW-DSS Delivery to CSGs							3Q-4Q	
USW-DSS Delivery to CSG/ Non CSG Platforms								3Q-4Q

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **FEBRUARY 2007**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-05	0604518N Combat Information Center Conversion	9844 / Command & Control (C2) Web-Based Architecture

CONGRESSIONAL PLUS-UPS:

	2006	2007	2008	2009
9844 - Command & Control (C2) Web-Based Architecture	0.986	0.996	0.000	0.000

FY06/07 Congressional Add: C2 Web-Based Architecture develops a network accessible data service whose sole focus will be to provide data about US Navy and foreign ships, plans, and sensors that can be used to gain a strategic advantage. This system will serve threat/force information on-demand to other participants in the network as independent services that are accessed in a standardized manner, providing more reliable, consistent data sets across programs, easier and timelier updates to data sets, all while moving the Navy closer towards its goal of FORCEnet.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **FEBRUARY 2007**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-05	0604518N Combat Information Center Conversion	9566 / Integrated Display and Enhanced Architecture

CONGRESSIONAL PLUS-UPS:

	2006	2007	2008	2009
9566 - Integrated Display and Enhanced Architecture (IDEA	3.351	0.000	0.000	0.000

FY06 Congressional Add: Integrated Display and Enhanced Architecture (IDEA) develops the Integrated Tactical Command and Control Console (ITC3), the horizontal display variant of the new family of data processing and display components in the Future Common Display and Multi-Modal Workstation family of products. The ITC3 is the first data processing and display system designed from the deck plate up in accordance with Open Architecture Computing Environment (OACE) and Human Systems Integration standards. ITC3 combines the processing plant and the horizontal display tier into a single element, enabled by commercial off-the-shelf (COTS) technology, resulting in a reduction in space and power and weight requirements.