CLASSIFICATION:	UNCLASSIFIED						
EXHIBIT R-2, RDT&E BUDGET ITEM JUSTIFICATION						DATE February 2008	
APPROPRIATION/BUDGET ACTIVITY **RDTEN/BA 6**			R-1 ITEM NOMENCLATURE 0605866N/Space and Electronic Warfare (SEW) Support				
COST (In Millions)	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Total PE Cost	4.051	2.386	2.708	2.862	2.799	3.355	3.393
0706 / EMC & RF Mgmt	3.084	1.633	2.025	2.246	2.084	2.286	2.304
0739 / NAVY C4 TOP LEVEL RQMTS	0.967	0.753	0.683	0.616	0.715	1.069	1.089

A. MISSION DESCRIPTION:

Project 0706, Electromagnetic Interference (EMI) Reduction and Radio Frequency (RF) Management - Develops advanced technology to identify and reduce EMI sources from Navy systems and platforms. FY2007 includes a transfer from the Spectrum Relocation Fund.

Project 0739, Navy C4I Top Level Requirements -This project provides analysis of both Fleet requirements and research and development technology, to develop top-level plans and space systems in the Space and Electronic Warfare (SEW) mission area. The Space and Electronic Warfare Studies and Analysis (SEWSAP) program supports analyses of Fleet requirements and research and development technology to develop top-level plans for operating Navy Command, Control, Communications, Intelligence, Surveillance and Reconnaissance (C4ISR) and space systems in the SEW mission area.

JUSTIFICATION FOR BUDGET ACTIVITY:

This program is funded under RDT&E MANAGEMENT SUPPORT because it supports the operations and installations required for general research and development use.

B. PROGRAM CHANGE SUMMARY:

Funding:	FY 2007	FY 2008	FY 2009
FY 2008 PB08 Baseline	4.127	2.439	3.978
FY 2009 Presidents Budget Submission	4.051	2.386	2.708
TOTAL ADJUSTMENT:	**-0.076**	**-0.053**	**-1.270**
Summary of Adjustments:			
EMI/EMP Program Reductions	0.000	0.000	-1.149
Miscellaneous Adjustment	0.000	0.000	-0.121
Small Business Innovation Research (SBIR tax)	-0.074	0.000	0.000
Execution Realignments	0.000	-0.034	0.000
Cancelled Accounts	-0.002	0.000	0.000
Congressional Action - Contractor Efficiencies	0.000	-0.004	0.000
Congressional Action - Revised Economic Assumptions	0.000	-0.012	0.000
FPRDC Reductions	0.000	-0.003	0.000
Subtotal:	**-0.076**	**-0.053**	**-1.270**

CLASSIFICATION:	UNCLASSIFIED						
EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION					DATE February 2008		
APPROPRIATION/BUDGET ACTIVITY **RDTEN/BA 6**	PROGRAM ELEMENT NUMBER AND NAME **0605866N/Space and Electronic Warfare (SEW) Support**				PROJECT NUMBER AND NAME **0706/EMC & RF Mgmt**		
COST (In Millions)	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Project Cost	3.084	1.633	2.025	2.246	2.084	2.286	2.304
RDT&E Articles Qty	0	0	0	0	0	0	0

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

Electromagnetic Interference (EMI) Reduction and Radio Frequency (RF) Management. This project develops tools, processes, and algorithms to identify and reduce EMI sources for Navy systems and platforms. There are several efforts under development to identify and reduce EMI through proper use of the electromagnetic spectrum. Automated capabilities will be developed that reflect research into new operational fleet battle group frequency management processes. They reflect current fleet needs for a communications planning and frequency management tool used to plan communication links and analyze, allocate, and assign communication and radar frequencies for fleet operations.

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EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION		DATE February 2008
APPROPRIATION/BUDGET ACTIVITY **RDTEN/BA 6**	PROGRAM ELEMENT NUMBER AND NAME 0605866N/Space and Electronic Warfare (SEW) Support	PROJECT NUMBER AND NAME **0706/EMC & RF Mgmt**

B. ACCOMPLISHMENTS/PLANNED PROGRAM:

	FY 2007	FY 2008	FY 2009
AESOP (Integrated CPM and EMCAP)	1.162	0.940	1.325
RDT&E Articles Quantity	0	0	0

FY 2007 Accomplishments - Developed interfaces for AESOP (Afloat Electromagnetic Spectrum Operations Program), and other automated tools to interface with evolving network protocols and to ensure currency for web based applications. Developed new algorithms for automated tools for new Navy C4ISR systems for both government and commercial communication systems being used by the Navy.

FY 2008 - FY2009 - Develop interfaces for AESOP, and other automated tools to interface with evolving network protocols and to ensure currency for web based applications. Develop new algorithms for automated tools for new Navy C4ISR systems for both government and commercial communication systems being used by the Navy. Implement a set of web-based capabilities utilizing latest technologies (XML) and other data standards to optimize information exchange/usability. Institutionalize frequency management process for operational fleet by developing procedures that can be utilized by all Navy Strike Groups. National and international regulations on legal spectrum use are continuously changing to accommodate the growing number of civilian and commercial devices that rely on the spectrum. To address spectrum relocations that affect U.S. Navy ships and systems in operating areas worldwide, determined via models, analysis, research, and testing the appropriate frequency spectrum restrictions, system modes, and stand-off distances to ensure U.S. Navy compliance with national and international laws and treaties that govern spectrum use. Make recommendations to update existing combatant commands' and numbered fleets' directives regarding spectrum use in their Areas of Responsibility. Coordinate with ranges regarding impacts of spectrum reallocations for systems used during tests, such as telemetry and data collection. Update the AESOP software with the new radiation restrictions that reflect current legal requirements that result from spectrum relocations worldwide.

	FY 2007	FY 2008	FY 2009
Spectrum Relocation	1.235	0.000	0.000
RDT&E Articles Quantity	0	0	0

FY 2008 - FY2009 Plans (Funds released August 2007; issued for execution October 2007) - All DOD Systems in the 1710-1755 MHz range are required to re-locate (replace) their systems. Will conduct a HERO survey/analysis, Ashore EMI/RADHAZ survey/analysis, and Spectrum Management efforts.

	FY 2007	FY 2008	FY 2009
Automated Tools	0.687	0.693	0.700
RDT&E Articles Quantity	0	0	0

FY 2007 - Accomplishments: Developed a multi band approach for current probe technology for multiple frequencies (HF, VHF, and UHF) that eliminates many of those legacy antennas and has the potential to drastically reduce shipboard interference effects.

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EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION (CONTINUATION)		DATE February 2008
APPROPRIATION/BUDGET ACTIVITY **RDTEN/BA 6**	PROGRAM ELEMENT NUMBER AND NAME 0605866N/Space and Electronic Warfare (SEW) Support	PROJECT NUMBER AND NAME **0706/EMC & RF Mgmt**

FY 2008 - FY2009 - Conduct research, development, testing, evaluation (RDTE), verification, validation, and assessment (VV&A) of afloat spectrum management software and automated tools for all U.S. Navy surface ships and shore commands. This includes the capability to provide commanders with increased common picture of spectrum situational awareness of friendly and hostile forces and transparently deconflict competing mission requirements for spectrum use. This capability will support transformation from the current preplanned and static assignment strategy into autonomous and adaptive spectrum operations and will support the integration of sensors, weapons systems, and software communications architecture for the U. S. Navy.

C. OTHER PROGRAM FUNDING SUMMARY:
Not Applicable

D. ACQUISITION STRATEGY:
Not Applicable

E. MAJOR PERFORMERS:

PERFORMER/RECIPIENT	CITY & STATE	BRIEF DESCRIPTION OF WORK	AWARD DATE
NSWC Dahlgren	Dalgren, VA	Joint E3 Analysis Tool, EMCAP Validation, AESOP Support	Various
Sentel	Alexandria, VA	Automated Tools Development	Various
SSC San Diego	San Diego, CA	Electromagnetic Compatibility (EMC) Support	Various

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EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION					DATE February 2008		
APPROPRIATION/BUDGET ACTIVITY **RDTEN/BA 6**	PROGRAM ELEMENT NUMBER AND NAME **0605866N/Space and Electronic Warfare (SEW) Support**				PROJECT NUMBER AND NAME **0739/NAVY C4 TOP LEVEL RQMTS**		
COST (In Millions)	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Project Cost	0.967	0.753	0.683	0.616	0.715	1.069	1.089
RDT&E Articles Qty	0	0	0	0	0	0	0

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

This project provides analysis of both Fleet requirements and research and development technology, to develop top-level plans and space systems in the Space and Electronic Warfare (SEW) mission area. The Space and Electronic Warfare Studies and Analysis (SEWSAP) program supports analyses of Fleet requirements and research and development technology to develop top-level plans for operating Navy Command, Control, Communications, Intelligence, Surveillance and Reconnaissance (C4ISR) and space systems in the SEW mission area.

Performance Metrics:

Conduct and report upon studies, plans and analysis of Fleet requirements for operating Navy C4ISR and space systems in the SEW mission area.

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APPROPRIATION/BUDGET ACTIVITY **RDTEN/BA 6**	PROGRAM ELEMENT NUMBER AND NAME 0605866N/Space and Electronic Warfare (SEW) Support	PROJECT NUMBER AND NAME **0739/NAVY C4 TOP LEVEL RQMTS**

B. ACCOMPLISHMENTS/PLANNED PROGRAM:

	FY 2007	FY 2008	FY 2009
Accomplishments/Effort/Subtotal Cost	0.967	0.753	0.683
RDT&E Articles Quantity	0	0	0

FY 2007 ACCOMPLISHMENTS:

Initiated and completed the following studies: (1) Infrastructure and Information Dependency Analyses, (2) Maritime Domain Awareness (MDA) Information Sharing Analysis, (3) MDA Connectivity Analysis, and (4) Analysis to identify areas of Highest Sensitivity to MDA.

These studies supported resource and requirement decisions in the Planning, Programming, and Budgeting Executing (PPBE) System; FORCEnet Fleet experiments; FORCEnet Architecture selection; evaluation of Tactics, Techniques, and Procedures (TTP); alignment of Science and Technology (S&T) and Research, Development, Test, and Evaluation (RDT&E) efforts with FORCEnet requirements; evaluation and selection of Modeling and Simulation (M&S) tools and scenarios.

SEWSAP (1) applied previously-developed models and analytical methods to identify areas of highest sensitivity in Command, Control, Communications (C3) performance, (2) extended previous architectural work on Naval operational functions and networks to detailed analyses of C3 and network requirements and, (3) extended previous system engineering results to newly emerging implementation issues.

FY 2008 PLANS:

Initiate and complete studies supporting FORCEnet Fleet experiments; FORCEnet Architecture selection; evaluation of Tactics, Techniques, and Procedures (TTP); alignment of Science and Technology (S&T) and Research, Development, Test, and Evaluation (RDT&E) efforts with FORCEnet requirements; evaluation and selection of Modeling and Simulation (M&S) tools and scenarios.

SEWSAP (1) applied previously-develop models and analytical methods to identify areas of highest sensitivity in Command, Control, Communications (C3) performance, (2) extend previous architectural work on Naval operational functions and networks to detailed analyses of C3 and network requirements and, (3) extend previous system engineering results to newly emerging implementation issues.

FY 2009 PLANS: Initiate and complete studies supporting FORCEnet Fleet experiments; FORCEnet Architecture selection; evaluation of Tactics, Techniques, and development, Test, and Evaluation (RDT&E) efforts with FORCEnet requirements; evaluation and selection of Modeling and Simulation (M&S) tools and scenarios.

CLASSIFICATION:	UNCLASSIFIED	
EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION (CONTINUATION)		DATE February 2008
APPROPRIATION/BUDGET ACTIVITY **RDTEN/BA 6**	PROGRAM ELEMENT NUMBER AND NAME 0605866N/Space and Electronic Warfare (SEW) Support	PROJECT NUMBER AND NAME **0739/NAVY C4 TOP LEVEL RQMTS**

SEWSAP (1) applied previously-develop models and analytical methods to identify areas of highest sensitivity in Command, Control, Communications (C3) performance, (2) extend previous architectural work on Naval operational functions and networks to detailed analyses of C3 and network requirements and, (3) extend previous system engineering results to newly emerging implementation issues.

C. OTHER PROGRAM FUNDING SUMMARY:
Not Applicable

D. ACQUISITION STRATEGY:
Not Applicable

E. MAJOR PERFORMERS:
Not Applicable