

CLASSIFICATION:								
EXHIBIT R-2, RDT&E Budget Item Justification							DATE:	
							February 2007	
APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE				
<b>RESEARCH DEVELOPMENT TEST &amp; EVALUATION, NAVY /</b>				PE 0304785N Tactical Cryptologic Systems				
				BA 5				
COST (\$ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Total PE Cost	0.000	27.720	39.053	16.708	14.694	15.024	16.557	16.862
2134/SHIPBOARD INFORMATION WARFARE (IW) EXPLOIT	0.000	20.444	21.730	14.672	14.694	15.024	16.557	16.862
3165/AUTOMATIC IDENTIFICATION SYSTEM (AIS)	0.000	2.993	17.323	2.036	0.000	0.000	0.000	0.000
9999/CONGRESSIONAL ADDS Quantity of RDT&E Articles	0.000	4.283	0.000	0.000	0.000	0.000	0.000	0.000
<b><i>Shipboard Information Warfare (IW) is realigned from PE 0604721N BA 5 (Battle Group Passive Horizon Extension System) beginning FY 2007.</i></b>								
U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:								
The Shipboard Information Warfare (IW) line includes the following programs: Ships Signal Exploitation Equipment (SSEE) and the Program of Record that executes the Maritime Cryptologic Systems for the 21st Century (MCS 21). These systems provide the Battle Group with real time Indications and Warnings (I&W) by acquisition and localization of signals of interest (SOI). This program's funding is required to incorporate new commercial off-the-shelf (COTS) based technologies and software into the existing systems. The funding will focus on merging the current IW sensor systems into a scalable sensor package that can be tailored to different ship types and be compliant with the Maritime Cryptologic Architecture.								
Ships Signal Exploitation Equipment (SSEE) is a classified tactical cryptologic Information Warfare/Command and Control Warfare (IW/C2W) system that provides critical tactical intelligence, Situational Awareness (SA)/Battlespace Awareness (BA), Indications and Warning (I&W), and hostile threat assessment. As a spiral acquisition program, SSEE funding is required to have new technologies and associated new operational capabilities rapidly developed and transitioned as Pre-Planned Product Improvement (P3I) upgrades into the system's hardware configuration.								
Automatic Identification System (AIS) is an International Maritime Very High Frequency (VHF) Communication system that allows any ship to exchange information (machine to machine) on Navigation (Position, Course Speed, etc), Ship Info (Ship Name, Call Sign, Length/Beam), Cargo Info (Draft, Type, Destination, Route, Estimated Time of Arrival (ETA)), and Messaging (Safety, Text). This technology will improve capability in three diverse areas: (a) Situational Awareness/Common Operational Picture (COP) (b) Navigation/Safety of Ship and (c) Other intelligence gathering/correlation. Research, Development, Test & Evaluation (RDT&E) will fund the integration of Commercial off-the-shelf (COTS) AIS equipment into the existing Global Command and Control - Maritime (GCCS-M)/COP, Navigation Sensor System Interface (NAVSSI) navigation and bridge capabilities surface search / weapons systems and intelligence / cryptologic capabilities.								
Military Intelligence Program (MIP), formerly Tactical Intelligence and Related Activities (TIARA) (DOD 7000.14) is reported to Congress in the MIP Congressional Justification Book (CJB).								
<b>Congressional Adds:</b>								
COOPERATIVE OUTBOARD LOGISTICS UPGRADE (COBLU) - NETWORK CENTRIC WARFARE ENHANCEMENTS - The COBLU system will provide enhanced capabilities which will facilitate the integration of Control and Coordination Software that enables multiple COBLU systems to be operated remotely in compliance within the FORCENet constructs; coordinate resources and reduce system manning; and enable the distributed operation of COBLU systems allowing operators to be remotely located at an Regional Security Operations Center (RSOC) or a COBLU operator on one platform to task and utilize a second COBLU on another platform. As part of this effort, interface software between COBLU and Distributed Information Operations Service (DIO-S) will be provided and an at-sea technology demonstration will be conducted.								
TREMILDEC TACTICAL TARGET GENERATOR SYSTEM - MILDEC Tactical Target Generator (TTG) will provide both offensive and defensive Information Operations (IO) and Military Deception (MILDEC) capabilities for military aircraft against current and future hostile air defense systems. In the offensive mode, the TTG will provide a tactical IO capability for airborne platforms to electronically stimulate hostile air defense acquisition and tracking radars so they can be detected and located by National and tactical sensors, and then be destroyed by US or coalition forces. In the defensive mode, the TTG will enable tactical airborne platforms (manned, unmanned, fixed wing or rotary) to successfully enter, transit and egress hostile territory by appearing as a non-threatening air contact.								

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EXHIBIT R-2, RDT&E Budget Item Justification	DATE: February 2007
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE PE 0304785N Tactical Cryptologic Systems
<b>RESEARCH DEVELOPMENT TEST &amp; EVALUATION, NAVY /</b>	<b>BA 5</b>
<b><i>Shipboard Information Warfare (IW) is realigned from PE 0604721N BA 5 (Battle Group Passive Horizon Extension System) beginning FY 2007.</i></b>	
<b>Congressional Adds Continued:</b>	
<p>ANS/SSQ-137 (v) SHIPS SIGNAL EXPLOITATION EQUIPMENT - ANS/SSQ supports effort to develop the latest Pre-Planned Product Improvements (P3I) enhancements upgrades to maintain the systems operational capability against evolving modern and future digital communications signals. P3I technology upgrades include; development of Communications Intelligence (COMINT) mapping and task synchronization, development Time Differential Multiplexing (TDM) and Networked High Frequency (HF)/ Direction Finding (DF) capability, and Radio Frequency Distribution Unit (RFDU) enhancements. These upgrades will improve SSEE Increment E capability to collect, process and analyze hostile threat communications emitters in order to provide tactical intelligence, Situational Awareness (SA), Indications and Warning, and hostile threat assessment to deployed Carrier Strike Group (CSG)/Expeditionary Strike Group (ESG) forces.</p> <p>SCAN EAGLE UNMANNED AERIAL VEHICLE (UAV) ADVANCED DATALINK AND SENSOR DEVELOPMENT- RDT&amp;E plus-up funds the development of a ScanEagle high capacity data link compatible with the Common Data Link (CDL) waveform and North Atlantic Treaty Organization (NATO) Standardization Agreement (STANAG) 4586 to enhance interoperability and networked imagery distribution with US Navy Fleet assets. The integration of a Commercial-off-the-Shelf (COTS) Automatic Identification System (AIS) transceiver into ScanEagle and data integration into the Navy's Integrated AIS Rapid Deployment Capability (RDC). This AIS RDC in turn provides AIS sensor data to the Global Command and Control - Maritime (GCCS-M) Common Operational Picture, Navigation Sensor System Interface (NAVSSI) navigation and bridge capabilities surface search / weapons systems and intelligence / cryptologic capabilities. Integration of this AIS technology will improve capability in three diverse areas: (a) Situational Awareness/Common Operational Picture (COP) (b) Navigation/Safety of Ship and (c) Other intelligence gathering/correlation.</p>	

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<b>RESEARCH DEVELOPMENT TEST &amp; EVALUATION, NAVY / BA5</b>	

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

(U) Funding:	FY 2006	FY 2007	FY 2008	FY 2009
FY07 President's Budget	0	23.526	18.379	17.676
FY08 President's Budget	0	27.720	39.053	16.708
Total Adjustments	0.000	4.194	20.674	-0.968

## Summary of Adjustments

COBLU - Congressional Add	0.000	1.000	0.000	0.000
TREX/MILDEC - Congressional Add	0.000	1.000	0.000	0.000
ANS/SSQ SSEE INC E - Congressional Add	0.000	1.300	0.000	0.000
SCAN EAGLE UAV Congressional Add	0.000	1.000	0.000	0.000
Revised Economic Assumption	0.000	-0.106	0.000	0.000
Warfighting Enhancements	0.000	0.000	14.300	0.000
Non-Purchase Inflation Adjustment	0.000	0.000	-0.111	0.030
Navy R&D accrued liabilities	0.000	0.000	0.155	0.128
Realign Shipboard IW OPN to RDT&E,N	0.000	0.000	7.310	0.000
CIVPERS/CS Adjustment for NETWARCOM Enterprise	0.000	0.000	-1.106	-1.190
FY 08/FY 09 NWCF Rate Adjustments -SPAWAR System Center	0.000	0.000	0.126	0.064
Subtotal	0.000	4.194	20.674	-0.968

## (U) Schedule:

Not Applicable.

## (U) Technical:

Not Applicable.

<b>CLASSIFICATION:</b>									
EXHIBIT R-2a, RDT&E Project Justification							DATE: February 2007		
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT NUMBER AND NAME				PROJECT NUMBER AND NAME			
<b>RDT&amp;E, N / BA-5</b>		PE 0304785N Tactical Cryptologic Systems				2134/SHIPBOARD INFORMATION WARFARE (IW) EXPLOIT			
COST (\$ in Millions)		FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Project Cost		0.000	20.444	21.730	14.672	14.676	15.006	16.541	16.847
RDT&E Articles Qty									
<p><b>(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:</b></p> <p>The Shipboard Information Warfare (IW) line includes the following programs: Ships Signal Exploitation Equipment (SSEE) and the Program of Record that executes the Maritime Cryptologic Systems for the 21st Century (MCS 21). These systems provide the Battle Group with real time Indications and Warnings (I &amp; W) by acquisition and localization of signals of interest (SOI). This program's funding is required to incorporate new commercial off-the-shelf (COTS) based technologies and software into the existing systems. The funding will focus on merging the current IW sensor systems into a scalable sensor package that can be tailored to different ship types and be compliant with the Maritime Cryptologic Architecture.</p> <p>Military Intelligence Program (MIP), formerly Tactical Intelligence and Related Activities (TIARA) (DOD 7000.14)</p>									

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EXHIBIT R-2a, RDT&E Project Justification		DATE: February 2007
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA 5</b>	PROGRAM ELEMENT NUMBER AND NAME PE 0304785N Tactical Cryptologic Systems	PROJECT NUMBER AND NAME 2134/SHIPBOARD INFORMATION WARFARE (IW) EXPLOIT

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

Ship Signal Exploitation Equipment (SSEE) Inc E	FY 06	FY 07	FY08	FY 09
Accomplishments/Effort/Subtotal Cost	0.000	4.270	3.482	4.075
RDT&E Articles Quantity				

FY07 - Continued to expand Signals of Interest (SOI) processing capability to priority signal sets. Fully test improved software. Modified Cryptologic On-Line Trainer (COLT) server to upgrade current software releases. Continued development and integration of Cryptologic Unified Build (CUB) software. As a spiral acquisition program Ship Signal Exploitation Equipment (SSEE) Inc F began in FY 06 with the development contract award date of April 2006. SSEE Inc F program information will be provided in separate exhibits.

FY 08 - Continue to expand Signals of Interest (SOI) processing capability to allow, collection of the newest high priority modern technology threat signals for processing and analysis for timely and accurate situational awareness for Force protection and for support to time critical strike military operation. Develop and Integrate upgrades to Hostile Force Integration Targeting Subsystems (HITS) to integrate both national and tactical ISR sensor data to provide geolocation of intercepted communication signals. Fully test improved software. Execute Follow-on Test and Evaluation.

FY 09 - Continue to expand Signals of Interest (SOI) processing capability to allow collection of the newest high priority modern technology threat signals for processing and analysis. This will allow the battlegroup to have timely and accurate situational awareness for Force protection and for support to time critical strike military operation. Develop and Integrate upgrades to Hostile Force Integration Targeting Subsystems (HITS) to integrate both national and tactical Intelligence Surveillance and Reconnaissance (ISR) sensor data to provide geolocation of intercepted communication signals. Development and integration of Cryptologic Unified Build (CUB) software to support battlegroup interoperability. Fully test improved software.

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EXHIBIT R-2a, RDT&E Project Justification		DATE: February 2007
APPROPRIATION/BUDGET ACTIVITY  <b>RDT&amp;E, N / BA 5</b>	PROGRAM ELEMENT NUMBER AND NAME  PE 0304785N Tactical Cryptologic Systems	PROJECT NUMBER AND NAME  2134/SHIPBOARD INFORMATION WARFARE (IW) EXPLOIT

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

Ship Signal Exploitation Equipment (SSEE) Inc F	FY 06	FY 07	FY08	FY 09
Accomplishments/Effort/Subtotal Cost	0.000	12.642	18.248	10.597
RDT&E Articles Quantity			2	2

Ship Signal Exploitation Equipment (SSEE) Inc F is a spiral development of the SSEE program. Milestone B occurred Q2FY06 and a combined development and production contract was awarded Q3FY06. Development will include system design, integration and testing of hardware and software for Engineering Development Models (EDMs), and support to Integrated Developmental and Operational Testing. Inc F will provide the warfighter with a robust Information Operations (IO) capability across surface Navy platforms. Inc F provides a fully scalable system dependent upon ship platform IO requirements; system will provide remote/autonomous operating capabilities to meet CNO's goals for reduced shipboard manning and maintenance personnel. Inc F will be fully FORCENet capable, meet all Net-Centric Enterprise Solutions for Interoperability (NESI) requirements, and will meet all joint interoperability requirements for operations in the Global Information Grid (GIG).

FY07 - Continue Ship Signal Exploitation Equipment (SSEE) Inc F system development and demonstration to support the delivery of two Engineering Development Models (EDMs). Continue additional development efforts for remoting of manned and unmanned platforms. The FY07 System Development and Demonstration phase will construct new shipboard antennas, Radio Frequency (RF) distribution, threat detection, geolocation, signal recognition, sensor data management, information operations, suitability, embedded training, communications and interfaces, automation, remoting, manning, information management, sensor tasking, and EDM #1 Integration, Assembly and Test. Operator training plans, processes, and material development will occur. SSEE Inc F FY07 major milestones will include System Requirements Review (SRR), Preliminary Design Review (PDR), Critical Design Review (CDR), Design Readiness Review (DRR), and Test Readiness Reviews (TRR).

FY 08 - Complete Ship Signal Exploitation Equipment (SSEE) Inc F development and system design of two Engineering Development Models (EDMs). Integrate, test and deliver EDMs. Continue development efforts for remoting of manned and unmanned platforms. Continued development in the areas of Signal Recognition, Suitability, and Net-Centric Enterprise Solutions for Interoperability (NESI). EDM #2 interoperability testing will occur and platform integration efforts will be conducted. The majority of technical publication development will commence during this period as well. Engineering and Management data will be completed. SSEE Inc F FY08 major milestones will include EDM First Article Testing (FAT), Integrated Testing (IT) Decisional Report, and Milestone C.

FY 09 - Complete development and system design of third and fourth Engineering Development Model (EDM)s. Integrate, test and deliver EDMs. Continue development efforts for remoting of manned and unmanned platforms. Expand Signals of Interest (SOI) processing capability to allow collection of the newest high priority modern technology threat signals for processing and analysis for timely and accurate situational awareness for force protection and for support to time critical strike military operation.

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APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME		
<b>RDT&amp;E, N / BA 5</b>	PE 0304785N Tactical Cryptologic Systems	2134/SHIPBOARD INFORMATION WARFARE (IW) EXPLOIT		
<b>(U) B. Accomplishments/Planned Program</b>				
Specific Emitter Identification (SEI)	FY 06	FY 07	FY 08	FY 09
Accomplishments/Effort/Subtotal Cost	0.000	2.512	0.000	0.000
RDT&E Articles Quantity				
<p>FY07 - Continue development of updated software for existing fielded Specific Emitter Identification (SEI) systems with new algorithms and software. Continue improvements to network based SEI data distribution and utilization. Continue SEI software enhancements to maximize automation of SEI collection &amp; reporting. Ensure SEI software is fully certified and tested. Continue integration of geolocation, SEI, and other data. Continue incorporation of SEI into Electronic Intelligence (ELINT) and the overall Navy Electronic Warfare (EW) and Maritime Cryptologic architecture with the goal of SEI being absorbed into ELINT. Enhance Tactical Data Processors (TDPs) and other fielded systems to support new SEI capabilities and data types. Continue to pursue enhanced SEI algorithms and techniques, SEI-based de-interleaving, and other SEI applications. Includes support for Maritime Domain Awareness.</p>				
Antenna & Radio Finder (RF) Distribution	FY 06	FY 07	FY 08	FY 09
Accomplishments/Effort/Subtotal Cost	0.000	1.020	0.000	0.000
RDT&E Articles Quantity				
<p>FY07 - Complete development of antenna &amp; Radio Frequency (RF) tools to enhance future capabilities via new technologies, Engineering Development Model (EDM) development, testing and certification.</p>				

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APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME																		
<b>RDT&amp;E, N / BA-5</b>	PE 0304785N Tactical Cryptologic Systems	2134/SHIPBOARD INFORMATION WARFARE (IW) EXPLOIT																		
<p><b>(U) C. OTHER PROGRAM FUNDING SUMMARY:</b></p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;"><u>Line Item No. &amp; Name</u></th> <th style="text-align: center;"><u>FY 2006</u></th> <th style="text-align: center;"><u>FY 2007</u></th> <th style="text-align: center;"><u>FY 2008</u></th> <th style="text-align: center;"><u>FY 2009</u></th> <th style="text-align: center;"><u>FY 2010</u></th> <th style="text-align: center;"><u>FY 2011</u></th> <th style="text-align: center;"><u>FY 2012</u></th> <th style="text-align: center;"><u>FY 2013</u></th> </tr> </thead> <tbody> <tr> <td>OPN Line 2360</td> <td style="text-align: center;">76.539</td> <td style="text-align: center;">73.192</td> <td style="text-align: center;">51.375</td> <td style="text-align: center;">92.397</td> <td style="text-align: center;">104.883</td> <td style="text-align: center;">87.827</td> <td style="text-align: center;">93.076</td> <td style="text-align: center;">94.423</td> </tr> </tbody> </table>			<u>Line Item No. &amp; Name</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u>	OPN Line 2360	76.539	73.192	51.375	92.397	104.883	87.827	93.076	94.423
<u>Line Item No. &amp; Name</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u>												
OPN Line 2360	76.539	73.192	51.375	92.397	104.883	87.827	93.076	94.423												
<p><b>(U) D. ACQUISITION STRATEGY:</b></p> <p>Acquisition, management and contracting strategies are to support engineering and manufacturing development by providing funds to a Prime Contractor and SPAWAR Systems Center (SSC) - Charleston, SSC-San Diego and miscellaneous contractors, with management oversight by SPAWAR.</p>																				
<p><b>(U) E. MAJOR PERFORMERS:</b></p> <p>N/A</p>																				
<p><b>(U) F. METRICS:</b></p> <p>Earned Value Management (EVM) is used for metrics reporting and risk management.</p>																				

**CLASSIFICATION:**

Exhibit R-3 Cost Analysis (page 1) DATE: February 2007

APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT	PROJECT NUMBER AND NAME
<b>RDT&amp;E, N / BA 5</b>	PE 0304785N Tactical Cryptologic Systems	2134/SHIPBOARD INFORMATION WARFARE (IW) EXPLOIT

Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	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 Hardware Development	Various	Various	49.299	6.539	11/06	8.494	11/07	4.631	11/08	Continuing	Continuing	Continuing
Ancillary Hardware Development											0.000	0.000
Systems Engineering	Various	Various	16.140	2.000		1.231		1.141		Continuing	Continuing	Continuing
Training Development	Various	Various	0.336	0.100		0.055		0.086		Continuing	Continuing	Continuing
Licenses											0.000	
Tooling											0.000	0.000
GFE											0.000	0.000
Award Fees											0.000	0.000
Subtotal Product Development			65.775	8.639		9.780		5.858		Continuing	Continuing	Continuing

Remarks:  
 PY funding reflects PE 0604721N. PE 0604721N migrates (Battle Group Passive Horizon Extension System) into PE 0304785N beginning in FY 2007.

Development Support											0.000	0.000
Software Development	Various	Various	18.098	8.643	11/06	8.835	11/07	6.440	11/08	Continuing	Continuing	Continuing
Training Development								0.079			0.079	0.000
Integrated Logistics Support	Various	Various	0.751	0.375		0.227		0.339		Continuing	Continuing	Continuing
Configuration Management	Various	Various	0.436	0.125		0.199		0.251		Continuing	Continuing	Continuing
Technical Data						0.264					0.264	0.000
GFE											0.000	0.000
Subtotal Support			19.285	9.143		9.525		7.109		Continuing	Continuing	Continuing

Remarks:  
 PY funding reflects PE 0604721N. PE 0604721N migrates (Battle Group Passive Horizon Extension System) into PE 0304785N beginning in FY 2007.

<b>CLASSIFICATION:</b>												
Exhibit R-3 Cost Analysis (page 2)										DATE: February 2007		
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT				PROJECT NUMBER AND NAME					
<b>RDT&amp;E, N / BA 5</b>			PE 0304785N Tactical Cryptologic Systems				2134/SHIPBOARD INFORMATION WARFARE (IW) EXPLOIT					
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	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
Developmental Test & Evaluation	Various	Various	5.722	0.450		0.372		0.100		Continuing	Continuing	Continuing
Operational Test & Evaluation	Various	Various	1.532	0.100		0.428		0.331		Continuing	Continuing	Continuing
Live Fire Test & Evaluation											0.000	0.000
Test Assets	Various	Various	1.597	0.150		0.000				Continuing	Continuing	Continuing
Tooling											0.000	0.000
GFE											0.000	0.000
Subtotal T&E			8.851	0.700		0.800		0.431		Continuing	Continuing	Continuing
Remarks: PY funding reflects PE 0604721N. PE 0604721N migrates (Battle Group Passive Horizon Extension System) into PE 0304785N beginning in FY 2007.												
Contractor Engineering Support											Continuing	Continuing
Government Engineering Support											Continuing	Continuing
Program Management Support	Various	Various	11.149	1.810		1.487		1.015		Continuing	Continuing	Continuing
Travel	Various	Various	0.551	0.152		0.138		0.259		Continuing	Continuing	Continuing
Subtotal Management			11.700	1.962		1.625		1.274		0.000	Continuing	Continuing
Remarks: PY funding reflects PE 0604721N. PE 0604721N migrates (Battle Group Passive Horizon Extension System) into PE 0304785N beginning in FY 07.												
Total Cost			105.611	20.444	0.000	21.730	0.000	14.672	0.000	Continuing	Continuing	Continuing
Remarks: PY funding reflects PE 0604721N. PE 0604721N migrates (Battle Group Passive Horizon Extension System) into PE 0304785N beginning in FY 2007.												

CLASSIFICATION:

EXHIBIT R4, Schedule Profile		SHIPS SIGNAL EXPLOITATION EQUIPMENT INCREMENT E (SSEE Incr E)																DATE: February 2007																						
APPROPRIATION/BUDGET ACTIVITY				PROGRAM ELEMENT NUMBER AND NAME												PROJECT NUMBER AND NAME																								
RDT&E, N / BA-5				PE 0304785N Tactical Cryptologic Systems												2134 SHIPBOARD INFORMATION WARFARE (IW) EXPLOIT/SHIPS SIGNAL EXPLOITATION EQUIPMENT INCREMENT E (SSEE Incr E)																								
Fiscal Year	2005				2006				2007				2008				2009				2010				2011				2012				2013							
	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	1	2	3	4	1	2	3	4				
Acquisition Milestones					INC F	MS B			SSEE Contract	Inc F Award							INC F	MS C			LRIP	Contract Option			FRP Decision				IOC								MSD			
System Development									IBR	SRR	SFR	PDR	CDR	DRR	TRR													FRP	Contract Option							FRP	Option			
SSEE INC F EDM Deliveries																	INC F	EDMs							INC F	EDM														
Software Development																																								
SSEE Inc E	Full Rate Production Build Inc E								Full Rate Production Build Inc E																															
FRP Baseline SW Development	████████████████████				████████████████████				████████████████████				████████████████████																											
SSEE Inc F									EDM Build Inc F																															
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FRP Baseline SW Development																																								
Test & Evaluation Milestones																																								
Development Test																																								
Operational Test																																								
Production Milestones																																								
FRP FY 05 SSEE Inc E	FRP FY05																																							
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FRP FY 12 SSEE Inc F																																								
FRP FY 13 SSEE Inc F																																								
Procurements																																								

Remarks:

- \* Shipboard IW migrates from PE 0604721N (Battle Group Passive Horizon Extension System) beginning FY07.
- \*Schedule data for PE 0304785N included in this exhibit for presentation purposes only.











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APPROPRIATION/BUDGET ACTIVITY				PROGRAM ELEMENT NUMBER AND NAME								PROJECT NUMBER AND NAME																								
<b>RDT&amp;E, N / BA 5</b>				PE 0304785N Tactical Cryptologic Systems								2134 SHIPBOARD INFORMATION WARFARE (IW) EXPLOIT/SPECIFIC EMITTER IDENTIFICATION (SEI)																								
Fiscal Year	2005				2006				2007				2008				2009				2010				2011				2012				2013			
	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	1	2	3	4	1	2	3	4
<b>Software</b>																																				
Version 1 SW Development																																				
Version 1 SDT&E																																				
Version 1 HW integration																																				
Version 1 Software Delivery																																				
Version 2 SW Development																																				
Version 2 HW Integration																																				
Version 2 Software Delivery																																				
Version 3 SW Development																																				
Version 3 HW Integration																																				
Version 3 Software Delivery																																				
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Version 5 HW Integration																																				
Version 5 Software Delivery																																				
Version 6 SW Development																																				
Version 6 HW Integration																																				
Version 6 Software Delivery																																				
Product Maint. & Sustainment																																				
Maintenance Releases																																				
<b>Test &amp; Evaluation</b>																																				
<b>Milestones</b>																																				
Technical Information Meetings																																				
Developmental Testing																																				
DT-V1																																				
DT-V2																																				
DT-V3																																				
DT-V4																																				
DT-V5																																				
DT-V6																																				
<b>Development</b>																																				
<b>Milestones</b>																																				
Integration at P-3 TSC/MOC (PMA-290 effort)																																				
Integration with PARAGON / SSEE Inc E effort																																				

Remarks:

\* Shipboard IW migrates from PE 0604721N (Battle Group Passive Horizon Extension System) beginning FY07.  
 Schedule data for PE 0304785N included in this exhibit for presentation purposes only.

**CLASSIFICATION:**

Exhibit R-4a, Schedule Detail						DATE: February 2007			
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT				PROJECT NUMBER AND NAME				
<b>RDT&amp;E, N / BA 5</b>	PE 0304785N Tactical Cryptologic Systems				2134 SHIPBOARD INFORMATION WARFARE (IW) EXPLOIT/SPECIFIC EMITTER IDENTIFICATION (SEI)				
Schedule Profile	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
SURPAS Development									
Phase 1 - Software Delivery	Q2								
Phase 2 - Software Delivery	Q4		01/00						
Phase 3 - Software Delivery		Q2							
Phase 4 - Software Delivery		Q4	01/00						
Phase 5 - Software Delivery			01/00						
Phase 6 - Software Delivery			Q4						
Software Maintenance Release			Q4	Q2	Q4	Q2	Q4	Q2	Q4
Technical Information Meeting	Q1 & Q3	Q1 & Q3	Q1 & Q3	Q1 & Q3	Q1 & Q3	Q1 & Q3	Q1 & Q3	Q1 & Q3	Q1 & Q3
Developmental Testing (DT-IIA)	Q2 & Q4	Q2 & Q4	Q2 & Q4						
Integration at TSC		Q4	Q1						
IOC at TSC			Q2						
Integration with PARAGON		Q4	Q2						
Interim PARAGON Demo		Q4							
PARAGON Demo			Q2						

Remarks:  
 \* **Shipboard IW migrates from PE 0604721N (Battle Group Passive Horizon Extension System) beginning FY07.**  
 \* **Schedule data for PE 0304785N included in this exhibit for presentation purposes only.**

Exhibit R-4 Schedule Profile

<b>CLASSIFICATION:</b>									
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-5		PE 0304785N Tactical Cryptologic Systems				3165 AUTOMATIC IDENTIFICATION SYSTEM (AIS)			
COST (\$ in Millions)		FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Project Cost		0.000	2.993	17.323	2.036	0.0	0.0	0.0	0.0
RDT&E Articles Qty									
<p><b>(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:</b>            AUTOMATIC IDENTIFICATION SYSTEM (AIS): AIS is an International Maritime Very High Frequency (VHF) Communication system that allows any ship to exchange information (machine to machine) on Navigation (Position, Course, Speed, etc), Ship Info (Ship Name, Call Sign, Length/Beam), Cargo Info (Draft, Type, Destination, Route, Estimated Time of Arrival (ETA)), and Messaging (Safety, Text). This technology will improve capability in three diverse areas: (a) Situational Awareness/Common Operational Picture (COP) (b) Navigation/Safety of Ship and (c) Other intelligence gathering/correlation. RDT&amp;E will fund the integration of Commercial off-the-shelf (COTS) Automatic Identification System (AIS) equipment into the existing Global Command and Control - Maritime/Common Operational Picture (GCCS-M)/COP, Navigation Sensor System Interface (NAVSSI) navigation and bridge capabilities surface search / weapons systems and intelligence / Cryptologic capabilities.</p> <p>The warfighting enhancement is to achieve an all-source Maritime Domain Awareness (MDA) capability, the CNO endorsed requirements for an unclassified (a) shipboard track management and (b) operational and tactical aggregation services capability for Automatic Identification System (AIS) data, organic shipboard sensors (including radar and EO/IR), and Airborne surface search radar. This capability must be exportable to those countries that have the capability to participate in MDA, with minimum additional manning and technical expertise. Finally, cross domain solutions that provide multi-layer security while allowing access to information across classified domains is needed to complete the fusion of AIS data with other data sources. These must be initially deployable in FY08, requiring minimum additional development. This effort will improve current capability in three diverse areas: (a) future integration of AIS receivers on Unmanned Aerial Systems (UASs), to increase the AIS Situational Awareness of deployed USN ships (b) improve Situational Awareness, Navigation and Safety of Ship by fusing AIS data with organic ship sensors (and airborne radars), and (c) providing a Cross Domain Solution for integration of AIS data with other forms of unclassified data from a variety of platforms (including classified domains).</p>									

**CLASSIFICATION:**

EXHIBIT R-2a, RDT&E Project Justification		DATE: February 2007																	
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME																	
<b>RDT&amp;E, N / BA 5</b>	PE 0304785N Tactical Cryptologic Systems	3165 AUTOMATIC IDENTIFICATION SYSTEM (AIS)																	
<b>(U) B. Accomplishments/Planned Program</b>																			
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;">AUTOMATIC IDENTIFICATION SYSTEM (AIS):</th> <th style="width: 15%;">FY 06</th> <th style="width: 15%;">FY 07</th> <th style="width: 15%;">FY08</th> <th style="width: 15%;">FY 09</th> </tr> </thead> <tbody> <tr> <td>Accomplishments/Effort/Subtotal Cost</td> <td></td> <td>2.993</td> <td>17.323</td> <td>2.036</td> </tr> <tr> <td>RDT&amp;E Articles Quantity</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>					AUTOMATIC IDENTIFICATION SYSTEM (AIS):	FY 06	FY 07	FY08	FY 09	Accomplishments/Effort/Subtotal Cost		2.993	17.323	2.036	RDT&E Articles Quantity				
AUTOMATIC IDENTIFICATION SYSTEM (AIS):	FY 06	FY 07	FY08	FY 09															
Accomplishments/Effort/Subtotal Cost		2.993	17.323	2.036															
RDT&E Articles Quantity																			
<p>FY 07: Efforts will include the integration of Commercial off-the-shelf (COTS) Automatic Identification System (AIS) equipment into the existing Global Command and Control - Maritime (GCCS-M)/Common Operating Picture (COP), Navigation Sensor System Interface (NAVSSI), navigation and bridge capabilities, surface search / weapons systems and intelligence / Cryptologic capabilities in support of AIS Phase 2 procurement efforts. Demonstrate additional aspects of the AIS Fleet Concept of Operation (CONOP) that could be included in an AIS Phase 3 configuration via participation in the FORCEnet v2.0, the Maritime Domain Awareness (MDA) Community of Interest (CoI) Pilot demonstration, and Trident Warrior (TW)07. Environmental testing is required to install units on ships.</p> <p>FY 08: Funds will design and develop the Engineering Change Proposal (ECP) to the Unclassified MDA CoI Data Sharing (DS) CoI pilot effort (phase 3) AIS implementation. Further define the Global Automatic Identification System (AIS) architecture.</p> <p>The warfighting enhancement will fund the integration of Commercial off-the-shelf (COTS) AIS equipment into Unmanned Aerial Systems (b) implementation of Government off-the-shelf GOTS software on US Navy ships (c) for aggregation of fused track management data, and (d) for acceleration and transition of cross-domain solutions.</p> <p>FY 09: Funds will design and develop a Net-Centric Enterprise Solution (NESI)-compliant Automatic Identification System (AIS) service oriented architecture (SOA).</p>																			

**CLASSIFICATION:**

EXHIBIT R-2a, RDT&E Project Justification		DATE: February 2007						
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME						
<b>RDT&amp;E, N /</b>	<b>BA-5</b>	PE 0304785N Tactical Cryptologic Systems	3165 AUTOMATIC IDENTIFICATION SYSTEM (AIS)					
<b>(U) C. OTHER PROGRAM FUNDING SUMMARY:</b>								
<u>Line Item No. &amp; Name</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u>
OPN Line 2360	76.539	73.192	51.375	92.397	104.883	87.827	93.076	94.423
<b>(U) D. ACQUISITION STRATEGY:</b>								
Acquisition management and contracting strategies are to support the integration of Commercial off-the-shelf (COTS) Automatic Identification System (AIS) equipment into the existing Global Command and Control - Maritime/Common Operational Picture (GCCS-M)/COP, Navigation Sensor System Interface (NAVSSI) navigation and bridge capabilities surface search / weapons systems and intelligence / cryptologic capabilities. COTS will be procured from a contractor with Government oversight from Space and Naval Warfare (SPAWAR) Systems Center (SSC) - Charleston, SSC-San Diego with management oversight by SPAWAR .								
<b>(U) E. MAJOR PERFORMERS:</b>								
N/A								
<b>(U) F. METRICS:</b>								
Earned Value Management (EVM) is used for metrics reporting and risk management.								

**CLASSIFICATION:**

Exhibit R-3 Cost Analysis (page 1)									DATE: February 2007				
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT						PROJECT NUMBER AND NAME				
<b>RDT&amp;E, N / BA 5</b>			PE 0304785N Tactical Cryptologic Systems						3165/AUTOMATIC IDENTIFICATION SYSTEM (AIS)				

Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	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 Hardware Development	Various	Various				0.500				0.000	0.500	
Ancillary Hardware Development	Various	Various		0.130	11/06	0.600	11/06	0.000	11/06	0.000	0.730	
Systems Engineering	Various	Various		0.100		0.900				0.000	1.000	
Training Development	Various	Various		0.100		0.100				0.000	0.200	
Licenses												
Tooling												
GFE												
Award Fees												
Subtotal Product Development				0.330		2.100		0.000		0.000	2.430	

Remarks:

Development Support												
Software Development	Various	Various		1.989		13.022		1.036		0.000	16.047	
Training Development						0.500		0.100		0.000	0.600	
Integrated Logistics Support	Various	Various		0.100		0.600		0.100		0.000	0.800	
Configuration Management	Various	Various		0.100		0.400		0.100		0.000	0.600	
Technical Data								0.100		0.000	0.100	
GFE												
Subtotal Support				2.189		14.522		1.436		0.000	18.147	

Remarks:

CLASSIFICATION:												
Exhibit R-3 Cost Analysis (page 2)									DATE: February 2007			
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT					PROJECT NUMBER AND NAME				
RDT&E, N / BA 5			PE 0304785N Tactical Cryptologic Systems					3165/AUTOMATIC IDENTIFICATION SYSTEM (AIS)				
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	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
Developmental Test & Evaluation	Various	Various		0.104		0.200				0.000	0.304	
Operational Test & Evaluation	Various	Various		0.130				0.200		0.000	0.330	
Live Fire Test & Evaluation												
Test Assets												
Tooling												
GFE												
Subtotal T&E				0.234		0.200		0.200		0.000	0.634	
Remarks:												
Contractor Engineering Support	Various	Various		0.100		0.100		0.100		0.000	0.300	
Government Engineering Support						0.100		0.100		0.000	0.200	
Program Management Support	Various	Various		0.100		0.201		0.150		0.000	0.451	
Travel				0.040		0.100		0.050		0.000	0.190	
Subtotal Management				0.240		0.501		0.400		0.000	1.141	
Remarks:												
Total Cost				2.993		17.323		2.036		0.000	22.352	
Remarks:												





**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 5	PE 0304785N Tactical Cryptologic Systems	Various Congressional Increases

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

9242 COBLU - NETWORK CENTRIC WARFARE ENHANCEMENTS	FY 06	FY 07	FY 08	FY 09
Accomplishments/Effort/Subtotal Cost	0.000	0.996	0.000	0.000
RDT&E Articles Quantity				

COOPERATIVE OUTBOARD LOGISTICS UPGRADE (COBLU) - NETWORK CENTRIC WARFARE ENHANCEMENTS - The COBLU system will provide enhanced capabilities which will facilitate the integration of Control and Coordination Software that enables multiple COBLU systems to be operated remotely in compliance within the FORCENet constructs; coordinate resources and reduce system manning; and enable the distributed operation of COBLU systems allowing operators to be remotely located at an Regional Security Operations Center (RSOC) or a COBLU operator on one platform to task and utilize a second COBLU on another platform. As part of this effort, interface software between COBLU and Distributed Information Operations Service (DIO-S) will be provided and an at-sea technology demonstration will be conducted.

9901 TREXIMILDEC TACTICAL TARGET GENERATOR SYSTEM	FY 06	FY 07	FY 08	FY 09
Accomplishments/Effort/Subtotal Cost	0.000	0.996	0.000	0.000
RDT&E Articles Quantity				

TREXIMILDEC TACTICAL TARGET GENERATOR SYSTEM - MILDEC Tactical Target Generator (TTG) will provide both offensive and defensive Information Operations (IO) and Military Deception (MILDEC) capabilities for military aircraft against current and future hostile air defense systems. In the offensive mode, the TTG will provide a tactical IO capability for airborne platforms to electronically stimulate hostile air defense acquisition and tracking radars so they can be detected and located by National and tactical sensors, and then be destroyed by US or coalition forces. In the defensive mode, the TTG will enable tactical airborne platforms (manned, unmanned, fixed wing or rotary) to successfully enter, transit and egress hostile territory by appearing as a non-threatening air contact.

9A29 ANS/SSQ-137 (v) SHIPS SIGNAL EXPLOITATION EQUIPMEN	FY 06	FY 07	FY 08	FY 09
Accomplishments/Effort/Subtotal Cost	0.000	1.295	0.000	0.000
RDT&E Articles Quantity				

ANS/SSQ-137 (v) SHIPS SIGNAL EXPLOITATION EQUIPMENT - ANS/SSQ supports effort to develop the latest Pre-Planned Product Improvements (P3I) enhancements upgrades to maintain the systems operational capability against evolving modern and future digital communications signals. P3I technology upgrades include; development of Communications Intelligence (COMINT) mapping and task synchronization, development Time Differential Multiplexing (TDM) and Networked High Frequency (HF)/ Direction Finding (DF) capability, and Radio Frequency Distribution Unit (RFDU) enhancements. These upgrades will improve SSEE Increment E capability to collect, process and analyze hostile threat communications emitters in order to provide tactical intelligence, Situational Awareness (SA), Indications and Warning, and hostile threat assessment to deployed Carrier Strike Group (CSG)/Expeditionary Strike Group (ESG) forces.

**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 5	PE 0304785N Tactical Cryptologic Systems	Various Congressional Increases

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

9A30 SCAN EAGLE UAV ADVANCED DATALINK AND SENSOR DEV	FY 06	FY 07	FY 08	FY 09
Accomplishments/Effort/Subtotal Cost	0.000	0.996	0.000	0.000
RDT&E Articles Quantity				

SCAN EAGLE UAV ADVANCED DATALINK AND SENSOR DEVELOPMENT- RDT&E plus-up funds the development of a ScanEagle high capacity data link compatible with the Common Data Link (CDL) waveform and NATO STANAG 4586 to enhance interoperability and networked imagery distribution with US Navy Fleet assets. The integration of a Commercial-off-the-Shelf (COTS) Automatic Identification System (AIS) transceiver into ScanEagle and data integration into the Navy's Integrated AIS Rapid Deployment Capability (RDC). This AIS RDC in turn provides AIS sensor data to the Global Command and Control - Maritime (GCCS-M) COP, Navigation Sensor System Interface (NAVSSI) navigation and bridge capabilities surface search / weapons systems and intelligence / cryptologic capabilities. Integration of this AIS technology will improve capability in three diverse areas: (a) Situational Awareness/COP(b) Navigation/Safety of Ship and (c) Other intelligence gathering/correlation.