

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Navy									DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 5: Development & Demonstration (SDD)				R-1 ITEM NOMENCLATURE PE 0304785N: Tactical Cryptologic Systems							
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	18.229	19.833	17.019	0.000	17.019	16.567	16.353	15.759	16.080	Continuing	Continuing
2134: Shipboard IW Exploit	12.608	16.943	16.554	0.000	16.554	16.099	16.353	15.759	16.080	Continuing	Continuing
3165: Automatic Identification System (AIS)	4.025	0.500	0.465	0.000	0.465	0.468	0.000	0.000	0.000	0.000	24.066
9999: Congressional Adds	1.596	2.390	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	9.816

A. Mission Description and Budget Item Justification

The Shipboard IW line includes the Ships Signal Exploitation Equipment (SSEE) program and the Program of Record that executes a major component of the Maritime Cryptologic Systems for the 21st Century. These systems provide the battle group and combatant commanders with the surfaces fleets only Information Operations (IO) non-kinetic capabilities ("Finish"). In addition they provide the battle groups with real time Indications and Warnings by acquisition ("Find") and localization ("Fix") of Signals of Interest. This program's funding is required to incorporate Pre-Planned Product Improvements, new Commercial Off-the-Shelf (COTS) based technologies and software into the existing systems. Funding will also focus on developing and delivering expanded non-kinetic IO capabilities and net-centric service oriented architecture, which includes the development, integration and test of "Ballistic Missile Defense Executive Committee Anti-Submarine Warfare Chief of Naval Operations Executive Board IO Countermeasure Red Flash / Integrated Communications and Data Systems (ICADS) (description and details classified) and Paragon (Frequency Extension/Targeting Enhancement) into SSEE E/F and the follow-on spiral of the SSEE program.

The SSEE program is a classified IW / IO and tactical cryptologic system that subsequently provides critical tactical intelligence, situational awareness/Battlespace Awareness, indications and warnings, and hostile threat assessment. As a spiral acquisition program, Research, Development, Test & Evaluation (RDT&E) funding is required to have new technologies and associated new operational capabilities rapidly developed and transitioned as Pre-Planned Product Improvements (P3I) upgrades into the system's hardware/software configuration.

Automatic Identification System is an International Maritime Very High Frequency 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), and Cargo Info (Draft, Type, Destination, Route, Estimated Time of Arrival) and Messaging (Safety, Text). This technology will improve capability in three diverse areas: (a) Situational Awareness/Common Operational Picture (b) Navigation/Safety of Ship and (c) Other intelligence gathering/correlation. Funding will support the integration of modified COTS AIS equipment with the existing Global Command and Control - Maritime/Common Operational Picture, navigation and bridge display capabilities, surface search / weapons systems and intelligence / Cryptologic capabilities

UNCLASSIFIED

R-1 Line Item #139

Page 1 of 19

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Navy				DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY		R-1 ITEM NOMENCLATURE			
1319: Research, Development, Test & Evaluation, Navy		PE 0304785N: Tactical Cryptologic Systems			
BA 5: Development & Demonstration (SDD)					
Congressional Adds:					
PARAGON System Updates is a classified Navy tactical signals intelligence frequency extension capability that will be integrated into Ships Signal Exploitation Equipment (SSEE) Inc E/F programs. This capability will provide simultaneous detection, collection, processing, IO and display of communication intelligence data from hostile, high threat and adversary platforms in select frequency ranges that are not prosecuted or countered today.					
PARAGON (Frequency Extension) is a classified Navy tactical signals intelligence frequency extension capability that will be integrated into SSEE Inc E/F programs. This capability provides simultaneous detection, collection, processing, Information Operations and display of communication intelligence data from hostile, high threat and adversary platforms in select frequency ranges that are not prosecuted or countered today.					
B. Program Change Summary (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Previous President's Budget	18.228	19.016	0.000	0.000	0.000
Current President's Budget	18.229	19.833	17.019	0.000	17.019
Total Adjustments	0.001	0.817	17.019	0.000	17.019
• Congressional General Reductions		-0.083			
• Congressional Directed Reductions		-1.500			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		2.400			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.001	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Program Adjustments	0.000	0.000	17.019	0.000	17.019
Congressional Add Details (\$ in Millions, and Includes General Reductions)					
Project: 9999: Congressional Adds					
Congressional Add: Paragon (Frequency Extension)					
Congressional Add: Paragon System Upgrades					
Congressional Add Subtotals for Project: 9999					
	FY 2009	FY 2010			
	0.000	2.390			
	1.596	0.000			
	1.596	2.390			

UNCLASSIFIED

R-1 Line Item #139

Page 2 of 19

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Navy		DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0304785N: <i>Tactical Cryptologic Systems</i>		
<u>Congressional Add Details (\$ in Millions, and Includes General Reductions)</u>		FY 2009	FY 2010
<div style="text-align: right; margin-bottom: 10px;">Congressional Add Totals for all Projects</div> <u>Change Summary Explanation</u> Technical: Not applicable. Schedule: Not applicable. FY11 from previous President's Budget is shown as zero because no FY11-15 data was presented in President's Budget 2010.		1.596	2.390

UNCLASSIFIED

R-1 Line Item #139

Page 3 of 19

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0304785N: <i>Tactical Cryptologic Systems</i>				PROJECT 2134: <i>Shipboard IW Exploit</i>			
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
2134: <i>Shipboard IW Exploit</i>	12.608	16.943	16.554	0.000	16.554	16.099	16.353	15.759	16.080	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		
A. Mission Description and Budget Item Justification <p>The Shipboard IW line includes the Ships Signal Exploitation Equipment (SSEE) program and the Program of Record that executes a major component of the Maritime Cryptologic Systems for the 21st Century. These systems provide the battle group and Combatant Commanders with the surfaces fleets only Information Operations (IO) non-kinetic capabilities ("Finish"). In addition they provide the battle groups with real time Indications and Warnings by acquisition ("Find") and localization ("Fix") of Signals of Interest. This program's funding is required to incorporate Pre-Planned Product Improvements (P3I), new Commercial Off-the-Shelf (COTS) based technologies and software into the existing systems. Funding will also focus on developing and delivering expanded non-kinetic IO capabilities and net-centric Service Oriented Architecture (SOA), which includes the development, integration and test of "Ballistic Missile Defense (BMD) Executive Committee (EXCOM) Anti-Submarine Warfare (ASW) Chief of Naval Operations Executive Board (CEB) IO Countermeasure Red Flash/ Integrated Communications and Data Systems (ICADS) (Description and details classified) and Paragon (Frequency Extension/Targeting Enhancement) into SSEE and the follow-on spiral of the SSEE program. Paragon is a classified Navy tactical signals intelligence frequency extension capability that will be integrated into SSEE Inc E/F and follow on spiral of SSEE programs. This capability will provide simultaneous detection, collection, processing, IO and display of communication intelligence data from hostile, high threat and adversary platforms in select frequency ranges that are not prosecuted or countered today.</p> <p>The SSEE program is a classified IW/IO and tactical cryptologic system that subsequently provides critical tactical intelligence, situational awareness/battlespace awareness (BA), indications and warnings, and hostile threat assessment. As a spiral acquisition program, Research, Development, Test & Evaluation funding is required to have new technologies and associated new operational capabilities rapidly developed and transitioned as P3I upgrades into the system's hardware/software configuration.</p> <p>FY11 funding will incorporate P3I, new COTS based technologies and software into the existing systems. Funding will also focus on developing and delivering IO capabilities and net-centric SOA, which includes the development, integration and test of "BMD EXCOM ASW CEB IO Countermeasure Red Flash/ICADS" (description and details classified), Graywing, Medusa and Paragon (Frequency Extension/Targeting Enhancement capabilities) into SSEE Inc F and the follow on spiral of the SSEE program.</p>											
B. Accomplishments/Planned Program (\$ in Millions)											

UNCLASSIFIED

R-1 Line Item #139

Page 4 of 19

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy				DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 5: Development & Demonstration (SDD)		R-1 ITEM NOMENCLATURE PE 0304785N: Tactical Cryptologic Systems		PROJECT 2134: Shipboard IW Exploit	
B. Accomplishments/Planned Program (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Ship Signal Exploitation Equipment Inc E (SSEE Inc E) FY 2009 Accomplishments: Expanded Signals of Interest (SOI) processing capability to allow collection of the newest high priority modern technology threat signals for tightly integrated Information Operation (IO) / non-kinetic, and processing and analysis capabilities. Developed and integrated Cryptologic Unified Build (CUB) software to support battlegroup interoperability. Developed and integrated upgrades to Hostile Force Integration Targeting Subsystems (HITS) to integrate both national and tactical Intelligence, Surveillance, and Reconnaissance (ISR) sensors for new and emerging SOI. Fully tested improved software. Completed Follow-on Test and Evaluation. FY 2010 Plans: Continue to expand SOI processing capability to allow collection of the newest high priority modern technology threat signals for tightly integrated IO / non-kinetic, and processing and analysis capabilities. Development and integration of CUB software to support battlegroup interoperability. Continue to develop and integrate upgrades to HITS to integrate both national and tactical ISR sensors for new and emerging SOI.	1.974	1.739	0.000	0.000	0.000
Ship Signals Exploitation Equipment Inc F (SSEE Inc F) FY 2009 Accomplishments: Continued SSEE Inc F development and system design Engineering Development Models (EDMs). Integrated, tested and delivered EDMs. Continued 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 (NCESI). Conducted EDM interoperability testing, platform integration efforts, and operational assessment. Developed technical publications. Completed engineering and management data. Continued development efforts for remoting and evolving NCESI/Service Oriented Architecture (SOA) and services.	10.572	11.775	15.615	0.000	15.615

UNCLASSIFIED

R-1 Line Item #139

Page 5 of 19

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 5: Development & Demonstration (SDD)		R-1 ITEM NOMENCLATURE PE 0304785N: Tactical Cryptologic Systems		PROJECT 2134: Shipboard IW Exploit		
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2010 Plans: Conduct EDM interoperability testing, platform integration efforts, environmental qualifications and correction of deficiencies identified during operational assessment. Expand Signals of Interest (SOI) processing capability to allow collection of the newest high priority modern technology threat signals for tightly integrated Information Operation (IO) / non-kinetic capabilities for support to time critical military strike operation and subsequent processing and analysis capabilities for timely and accurate situational awareness for force protection. Funding will focus on developing and delivering IO capabilities and Net-Centric SOA including development integration and test of "Ballistic Missile Defense (BMD) Executive Committee (EXCOM) Anti-Submarine Warfare (ASW) Chief of Naval Operations Executive Board (CEB) IO Countermeasure Red Flash" (program details classified), and Paragon (Frequency Extension/Targeting Enhancement) for integration into SSEE Inc F and the follow on spiral of the SSEE program.						
FY 2011 Base Plans: Continue to expand SOI processing capability to allow collection of the newest high priority modern technology threat signals for tightly integrated IO/non-kinetic capabilities for support to time critical military strike operation and subsequent processing and analysis capabilities for timely and accurate situational awareness for force protection. Complete operational evaluation in support of full rate decision. Correct limitations identified in operational evaluation in support of follow on test and evaluation. Develop and deliver IO capabilities and NCESI SOA including development integration and test of "BMD EXCOM ASW CEB IO Countermeasure Red Flash", Graywing, Medusa, and Paragon (Frequency Extension/Targeting Enhancement capabilities) for integration into SSEE Inc F.						
ICADS FY 2010 Plans: Integrated Communications and Data System (ICADS) is a non-kinetic capability that can be rapidly developed to counter a serious threat to afloat units. ICADS provides a counter-Intelligence,		0.000	3.429	0.939	0.000	0.939

UNCLASSIFIED

R-1 Line Item #139

Page 6 of 19

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy							DATE: February 2010				
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 5: Development & Demonstration (SDD)			R-1 ITEM NOMENCLATURE PE 0304785N: Tactical Cryptologic Systems			PROJECT 2134: Shipboard IW Exploit					
B. Accomplishments/Planned Program (\$ in Millions)											
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
Surveillance, Reconnaissance (ISR) capability against adversary sensor systems (specific development/capability details are held at a higher classification). FY 2011 Base Plans: ICADS is a non-kinetic capability that can be rapidly developed to counter a serious threat to afloat units. ICADS provides a counter-ISR capability against adversary sensor systems (specific development/capability details are held at a higher classification). Note: Funds transferred from Program Element 0204575N Project Number 2263.											
Acquisition Workforce Fund FY 2009 Accomplishments: Funded acquisition workforce fund.						0.062	0.000	0.000	0.000	0.000	
Accomplishments/Planned Programs Subtotals						12.608	16.943	16.554	0.000	16.554	
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• OPN / 2360: Shipboard IW Exploit	90.672	89.408	105.624	0.000	105.624	101.575	110.648	111.913	113.904	Continuing	Continuing
D. Acquisition Strategy											
Acquisition, management and contracting strategies are to support engineering and manufacturing development by providing funds to a Prime Contractor and Space & Naval Warfare Systems Command (SPAWAR) Systems Center (SSC) - Atlantic, SSC - Pacific and miscellaneous contractors, with management oversight by SPAWAR.											
E. Performance Metrics											
Ship Signal Exploitation Equipment (SSEE) Inc F is in its last year of development. SSEE Inc F is scheduled to achieve Milestone-C in FY10.											

UNCLASSIFIED

R-1 Line Item #139

Page 7 of 19

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy											DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 5: Development & Demonstration (SDD)					R-1 ITEM NOMENCLATURE PE 0304785N: Tactical Cryptologic Systems					PROJECT 2134: Shipboard IW Exploit				
Product Development (\$ in Millions)														
				FY 2010		FY 2011 Base		FY 2011 OCO		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	
Primary Hardware Development	Various/ Various	Various Various	73.395	0.000		0.000		0.000		0.000	Continuing	Continuing	Continuing	
Systems Engineering	Various/ Various	Various Various	20.762	1.547	Nov 2009	1.684	Nov 2010	0.000		1.684	Continuing	Continuing	Continuing	
Training Development	WR	SSC PAC San Diego, CA	0.577	0.899	Nov 2009	0.220	Nov 2010	0.000		0.220	Continuing	Continuing	Continuing	
Systems Engineering	WR	SSC LANT Charleston, SC	0.000	1.324	Nov 2009	1.476	Nov 2010	0.000		1.476	Continuing	Continuing	Continuing	
Subtotal			94.734	3.770		3.380		0.000		3.380				
Remarks														
Support (\$ in Millions)														
				FY 2010		FY 2011 Base		FY 2011 OCO		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	
Software Development	Various/ Various	Various Various	39.428	1.348	Feb 2010	1.167	Nov 2010	0.000		1.167	Continuing	Continuing	Continuing	
Training Development	Various/ Various	Various Various	0.079	0.000		0.445	Nov 2010	0.000		0.445	Continuing	Continuing	Continuing	
Integrated Logistics Support	Various/ Various	Various Various	1.692	0.514	Nov 2009	0.000		0.000		0.000	Continuing	Continuing	Continuing	

UNCLASSIFIED

R-1 Line Item #139

Page 8 of 19

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy										DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 5: <i>Development & Demonstration (SDD)</i>					R-1 ITEM NOMENCLATURE PE 0304785N: <i>Tactical Cryptologic Systems</i>					PROJECT 2134: <i>Shipboard IW Exploit</i>	

Support (\$ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		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
Configuration Management	WR	SSC Lant Charleston, SC	1.011	0.325	Nov 2009	0.341	Nov 2010	0.000		0.341	Continuing	Continuing	Continuing
Technical Data	Various/ Various	Various Various	0.264	0.278	Nov 2009	0.210	Nov 2010	0.000		0.210	Continuing	Continuing	Continuing
Software Development	C/CPAF	Argon ST Fairfax, VA	0.000	6.284	Feb 2010	5.442	Nov 2010	0.000		5.442	Continuing	Continuing	Continuing
Subtotal			42.474	8.749		7.605		0.000		7.605			

Remarks

Software Development contract action delayed due to FY10 CRA.

Test and Evaluation (\$ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		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
Developmental Test & Evaluation	Various/ Various	Various Various	6.644	0.731	Nov 2009	0.769	Nov 2010	0.000		0.769	Continuing	Continuing	Continuing
Operational Test & Evaluation	WR	OPTEVFOR Norfolk	2.391	0.400	Nov 2009	0.287	Nov 2010	0.000		0.287	Continuing	Continuing	Continuing
Test Assets	WR	SSC PAC San Diego	1.747	0.000		0.000		0.000		0.000	Continuing	Continuing	Continuing
Subtotal			10.782	1.131		1.056		0.000		1.056			

UNCLASSIFIED

R-1 Line Item #139

Page 9 of 19

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy											DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0304785N: <i>Tactical Cryptologic Systems</i>				PROJECT 2134: <i>Shipboard IW Exploit</i>					
Test and Evaluation (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		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
Remarks													
Management Services (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		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
Contractor Engineering Support	Various/ Various	Various Various	0.000	0.933	Nov 2009	0.942	Nov 2010	0.000		0.942	Continuing	Continuing	Continuing
Government Engineering Support	Various/ Various	Various Various	0.000	1.290	Nov 2009	2.140	Nov 2010	0.000		2.140	Continuing	Continuing	Continuing
Program Management Support	Various/ Various	Various Various	15.611	0.600	Nov 2009	0.900	Nov 2010	0.000		0.900	Continuing	Continuing	Continuing
Travel	WR	DTS Various	1.100	0.470	Nov 2009	0.531	Nov 2010	0.000		0.531	Continuing	Continuing	Continuing
Acquisition Workforce	Various/ Various	Various Various	0.062	0.000		0.000		0.000		0.000	Continuing	Continuing	Continuing
Subtotal			16.773	3.293		4.513		0.000		4.513			
Remarks													

UNCLASSIFIED

R-1 Line Item #139

Page 10 of 19

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy							DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0304785N: <i>Tactical Cryptologic Systems</i>			PROJECT 2134: <i>Shipboard IW Exploit</i>		
<div style="display: flex; justify-content: space-between;"> <div style="width: 25%;"></div> <div style="width: 20%; text-align: center;"> Total Prior Years Cost </div> <div style="width: 10%; text-align: center;"> FY 2010 </div> <div style="width: 10%; text-align: center;"> FY 2011 Base </div> <div style="width: 10%; text-align: center;"> FY 2011 OCO </div> <div style="width: 10%; text-align: center;"> FY 2011 Total </div> <div style="width: 10%; text-align: center;"> Cost To Complete </div> <div style="width: 10%; text-align: center;"> Total Cost </div> <div style="width: 10%; text-align: center;"> Target Value of Contract </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div style="width: 25%;">Project Cost Totals</div> <div style="width: 20%; text-align: center;">164.763</div> <div style="width: 10%; text-align: center;">16.943</div> <div style="width: 10%; text-align: center;"></div> <div style="width: 10%; text-align: center;">16.554</div> <div style="width: 10%; text-align: center;">0.000</div> <div style="width: 10%; text-align: center;">16.554</div> <div style="width: 10%; text-align: center;"></div> <div style="width: 10%; text-align: center;"></div> </div>									
Remarks PY funding reflects PE 0604721N. Funding moved to PE 0304785N starting in FY07.									

UNCLASSIFIED

UNCLASSIFIED

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

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

1319: Research, Development, Test & Evaluation, Navy
BA 5: Development & Demonstration (SDD)

R-1 ITEM NOMENCLATURE

PE 0304785N: *Tactical Cryptologic Systems*

PROJECT

2134: *Shipboard IW Exploit*

Fiscal Year	2009				2010				2011				2012				2013				2014				2015			
	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								△ FOC																				
Test & Evaluation Milestones		▲																										
Development Test		SSEE Inc E																										
Operational Test		FOT&E																										
Production Milestones																												
FRP FY 09 SSEE Inc E		FRP FY09																										
Procurements		FRP(8)																										
Remarks:																												

UNCLASSIFIED

R-1 Line Item #139

Page 12 of 19

UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Navy																								DATE: February 2010								
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 5: Development & Demonstration (SDD)												R-1 ITEM NOMENCLATURE PE 0304785N: Tactical Cryptologic Systems												PROJECT 2134: Shipboard IW Exploit								
Fiscal Year	2008				2009				2010				2011				2012				2013				2014				2015			
	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										MS-C △				FRP DR △			IOC △				MSD △											
Prototype Phase																																
System Development		▲	DRR				▲	TRR							FRP Decision Contract Option																	
SSEE INC F EDM Deliveries							▲	EDM 1																								
Software Development																																
SSEE Inc F																																
FRP Baseline SW Development																																
SSEE Inc F EDM Baseline SW Development																																
LRIP Baseline SW Development																																
FRP Baseline SW Development																																
Test & Evaluation Milestones																																
Development Test																																
Operational Test																																
Production Milestones																																
LRIP FY 10 SSEE Inc F																																
FRP FY 11 SSEE Inc F																																
FRP FY 12 SSEE Inc F																																
FRP FY 13 SSEE Inc F																																
FRP FY 14 SSEE Inc F																																
FRP FY 15 SSEE Inc F																																
Procurements																																
Remarks:																																

UNCLASSIFIED

R-1 Line Item #139

Page 13 of 19

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Navy			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0304785N: <i>Tactical Cryptologic Systems</i>	PROJECT 2134: <i>Shipboard IW Exploit</i>	

Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
Inc E - Full Operational Capability (FOC)	4	2010	4	2010
Inc E - Follow-On Test & Evaluation (FOTE)	2	2009	2	2009
Inc E - Full Rate Production (FRP)	1	2009	4	2009
Inc F - Test Readiness Review (TRR)	3	2009	3	2009
Inc F - Developmental Testing IT-B1	3	2009	4	2009
Inc F - Developmental Testing IT-B2	1	2010	2	2010
Inc F - Developmental Testing IT-C1	4	2010	1	2011
Inc F - Developmental Testing IT-C2	2	2011	2	2011
Inc F - Operational Testing Operational Assessment (OA)	4	2009	1	2010
Inc F - Operational Testing (OT)	2	2011	2	2011
Inc F - Engineering Development Models (EDM) Deliveries	3	2009	3	2009
Inc F - Milestone C - Low Rate Initial Production (LRIP)	2	2010	2	2010
Inc F - LRIP Contract Award	2	2010	3	2010
Inc F - Full Rate Production (FRP) Decision	2	2011	3	2011
Inc F - FRP Contract Award	3	2011	3	2011
Inc F - Material Support Date (MSD)	2	2013	2	2013
Inc F - Initial Operational Capability (IOC)	1	2012	1	2012

UNCLASSIFIED

R-1 Line Item #139

Page 14 of 19

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0304785N: <i>Tactical Cryptologic Systems</i>				PROJECT 3165: <i>Automatic Identification System (AIS)</i>			
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
3165: <i>Automatic Identification System (AIS)</i>	4.025	0.500	0.465	0.000	0.465	0.468	0.000	0.000	0.000	0.000	24.066
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		
A. Mission Description and Budget Item Justification Automatic Identification System (AIS) is an International Maritime Very High Frequency 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), and Cargo Info (Draft, Type, Destination, Route, Estimated Time of Arrival) and Messaging (Safety, Text). This technology will improve capability in three diverse areas: (a) Situational Awareness/Common Operational Picture (b) Navigation/Safety of Ship and (c) Other intelligence gathering/correlation. Funding will support the integration of modified Commercial Off-The-Shelf AIS equipment with the existing Global Command and Control - Maritime/Common Operational Picture navigation and bridge display capabilities, surface search / weapons systems and intelligence / Cryptologic capabilities.											
B. Accomplishments/Planned Program (\$ in Millions)											
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
Automatic Identification System (AIS)						4.005	0.500	0.465	0.000	0.465	
<i>FY 2009 Accomplishments:</i> Continued to design and develop a Net-Centric Enterprise Solution-compliant AIS, within a service oriented architecture. Consolidated and streamlined data sharing between the United States Navy (USN) /Department of Defense (DoD) AIS capability and other agencies, such as the Department of Transportation emerging Maritime Security and Safety Information System (MSSIS). Continued the refinement of the Global AIS architecture, and its relation to the overall USN Maritime Domain Awareness (MDA) effort and Concept of Operations (CONOP) as well as the National MDA CONOP. This will provide a secure end-to-end AIS data sharing capability in-line with National MDA CONOPs and current DoD guidance and policies.											

UNCLASSIFIED

R-1 Line Item #139

Page 15 of 19

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy									DATE: February 2010				
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 5: Development & Demonstration (SDD)				R-1 ITEM NOMENCLATURE PE 0304785N: Tactical Cryptologic Systems			PROJECT 3165: Automatic Identification System (AIS)						
B. Accomplishments/Planned Program (\$ in Millions)													
									FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2010 Plans: Funds will support developmental testing and operational testing of submarines and shore site Automatic Identification System (AIS) configurations. Also funds will support new AIS interoperability requirements, such as incorporation of AIS into Consolidated Afloat Networks and Enterprise Services (CANES) and AIS interoperability with the Maritime Security and Safety Information System (MSSIS). Funds will also continue the refinement of the Global AIS architecture, and its relation to the overall United States Navy (USN) Maritime Domain Awareness (MDA) effort and Concept of Operations (CONOP) as well as the National MDA CONOP.													
FY 2011 Base Plans: Funds will support incorporation of new AIS interoperability requirements, such as AIS CANES configuration. Funds will also continue the refinement of the Global AIS architecture, and its relation to the overall USN MDA effort and CONOP as well as the National MDA CONOP. This will provide a secure end-to-end AIS data sharing capability in-line with National MDA CONOPs.													
Acquisition Workforce Fund FY 2009 Accomplishments: Funded Acquisition Workforce Fund.									0.020	0.000	0.000	0.000	0.000
Accomplishments/Planned Programs Subtotals									4.025	0.500	0.465	0.000	0.465
C. Other Program Funding Summary (\$ in Millions)													
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost		
• OPN / 2360: Shipboard IW Exploit (AIS only)	6.912	2.399	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing		
	0.000	0.000	1.299	0.000	1.299	1.384	0.961	0.957	0.954	Continuing	Continuing		

UNCLASSIFIED

R-1 Line Item #139

Page 16 of 19

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy										DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 5: Development & Demonstration (SDD)				R-1 ITEM NOMENCLATURE PE 0304785N: Tactical Cryptologic Systems				PROJECT 3165: Automatic Identification System (AIS)			
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• OPN / 2361: Automatic Identification System											
D. Acquisition Strategy											
Acquisition management and contracting strategies are to support the integration of Commercial Off-The-Shelf (COTS) Automatic Identification System (AIS) data into the existing and emerging United States Navy Command and Control and Network infrastructure capabilities, 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) - Atlantic and SSC - Pacific with management oversight by SPAWAR .											
E. Performance Metrics											
AIS will incorporate new interoperability requirements in order to provide a secure end-to-end AIS data sharing capability with National Maritime Domain Awareness Concept of Operations.											

UNCLASSIFIED

R-1 Line Item #139

Page 17 of 19

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0304785N: <i>Tactical Cryptologic Systems</i>				PROJECT 9999: <i>Congressional Adds</i>			
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
9999: <i>Congressional Adds</i>	1.596	2.390	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	9.816
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		
A. Mission Description and Budget Item Justification PARAGON System Updates is a classified Navy tactical signals intelligence frequency extension capability that will be integrated into SSEE Inc E/F programs. This capability will provide simultaneous detection, collection, processing, IO and display of communication intelligence data from hostile, high threat and adversary platforms in select frequency ranges that are not prosecuted or countered today.											
B. Accomplishments/Planned Program (\$ in Millions)											
							FY 2009	FY 2010			
Congressional Add: Paragon (Frequency Extension)							0.000	2.390			
<i>FY 2010 Plans:</i> PARAGON Frequency Extension is a classified Navy tactical signals intelligence frequency extension capability that will be integrated into Ships Signal Exploitation Equipment Inc E/F programs. This capability provides simultaneous detection, collection, processing, Information Operations and display of communication intelligence data from hostile, high threat and adversary platforms in select frequency ranges that are not prosecuted or countered today.											
Congressional Add: Paragon System Upgrades							1.596	0.000			
<i>FY 2009 Accomplishments:</i> PARAGON system updates is a classified Navy tactical signals intelligence frequency extension capability that was integrated into Ships Signal Exploitation Equipment Inc E/F programs. This capability provided simultaneous detection, collection, processing, Information Operations and											

UNCLASSIFIED

R-1 Line Item #139

Page 18 of 19

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0304785N: <i>Tactical Cryptologic Systems</i>	PROJECT 9999: <i>Congressional Adds</i>
<u>B. Accomplishments/Planned Program (\$ in Millions)</u>		
	FY 2009	FY 2010
display of communication intelligence data from hostile, high threat and adversary platforms in select frequency ranges that are not prosecuted or countered today.		
Congressional Adds Subtotals	1.596	2.390
<u>C. Other Program Funding Summary (\$ in Millions)</u> N/A		
<u>D. Acquisition Strategy</u> N/A		
<u>E. Performance Metrics</u> Congressional Add.		

UNCLASSIFIED

R-1 Line Item #139

Page 19 of 19