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Exhibit R-2, RDT&E Budget Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation/Budget Activity 1319: <i>Research, Development, Test & Evaluation, Navy / BA 5: System Development & Demonstration (SDD)</i>	R-1 Program Element (Number/Name) PE 0304785N / <i>Tactical Cryptologic Systems</i>
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COST (\$ in Millions)	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
Total Program Element	265.837	10.157	17.785	36.747	-	36.747	29.025	37.342	34.429	36.649	Continuing	Continuing
2134.: <i>Shipboard IW Exploit</i>	265.837	10.157	17.785	36.747	-	36.747	29.025	37.342	34.429	36.649	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Shipboard Information Warfare (IW) line includes the Ship's Signal Exploitation Equipment (SSEE) Increment E, F, G, Modifications and ICADS ((AN/URC-148(V)) programs. The SSEE program is a classified IW / Electronic Warfare (EW) and tactical cryptologic system supporting Assured Command and Control, Battlespace Awareness, Integrated Fires and Electromagnetic Maneuver Warfare. These systems enable power projection in Anti-Access, Area Denial (A2AD) situations and offensive EW capabilities enabling surface vessels to disrupt, deny, degrade and defeat adversary (state and non-state) use of the radio frequency spectrum. SSEE systems detect adversary radio frequency emissions and use them to provide critical tactical and strategic intelligence, battlespace awareness, and hostile threat assessment. It is an incremental acquisition program, keeping up with adversary communications technology development by using Research, Development, Test & Evaluation (RDT&E) funding to rapidly develop and transition new technologies as Pre-Planned Product Improvements (P3I) upgrades into the system's hardware/software configuration via a net-centric Service Oriented Architecture. Funding will focus on developing and delivering expanded offensive EW capabilities in support of "Ballistic Missile Defense (BMD) Executive Committee (EXCOM) Anti-Submarine Warfare (ASW) Chief of Naval Operations (CNO) Executive Board Information Operation (IO) Countermeasure Red Flash/Medusa" as well as capabilities enabling operations and power projection in A2AD scenarios.

ICADS Increment II is a mission critical system providing advanced simulation capability for naval platforms as well as back-up communications capabilities. Additional details on these programs are held at a higher classification level.

Funding increases in FY 17 to develop capabilities within the radio frequency spectrum to project maritime power into A2AD environs of SSEE systems. Additionally, FY17 funding increases to initiate SSEE Inc G development efforts to create Engineering Design Models EDM).

B. Program Change Summary (\$ in Millions)	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Previous President's Budget	10.827	17.785	15.429	-	15.429
Current President's Budget	10.157	17.785	36.747	-	36.747
Total Adjustments	-0.670	0.000	21.318	-	21.318
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-0.670	0.000			
• SBIR/STTR Transfer	-	-			
• Program Adjustments	0.000	0.000	30.400	-	30.400

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2017 Navy	Date: February 2016
---	----------------------------

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• Rate/Misc Adjustments	0.000	0.000	-9.082	-	-9.082
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Change Summary Explanation

Funding increases in FY 17 to develop capabilities within the radio frequency spectrum to project maritime power into A2AD environs of SSEE systems. A2AD capabilities integrated into the SSEE Systems will enable maritime power projection in enabling surface vessels to disrupt, deny, degrade and defeat adversary (state and non-state) use of the radio frequency spectrum, improving the Fleet's ability to communicate and operate therein. These systems will be deployed supporting Assured Command and Control, Battlespace Awareness, and Integrated Fires (further details held at a higher classification level).

Funding will initiate Program of Record (POR) acquisition documentation and begin development activities for the engineering design models (EDM) for the ICADS Increment II system.

Additionally, FY17 funding increases to initiate SSEE Inc G development efforts to create Engineering Design Models EDM).

As a result of ongoing Pre-Acquisition Activities and in conjunction with a decision to pursue an Agile Acquisition model in lieu of a traditional acquisition model to facilitate and adapt to rapid changes in adversary communications capabilities over the course of the program life-cycle, the below changes have been made to the Increment G Schedule: development contract award is QTR 2 FY 17; Build Technical Review 1 will occur in QTR3 FY 17; Fleet Capability Release will begin in QTR 4 FY 17 and Field Technical Review 1 will be in QTR 2 FY 19.

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2017 Navy										Date: February 2016		
Appropriation/Budget Activity 1319 / 5					R-1 Program Element (Number/Name) PE 0304785N / <i>Tactical Cryptologic Systems</i>				Project (Number/Name) 2134. / <i>Shipboard IW Exploit</i>			
COST (\$ in Millions)	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
2134.: <i>Shipboard IW Exploit</i>	265.837	10.157	17.785	36.747	-	36.747	29.025	37.342	34.429	36.649	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Shipboard Information Warfare (IW) line includes the Ship's Signal Exploitation Equipment (SSEE) Increment E, F, G and Modifications programs. The SSEE program is a classified IW / Electronic Warfare (EW) and tactical cryptologic system that provide critical tactical intelligence, situational awareness, battlespace awareness, indications and warnings and hostile threat assessment. These systems provide the battle group and combatant commanders with the surface fleet's only EW 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 (SOI). As an incremental 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. This program's funding incorporates 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 EW capabilities and net-centric Service Oriented Architecture (SOA), which includes the development, integration and test of Medusa and the SSEE Modifications capabilities in support of "Ballistic Missile Defense (BMD) Executive Committee (EXCOM) Anti-Submarine Warfare (ASW) Chief of Naval Operations (CNO) Executive Board Information Operation (IO) Countermeasure Red Flash/Medusa (Additional details held at a higher classification level)."

Shipboard IW will develop Anti-Access, Area Denial (A2AD) capabilities for the Ship's Signal Exploitation Equipment Increment F, G and Modifications systems. A2AD capabilities integrated into the SSEE Systems will enable maritime power projection in enabling surface vessels to disrupt, deny, degrade and defeat adversary (state and non-state) use of the radio frequency spectrum, improving the Fleet's ability to communicate and operate therein. These systems will be deployed supporting Assured Command and Control, Battlespace Awareness, and Integrated Fires (further details held at a higher classification level).

FY17 funding for SSEE Inc F will develop and test new, unexplored and unexploited cyber capabilities that will enhance Fleet ability to dominate and defend cyberspace. It will also develop software and hardware upgrades in support of emerging adversary communications capabilities and insert new technology enhancements via incremental software and hardware upgrades. It will continue P3I, expand SOI processing capability, enhance remote capabilities and integrate Medusa HW into the SSEE Inc F scan chassis - improving the surface fleet's ability to dominate the radio frequency spectrum.

FY17 funding for SSEE Modifications will complete Phase 3 hardware and software development and test and evaluation activities on the first Low Rate Initial Production unit aboard USS OKANE (DDG 77), bringing capability to the Fleet for simultaneous detection, collection, processing, electronic warfare and display of communication intelligence data from hostile, high threat and adversary platforms in select frequency ranges that are not prosecuted today.

FY17 funding for SSEE Inc G will continue acquisition activities and contract development efforts. It will integrate and improve upon all aspects of SSEE Increment F, leveraging SSEE Increment F software and technology to increase the automation and integration of existing Ship's Signal Exploitation Space (SSES) capabilities into

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2017 Navy	Date: February 2016
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Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0304785N / <i>Tactical Cryptologic Systems</i>	Project (Number/Name) 2134. / <i>Shipboard IW Exploit</i>
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a common user interface while advancing and incorporating new technologies through an open architecture that allows for rapid integration and deployment of new capabilities. Additional specific details on all of these efforts are held at a higher classification level.

FY17 funding for SSEE Inc F, Inc G and SSEE Modifications will develop and test A2AD Kits for deployment on surface combatants that will enable maritime power projection into a contested A2AD environment, improving the Fleet's ability to communicate and operate therein.

FY17 funding for Integrated Communications and Data System Increment II (ICADS Inc II) is a mission critical system providing advanced simulation capability for naval platforms as well as back-up communications; additional details held at higher classification and outlined in the Capability Production Document. FY17 funding will initiate POR acquisition activities and begin developing efforts for the Engineering Design Models (EDM) for the Increment II system. Funding will develop and integrate system design to support refined COMPACFLT requirements.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Title: Ship's Signal Exploitation Equipment Inc F (SSEE Inc F)	1.554	2.759	7.775	0.000	7.775
Articles:	-	-	-	-	-
FY 2015 Accomplishments:					
Continued pre-planned product improvements to provide enhanced and additional capabilities into the SSEE Inc F system. Expanded SOI processing capability to allow collection of the newest high priority modern technology threat signals for tightly integrated IO/non-kinetic capabilities in support of time critical military strike operations and subsequent processing and analysis for timely and accurate situational awareness for force protection. Developed and delivered EW capabilities based upon the warfighter identified, FY15 SOI threats (annually-updated) for integration into the SSEE Inc F system. Enhanced the SSEE Inc F remote capabilities and usability providing increased functionality and capabilities to remote and local users. Integrated Medusa hardware into the SSEE Inc F scan chassis. Maintained cognizance of current warfighter-identified signal set and make additions and improvements to the system as needed.					
FY 2016 Plans:					
Continue pre-planned product improvements to provide enhanced and additional capabilities into the SSEE Inc F system. Expand SOI processing capability to allow collection of the newest high priority modern technology threat signals for tightly integrated IO/non-kinetic capabilities in support of time critical military strike operations and subsequent processing and analysis for timely and accurate situational awareness for force protection. Develop and deliver EW capabilities based upon the warfighter identified FY16 SOI threats (annually-updated) for integration into the SSEE Inc F system. Develop enhanced Red Falcon systems to combat future SOI. Enhance the SSEE Inc F remote capabilities and usability providing increased functionality and capabilities to					

UNCLASSIFIED

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Appropriation/Budget Activity 1319 / 5		R-1 Program Element (Number/Name) PE 0304785N / <i>Tactical Cryptologic Systems</i>		Project (Number/Name) 2134. / <i>Shipboard IW Exploit</i>	
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)					
remote and local users. Maintain cognizance of current warfighter-identified signal set and make additions and improvements to the system as needed.					
FY 2017 Base Plans: Continue pre-planned product improvements to provide enhanced and additional capabilities into the SSEE Inc F system. Expand SOI processing capability to allow collection of the newest high priority modern technology threat signals for tightly integrated IO/non-kinetic capabilities in support of time critical military strike operations and subsequent processing and analysis for timely and accurate situational awareness for force protection. Develop and deliver EW capabilities based upon the warfighter identified FY17 SOI threats (annually-updated) for integration into the SSEE Inc F system. Develop enhanced Red Falcon systems to combat future SOI. Enhance the SSEE Inc F remote capabilities and usability providing increased functionality and capabilities to remote and local users. Develop Anti-Access, Area Denial capabilities for the Ship's Signal Exploitation Equipment Increment F systems. A2AD capabilities integrated into the SSEE Systems will enable maritime power projection in enabling surface vessels to disrupt, deny, degrade and defeat adversary (state and non-state) use of the radio frequency spectrum, improving the Fleet's ability to communicate and operate therein - further details held at a higher classification level.					
FY 2017 OCO Plans: N/A					
Title: Ship's Signal Exploitation Equipment Inc G (SSEE Inc G)					
Articles:					
	1.472	4.787	9.418	0.000	9.418
	-	-	-	-	-
FY 2015 Accomplishments: Complete pre-acquisition activities, requirements documentation, contract development, and continued to integrate and improve upon all aspects of the "BMD EXCOM ASW CNO CEB IO Countermeasure Red Flash/ Medusa."					
FY 2016 Plans: Complete requirements adjudication via the Capability Development Document (CDD) and continue acquisition documentation to support milestone decision in FY17. Continue administrative activities in support of development contract award.					
FY 2017 Base Plans:					

UNCLASSIFIED

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Appropriation/Budget Activity 1319 / 5		R-1 Program Element (Number/Name) PE 0304785N / <i>Tactical Cryptologic Systems</i>		Project (Number/Name) 2134. / <i>Shipboard IW Exploit</i>	
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)					
<p>Efforts will center on synthesizing requirements into system design developed under the first Fleet Capability Review (FCR). Program will work to gain a viable Requirements Development Package (RDP) derived from the program CDD in support of FCR. Initiate development efforts to create Engineering Design Models (EDM) and continue acquisition document preparation to support future FCR build cycles and future Full Deployment Decision Review. Support Critical Design Review (CDR). Design efforts will focus on integrating Ship Signal Exploitation Space with the rest of the shipboard combat systems, synthesizing inputs from all sensor areas for an Integrated Fires approach to naval warfare. Funding will also support integrating Anti-Access, Area Denial capabilities into the SSEE Inc G design (further details held at a higher classification level). Achieve Milestone B.</p> <p>FY 2017 OCO Plans: N/A</p> <p>Title: Ship's Signal Exploitation Red Falcon (OCO)</p> <p align="right">Articles:</p> <p>FY 2015 Accomplishments: Developed enhanced Red Falcon systems which will provide additional processing and collection of simultaneous targets (additional details held at a higher classification).</p> <p>FY 2016 Plans: N/A</p> <p>FY 2017 Base Plans: N/A</p> <p>FY 2017 OCO Plans: N/A</p>					
	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
	0.470	0.000	0.000	0.000	0.000
	-	-	-	-	-
	6.661	10.239	10.054	0.000	10.054
	-	-	-	-	-
<p>FY 2015 Accomplishments: Completed SSEE Modifications Phase 2 hardware and software development to provide: capabilities to the Fleet in support of "BMD EXCOM ASW CEB IO Countermeasure Red Flash" including automation of key system operation and maintenance procedures; additional SOIs in support of Fleet needs; and enhanced system capabilities for Graywing and Paragon in order to meet Full Rate Production (FRP) performance thresholds</p>					

UNCLASSIFIED

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)					
and provide P3I improvement. Funds supported development efforts to enable more robust signal exploitation. Expanded integration with SSEE Increment F special capabilities. Enriched Graywing scan and search capabilities. Provided test plans and procedures for follow on testing and evaluation, including an updated Test and Evaluation Master Plan (TEMP). Conducted extensive integration and testing in support of correction of deficiencies identified during test events.					
FY 2016 Plans: Commence SSEE Modifications Phase 3 hardware and software development to provide capabilities to the Fleet in support of "BMD EXCOM ASW CEB IO Countermeasure Red Flash" including additional SOIs in support of Fleet needs; and enhanced system capabilities for Graywing and Paragon in order to meet Full Rate Production (FRP) performance thresholds and provide P3I improvement. Continue to support development efforts to enable more robust signal exploitation and expand integration with SSEE Increment F special capabilities. Provide test plans and procedures for follow on testing and evaluation. Conduct Developmental Testing (DT) as well as Initial Operational Test & Evaluation (IOT&E). Attain Joint Integration Test Command (JITC) certification. Continue to conduct extensive integration and testing in support of the correction of deficiencies identified during test events.					
FY 2017 Base Plans: Complete SSEE Modifications Phase 3 hardware and software development to provide capabilities to the Fleet in support of "BMD EXCOM ASW CEB IO Countermeasure Red Flash" including additional SOIs in support of Fleet needs; and enhanced system capabilities for Graywing and Paragon in order to meet Full Rate Production performance thresholds and provide P3I improvement. Continue to support development efforts to enable more robust signal exploitation and expand integration with SSEE Increment F special capabilities. Conduct follow-on testing and evaluation (FOT&E). Develop and test Anti-Access, Area Denial Kits for deployment on SSEE systems to facilitate maritime power projection in A2AD environs. Further details held at a higher classification level.					
FY 2017 OCO Plans: N/A					
Title: Integrated Communications and Data System Inc II (ICADS Inc II)					
Articles:					
	0.000	0.000	9.500	0.000	9.500
	-	-	-	-	-
FY 2015 Accomplishments: N/A					
FY 2016 Plans:					

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2017 Navy **Date:** February 2016

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
N/A					
<i>FY 2017 Base Plans:</i> Initiate POR acquisition activities and begin developing efforts for the Engineering Design Models (EDM) for the Increment II system. Funding will develop and integrate system design to support refined COMPACFLT requirements. Specific details are held at a higher classification level.					
<i>FY 2017 OCO Plans:</i> N/A					
Accomplishments/Planned Programs Subtotals	10.157	17.785	36.747	0.000	36.747

C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017 Base</u>	<u>FY 2017 OCO</u>	<u>FY 2017 Total</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• OPN / 2360: <i>Shipboard IW Exploit</i>	123.362	148.221	184.116	-	184.116	222.799	232.836	216.563	225.921	Continuing	Continuing

Remarks

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, SPAWAR Systems Center - Pacific and miscellaneous contractors, with management oversight by SPAWAR HQ.

E. Performance Metrics
Ship's Signal Exploitation Equipment Increment F will incorporate pre-planned product improvements to provide enhanced and additional capabilities into the SSEE Inc F system. SSEE Inc F improvements along with the addition of the SSEE Modifications and Medusa capabilities will expand signals of interest processing capability to allow collection of the newest high priority modern technology threat signals for tightly integrated IO/non-kinetic capabilities in support of time critical military strike operations and subsequent processing and analysis for timely and accurate situational awareness for force protection. The SSEE Modifications program includes the "BMD EXCOM ASW CEB IO Countermeasure Red Flash/Medusa", capabilities of Paragon and Graywing. Paragon is a classified Navy tactical signals intelligence frequency extension capability that will be integrated into Ship's Signal Exploitation Equipment Inc E and F programs. SSEE Inc G will expand upon the IW / Electronic Warfare and tactical cryptologic system capability of exploiting signals throughout the Radio Frequency (RF) spectrum, in addition to focusing new technologies towards new and previously unexplored/unexploited cyber capabilities as we integrate into the Integrated Fires (IF) architecture.

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2017 Navy												Date: February 2016			
Appropriation/Budget Activity 1319 / 5				R-1 Program Element (Number/Name) PE 0304785N / Tactical Cryptologic Systems				Project (Number/Name) 2134. / Shipboard IW Exploit							
Product Development (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Product Development Prior Years	Various	Various : Various	158.330	0.000		0.000		0.000		-		0.000	0.000	158.330	-
Systems Engineering	C/CPAF	Classified Contract : Classified Contract	6.803	0.515	Nov 2014	1.500	Nov 2015	3.500	Dec 2016	-		3.500	Continuing	Continuing	Continuing
Systems Engineering	WR	SSC PAC : San Diego, CA	3.513	0.265	Nov 2014	0.500	Nov 2015	1.125	Oct 2016	-		1.125	Continuing	Continuing	Continuing
Systems Engineering	WR	SSC LANT : Charleston, SC	4.722	0.294	Nov 2014	0.551	Nov 2015	1.300	Oct 2016	-		1.300	Continuing	Continuing	Continuing
Integration, Assembly & Test (PMP Dev)	WR	SSC PAC : San Diego, CA	2.317	0.358	Nov 2014	0.668	Nov 2015	1.300	Oct 2016	-		1.300	Continuing	Continuing	Continuing
Hardware/Software Development	WR	NRL : Washington, DC	1.840	0.170	Nov 2014	0.250	Nov 2015	0.550	Oct 2016	-		0.550	Continuing	Continuing	Continuing
Software Development	C/CPAF	Classified Contracts : Classified Contracts	26.243	3.842	Nov 2014	5.334	Nov 2015	12.874	Dec 2016	-		12.874	Continuing	Continuing	Continuing
Software Development	WR	SSC PAC : San Diego, CA	1.369	0.070	Nov 2014	0.141	Nov 2015	0.257	Oct 2016	-		0.257	Continuing	Continuing	Continuing
Integration, Assembly & Test	C/CPAF	Classified Contracts : Classified Contracts	1.981	0.310	Nov 2014	0.580	Nov 2015	0.363	Dec 2016	-		0.363	Continuing	Continuing	Continuing
Software Development	WR	SSC LANT : Charleston, SC	0.020	0.040	Nov 2014	0.086	Nov 2015	0.147	Oct 2016	-		0.147	Continuing	Continuing	Continuing
Integration, Assembly & Test (PMP Dev)	WR	SSC LANT : Charleston, SC	0.217	0.245	Nov 2014	0.461	Nov 2015	0.700	Oct 2016	-		0.700	Continuing	Continuing	Continuing
Subtotal			207.355	6.109		10.071		22.116		-		22.116	-	-	-
Support (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Support Prior Years	Various	Various : Various	4.327	0.000		0.000		0.000		-		0.000	0.000	4.327	-
Training Development	C/CPFF	Classified Contract : Classified Contract	1.045	0.115	Nov 2014	0.223	Nov 2015	0.335	Dec 2016	-		0.335	Continuing	Continuing	Continuing

UNCLASSIFIED

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Support (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Integrated Logistics Support	C/CPFF	Classified Contract : Classified Contract	0.300	0.110	Nov 2014	0.214	Nov 2015	0.425	Dec 2016	-		0.425	Continuing	Continuing	Continuing
Configuration Management	WR	SSC Lant : Charleston, SC	1.687	0.092	Nov 2014	0.181	Nov 2015	0.302	Oct 2016	-		0.302	Continuing	Continuing	Continuing
Configuration Management	WR	SSC PAC : San Diego, CA	0.586	0.085	Nov 2014	0.169	Nov 2015	0.345	Oct 2016	-		0.345	Continuing	Continuing	Continuing
Technical Data	WR	SSC PAC : San Diego, CA	1.555	0.155	Nov 2014	0.297	Nov 2015	0.500	Oct 2016	-		0.500	Continuing	Continuing	Continuing
Training Development	WR	SSC LANT : Charleston, SC	0.225	0.053	Nov 2014	0.110	Nov 2015	0.283	Oct 2016	-		0.283	Continuing	Continuing	Continuing
Integrated Logistic Support	WR	SSC LANT : Charleston, SC	0.337	0.125	Nov 2014	0.242	Nov 2015	0.510	Oct 2016	-		0.510	Continuing	Continuing	Continuing
Requirements Analysis	WR	SSC LANT : Charleston, SC	0.000	0.085	Nov 2014	0.169	Nov 2015	0.300	Oct 2016	-		0.300	Continuing	Continuing	Continuing
Studies & Design	WR	SSC PAC : San Diego, CA	0.000	0.284	Nov 2014	0.533	Nov 2015	1.000	Oct 2016	-		1.000	Continuing	Continuing	Continuing
Studies & Design	C/CPFF	Classified Contract : Classified Contract	0.170	0.192	Nov 2014	0.364	Nov 2015	0.600	Dec 2016	-		0.600	Continuing	Continuing	Continuing
Studies & Design	WR	NAVSEA : NAVSEA	0.000	0.245	Nov 2014	0.461	Nov 2015	0.820	Oct 2016	-		0.820	Continuing	Continuing	Continuing
Requirements Analysis	C/CPFF	Classified Contract : Classified Contract	0.319	0.385	Nov 2014	0.717	Nov 2015	1.300	Dec 2016	-		1.300	Continuing	Continuing	Continuing
Subtotal			10.551	1.926		3.680		6.720		-		6.720	-	-	-
Test and Evaluation (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Test & Evaluation Prior Years	Various	Various : Various	14.537	0.000		0.000		0.000		-		0.000	0.000	14.537	-
Developmental Test & Evaluation	WR	SSC PAC : San Diego, CA	1.909	0.462	Nov 2014	0.858	Nov 2015	1.100	Oct 2016	-		1.100	Continuing	Continuing	Continuing

UNCLASSIFIED

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Test and Evaluation (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	WR	SSC LANT : Charleston, SC	1.361	0.129	Nov 2014	0.249	Nov 2015	0.421	Oct 2016	-		0.421	Continuing	Continuing	Continuing
Developmental Test & Evaluation	C/CPFF	Classified Contracts : Classified Contracts	1.103	0.320	Nov 2014	0.598	Nov 2015	1.000	Dec 2016	-		1.000	Continuing	Continuing	Continuing
Developmental Test & Evaluation	WR	NSWC Dahlgren : Dahlgren, VA	0.120	0.125	Nov 2014	0.242	Nov 2015	0.425	Oct 2016	-		0.425	Continuing	Continuing	Continuing
Subtotal			19.030	1.036		1.947		2.946		-		2.946	-	-	-
Management Services (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Management Services Prior Years	Various	Various : Various	18.496	0.000		0.000		0.000		-		0.000	0.000	18.496	-
Contractor Engineering Support	C/CPFF	Classified Contract : Classified Contract	2.741	0.565	Nov 2014	1.061	Nov 2015	2.306	Dec 2016	-		2.306	Continuing	Continuing	Continuing
Government Engineering Support	WR	SSC LANT : Charleston, SC	1.477	0.086	Nov 2014	0.170	Nov 2015	0.438	Oct 2016	-		0.438	Continuing	Continuing	Continuing
Government Engineering Support	WR	SSC PAC : San Diego, CA	1.838	0.072	Nov 2014	0.145	Nov 2015	0.374	Oct 2016	-		0.374	Continuing	Continuing	Continuing
Program Management Support	C/CPFF	Classified Contract : Classified Contract	1.495	0.254	Nov 2014	0.478	Nov 2015	0.900	Dec 2016	-		0.900	Continuing	Continuing	Continuing
Program Management Support	WR	SSC LANT : Charleston, SC	0.608	0.094	Nov 2014	0.193	Nov 2015	0.497	Oct 2016	-		0.497	Continuing	Continuing	Continuing
Travel	WR	SPAWAR : San Diego, CA	2.246	0.015	Nov 2014	0.040	Nov 2015	0.450	Oct 2016	-		0.450	Continuing	Continuing	Continuing
Subtotal			28.901	1.086		2.087		4.965		-		4.965	-	-	-
Project Cost Totals			265.837	10.157		17.785		36.747		-		36.747	-	-	-

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2017 Navy							Date: February 2016			
Appropriation/Budget Activity 1319 / 5			R-1 Program Element (Number/Name) PE 0304785N / <i>Tactical Cryptologic Systems</i>			Project (Number/Name) 2134. / <i>Shipboard IW Exploit</i>				
	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract	

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2017 Navy **Date:** February 2016

Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0304785N / <i>Tactical Cryptologic Systems</i>	Project (Number/Name) 2134. / <i>Shipboard IW Exploit</i>
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Fiscal Year	FY15				FY16				FY17				FY18				FY19				FY20				FY21			
	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
Acquisitions Milestones Milestone C								△												◇								
Test & Eval Integration Test - B1 Integration Test - B2 (OA)																△				△								
Sys Eng / T&E Docs Systems Engineering Plan Test & Eval Master Plan									SEP				TEMP															
Requirements Docs Project Description Document Capability Production Document																												
System Development System Requirement Review (SRR) Preliminary Design Review (PDR) Critical Design Review (CDR) Engineering Design Model (EDM) Delivery									△				△				△				△	△						
System Contracts Chief Engineering Integrator Production Contract (RFP)									LSI																			
Increment II LRIP																												
Remarks: Increment II system reflects new design and Performance Parameters outlined in CPD																												

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Exhibit R-4, RDT&E Schedule Profile: PB 2017 Navy **Date:** February 2016

Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0304785N / <i>Tactical Cryptologic Systems</i>	Project (Number/Name) 2134. / <i>Shipboard IW Exploit</i>
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Fiscal Year	2015				2016				2017				2018				2019				2020				2021			
	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																												
System Development																												
Software Development																												
SSEE Inc F Baseline SW Development																												
Test & Evaluation Milestones																												
Production Milestones																												
FRP FY15 SSEE Inc F																												
FRP FY16 SSEE Inc F																												
FRP FY17 SSEE Inc F																												
FRP FY18 SSEE Inc F																												
FRP FY19 SSEE Inc F																												
FRP FY20 SSEE Inc F																												
FRP FY21 SSEE Inc F																												
Procurements																												

Remarks:
 1) Shipboard Information Warfare (IW) Exploit / 2134 (SSEE Inc F)
 2) Production Milestones reflect contract award dates.
 3) FY16 Production Milestones include 7 Inc F Systems
 4) FY17 Production Milestones include 7 Inc F Systems
 5) FY19 Production Milestones include 7 Systems and 2 DDG 119 Inc F.

EXHIBIT R4, Schedule Profile

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Exhibit R-4, RDT&E Schedule Profile: PB 2017 Navy **Date:** February 2016

Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0304785N / <i>Tactical Cryptologic Systems</i>	Project (Number/Name) 2134. / <i>Shipboard IW Exploit</i>
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Fiscal Year	2015				2016				2017				2018				2019				2020				2021							
	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																																
Integrated Logistics Assessment (ILA)					A								ILA																			
Milestone C Decision (MS C)					FRP				IOC																							
Full Rate Production (FRP) Decision					△				△																							
Installation																																
EDM																																
LRIP Retrofit Kits	■																															
LRIP																																
FRP									FRP (5)				FRP (7)				FRP (8)				FRP (10)				FRP (7)							
Software Development																																
SSEE MODS	■																															
Baseline SW Development	■				FRP Build 11				FRP Build 12				FRP Build 13				FRP Build 14				FRP Build 15				FRP Build 16							
Test & Evaluation																																
Production Acceptance Testing																																
Factory Acceptance Testing																																
Development Test																																
Operational Assessment																																
IOT&E																																
Operational Test																																
Production																																
FRP FY16																																
FRP FY17																																
FRP FY18																																
FRP FY19																																
FRP FY20																																
FRP FY21																																
Procurements	FY15 (0)				FY16 (7)				FY17 (11)				FY18 (9)				FY19 (9)				FY20 (9)				FY21 (XXX)							

Remarks:

- 1) Shipboard Information Warfare (IW) Exploit / 2134 (SSEE Mods)
- 2) Production Milestones reflect contract award dates
- 3) FY16 Production Milestones include 6 Systems, 1 Maintenance Training Systems
- 4) FY17 Production Milestones include 9 Systems and 2 Operator Training System
- 5) FY18 Production Milestones include 8 Systems and 1 Operator Training System
- 6) SSEE MODS Software development integrated and tested in junction with SSEE INC F Software builds.

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Exhibit R-4A, RDT&E Schedule Details: PB 2017 Navy		Date: February 2016
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0304785N / <i>Tactical Cryptologic Systems</i>	Project (Number/Name) 2134. / <i>Shipboard IW Exploit</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
SSEE Inc F				
Inc F - Joint Integration Test Command (JITC) Certification	3	2015	3	2015
Inc F - JITC Certification FY19	3	2019	3	2019
Inc F - FY15 FRP Production Milestone	2	2015	2	2015
Inc F - FY16 FRP Production Milestone	2	2016	2	2016
Inc F - FY17 FRP Production Milestone	2	2017	2	2017
Inc F - FY18 FRP Production Milestone	2	2018	2	2018
Inc F - FY19 FRP Production Milestone	2	2019	2	2019
Inc F - FY20 FRP Production Milestone	2	2020	2	2020
Inc F - FY21 FRP Production Milestone	2	2021	2	2021
SSEE Modifications				
SSEE Modifications - ILA #2	4	2015	1	2016
SSEE Modifications - ILA #3	4	2018	1	2019
SSEE Modifications - Fielding Decision (FRP)	3	2016	3	2016
SSEE Modifications - Initial Operating Capability (IOC)	3	2017	3	2017
SSEE Modifications - LRIP Retrofit Kits Installation	2	2015	4	2015
SSEE Modifications - FRP Installation FY17 (6)	2	2017	4	2017
SSEE Modifications - FRP Installation FY18 (7)	2	2018	4	2018
SSEE Modifications - FRP Installation FY19 (8)	2	2019	4	2019
SSEE Modifications - FRP Installation FY20 (9)	2	2020	4	2020
SSEE Modifications - FRP Installation FY21 (7)	2	2021	4	2021
SSEE Modifications - Software Development (LRIP Build 10)	2	2015	1	2016

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Exhibit R-4A, RDT&E Schedule Details: PB 2017 Navy **Date:** February 2016

Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0304785N / <i>Tactical Cryptologic Systems</i>	Project (Number/Name) 2134. / <i>Shipboard IW Exploit</i>
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Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
SSEE Modifications - Software Development (FRP Build 11)	3	2016	2	2017
SSEE Modifications - Software Development (FRP Build 12)	2	2017	1	2018
SSEE Modifications - Software Development (FRP Build 13)	2	2018	1	2019
SSEE Modifications - Software Development (FRP Build 14)	2	2019	1	2020
SSEE Modifications - Software Development (FRP Build 15)	2	2020	1	2021
SSEE Modifications - Software Development (FRP Build 16)	2	2021	4	2021
SSEE Modifications - Factory Acceptance Testing (LRIP)	4	2015	4	2015
SSEE Modifications - Development Testing (IT-E1/E2)	1	2016	1	2016
SSEE Modifications - Joint Integration Test Command (JITC) Certification FY16	2	2016	2	2016
SSEE Modifications - Operational Testing (OT-E1)	2	2016	2	2016
SSEE Modifications - Operational Testing (FOT&E)	2	2017	2	2017
SSEE Modifications - Joint Integration Test Command (JITC) Certification FY19	3	2019	3	2019
SSEE Modifications - FY16 FRP Production Milestone	4	2016	4	2016
SSEE Modifications - FY17 FRP Production Milestone	2	2017	2	2017
SSEE Modifications - FY18 FRP Production Milestone	2	2018	2	2018
SSEE Modifications - FY19 FRP Production Milestone	2	2019	2	2019
SSEE Modifications - FY20 FRP Production Milestone	2	2020	2	2020
SSEE Modifications - FY21 FRP Production Milestone	2	2021	2	2021
SSEE Inc G				
Inc G -Pre - Acquisition Activities	1	2015	4	2015
Inc G - Milestone B	3	2017	3	2017
Inc G - Pre - Acquisition ADM	4	2015	4	2015
Inc G - Full Deployment Decision Review	3	2020	3	2020
Inc G - Capability Development Document	1	2015	4	2016
Inc G - Build Decision 1	3	2017	3	2017

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Exhibit R-4A, RDT&E Schedule Details: PB 2017 Navy **Date:** February 2016

Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0304785N / <i>Tactical Cryptologic Systems</i>	Project (Number/Name) 2134. / <i>Shipboard IW Exploit</i>
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Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Inc G - Build Decision 2	2	2019	2	2019
Inc G - Build Decision 3	3	2020	3	2020
Inc G - Field Decision 1	3	2019	3	2019
Inc G - Field Decision 2	4	2020	4	2020
Inc G - Development Requirements Package Approval 1	2	2017	2	2017
Inc G - Development Requirements Package Approval 2	4	2018	4	2018
Inc G - Development Requirements Package Approval 3	2	2020	2	2020
Inc G - Build Technical Review 1	3	2017	3	2017
Inc G - Build Technical Review 2	1	2019	1	2019
Inc G - Build Technical Review 3	3	2020	3	2020
Inc G - Fleet Capability Release 1	4	2017	1	2019
Inc G - Fleet Capability Release 2	1	2019	3	2020
Inc G - Fleet Capability Release 3	3	2020	4	2021
Inc G - Fielding Technical Review 1	2	2019	2	2019
Inc G - Fielding Technical Review 2	3	2020	3	2020
Inc G - Systems Engineering Plan	1	2016	4	2016
Inc G - FCR-1 (IT)	3	2019	3	2019
Inc G - FCR-2 (IT)	3	2020	3	2020
Inc G - IOT&E	2	2020	3	2020
Inc G - FCR-2	4	2020	4	2020
ICADS Inc II: Pre-Acquisition ADM	1	2017	1	2017
ICADS Inc II: Milestone C (LRIP)	3	2019	3	2019
ICADS Inc II: Integration Test - B1	4	2018	4	2018
ICADS Inc II: Integraton Test - B2	2	2019	2	2019
ICADS Inc II: Systems Engineering Plan (SEP)	1	2017	4	2017

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Exhibit R-4A, RDT&E Schedule Details: PB 2017 Navy **Date:** February 2016

Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0304785N / <i>Tactical Cryptologic Systems</i>	Project (Number/Name) 2134. / <i>Shipboard IW Exploit</i>
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Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
ICADS Inc II: Test Evaluation Master Plan (TEMP)	2	2017	3	2018
ICADS Inc II: System Requirements Review (SRR)	2	2017	2	2017
ICADS Inc II: Preliminary Design Review (PDR)	4	2017	4	2017
ICADS Inc II: Critical Design Review (CDR)	2	2018	2	2018
ICADS Inc II: Engineering Design Model (EDM) #1	4	2018	4	2018
ICADS Inc II: Engineering Design Model (EDM) #2	1	2019	1	2019
ICADS Inc II: Lead System Integration (LSI)	1	2017	4	2019
ICADS Inc II: Request for Proposal (RFP)	4	2017	2	2019
ICADS Inc II: RFP Release	3	2019	3	2019
ICADS Inc II: Low Rate Initial Production (LRIP)	3	2019	3	2019