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Exhibit R-2, RDT&E Budget Item Justification: PB 2020 Navy										Date: March 2019		
Appropriation/Budget Activity 1319: Research, Development, Test & Evaluation, Navy I BA 7: Operational Systems Development					R-1 Program Element (Number/Name) PE 0204574N I Cryptologic Direct Support							
COST (\$ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
Total Program Element	22.791	2.355	4.544	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	29.690
3091: Advanced Cryptological Sys Eng (CCOP)	22.791	2.355	4.544	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	29.690

A. Mission Description and Budget Item Justification

Funding for the following project has been realigned out of PE 0204574N into PE 0304785N as part of Program Element Consolidation starting in FY20: Project 3091 (Advanced Cryptological Sys Eng).

The Advanced Cryptologic Systems Engineering - The Cryptologic Carry-on Program (CCOP) rapidly develops and fields state-of-the-art signal acquisition capabilities in response to Combatant Command requirements for a quick-reaction surface cryptologic carry-on capability. There are 124 cryptologic capable surface ships and shore sites in the current Navy inventory; each of these is a potential user of this carry-on equipment, depending on deployment schedules and the tempo of operations. In addition, numerous Navy and Coast Guard platforms are other potential users.

B. Program Change Summary (\$ in Millions)	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Previous President's Budget	1.155	4.544	4.514	-	4.514
Current President's Budget	2.355	4.544	0.000	-	0.000
Total Adjustments	1.200	0.000	-4.514	-	-4.514
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Program Adjustments	1.200	0.000	0.000	-	0.000
• Rate/Misc Adjustments	0.000	0.000	-4.514	-	-4.514

Change Summary Explanation

Technical: Not applicable.

Schedule: Not applicable.

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Exhibit R-2A, RDT&E Project Justification: PB 2020 Navy										Date: March 2019		
Appropriation/Budget Activity 1319 / 7					R-1 Program Element (Number/Name) PE 0204574N / Cryptologic Direct Support				Project (Number/Name) 3091 / Advanced Cryptological Sys Eng (CCOP)			
COST (\$ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
3091: Advanced Cryptological Sys Eng (CCOP)	22.791	2.355	4.544	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	29.690
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

Note

Funding has been realigned out of PE 0204574N Project 3091, into PE 0304785N as part of RDTE PE Consolidation starting in FY20.

A. Mission Description and Budget Item Justification

The Advanced Cryptologic Systems Engineering - Cryptologic Carry On Program (CCOP) rapidly develops and fields state-of-the-art signal acquisition capabilities in response to Combatant Command requirements for a quick-reaction surface, subsurface and airborne cryptologic carry-on capability. There are approximately 124 cryptologic capable surface ships and shore sites in the current Navy inventory; each is a potential user of this carry-on equipment, depending on deployment schedules and the tempo of operations. In addition, there are other numerous Naval platforms(including U.S. Coast Guard and USNs) that could serve as potential users. This funding line provides resources to enable rapid transition of available Commercial Off-The-Shelf (COTS) and Government Off -The-Shelf (GOTS) technologies that apply to Fleet requirements for carry-on system functionalities. These technologies typically require various levels of integration to leverage on-board systems providing system and mission management, product reporting, and data analysis. COTS / GOTS system documentation and training materials require adaptation or modification to meet fleet operator requirements, or entirely new training materials may need to be developed. Prior to operational deployment, systems must be systematically tested to ensure suitable and reliable operation, tested for network vulnerabilities if connected to shipboard Local Area Networks, and tested relative to interoperability requirements. Certification testing is conducted to meet Office of Naval Intelligence security requirements, and network testing is conducted in accordance with Information Technology (IT) requirements to allow connection to Navy networks. Funding will also provide resources to address rapid deployment of enhancements or improvements to the common hardware and/or software baseline of all other carry-on subsystems to meet emergent requirements. Funding will support development and integration efforts to fuse data produced and distributed by Shipboard IW / Information Operations (IO) systems with other intelligence data at multiple classification levels which is then provided to shipboard combat systems to support kinetic (bombs, mortars, missiles, bullets, etc.) and non-kinetic fires (electronic attack, lasers, cyber) in order to enable a more agile, effective and complete exploitation of the electromagnetic spectrum.

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

	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Title: Advanced Cryptological Sys Eng - CCOP	2.355	4.544	0.000	0.000	0.000
Articles:	-	-	-	-	-
FY 2019 Plans: Continue to integrate, test, and document identified COTS and GOTS technologies and subsystems that meet emergent and on-going Fleet requirements as specified in the SOI and target threat list, as well as, continue to develop upgrades to existing systems and subsystems according to Fleet requirements. Funds aid the					

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Appropriation/Budget Activity 1319 / 7				R-1 Program Element (Number/Name) PE 0204574N / Cryptologic Direct Support				Project (Number/Name) 3091 / Advanced Cryptological Sys Eng (CCOP)			
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)						FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	
<p>development of new signal processing algorithms and software based solutions to enable rapid transition of capability to permanently installed SSES systems, including SSEE Family of Systems (FoS) and its variants, the research of self-contained small form factor systems for Patrol craft and other small units, and the research of Adaptive Mission Modules for rapid insertion to counter specific threats or provide intelligence in specific areas of operation. FY19 funds will also initiate engineering and software development of the next generation Red Falcon capabilities using common data formatting and hardware backplane standards.</p> <p>FY 2020 Base Plans: FY20 funding has been realigned to PE 0304785N Project 3091 as part of PE Consolidation.</p> <p>FY 2020 OCO Plans: N/A</p> <p>FY 2019 to FY 2020 Increase/Decrease Statement: Program decrease is due to realigning funds as part of PE Consolidation. FY20 justification and change explanation is provided under PE 0304785N Project 3091.</p>											
Accomplishments/Planned Programs Subtotals						2.355	4.544	0.000	0.000	0.000	
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
• OPN / 3501: <i>Cryptologic Communications Equipment</i>	23.935	16.137	9.510	-	9.510	9.968	11.108	11.371	11.604	0.000	186.362
• RDTEN/0304785N: <i>Tactical Cryptologic Systems</i>	0.000	0.000	4.515	-	4.515	4.630	4.686	4.835	4.932	Continuing	Continuing
Remarks											
D. Acquisition Strategy											
Acquisition, management, and contracting strategies support engineering and manufacturing development by providing funds to Space and Naval Warfare Systems Centers Atlantic and Pacific (SPAWARSYSCTR), and miscellaneous contractors with management oversight by SPAWAR.											
E. Performance Metrics											
Cryptologic Carry On Program (CCOP) delivers state-of-the-art signal acquisition software for CCOP systems in response to Combatant Command requirements for a quick-reaction surface, subsurface and airborne cryptologic carry-on capability.											

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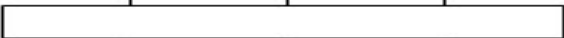
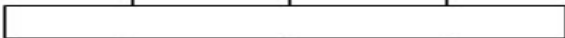

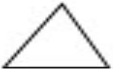




Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Navy												Date: March 2019			
Appropriation/Budget Activity 1319 / 7						R-1 Program Element (Number/Name) PE 0204574N / <i>Cryptologic Direct Support</i>				Project (Number/Name) 3091 / <i>Advanced Cryptological Sys Eng (CCOP)</i>					
Product Development (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 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
Software Development	Various	Various : Various	6.109	0.000		0.000		0.000		-		0.000	0.000	6.109	-
Software Development	C/CPFF	Classified Contract : Classified Contract	6.160	1.480	Jan 2018	2.856	Jan 2019	0.000		-		0.000	0.000	10.496	-
Software Development	WR	SSC PAC : San Diego, CA	2.315	0.290	Nov 2017	0.560	Nov 2018	0.000		-		0.000	0.000	3.165	-
Software Development	WR	SSC LANT : Charleston, SC	1.764	0.150	Nov 2017	0.289	Nov 2018	0.000		-		0.000	0.000	2.203	-
Subtotal			16.348	1.920		3.705		0.000		-		0.000	0.000	21.973	N/A
Support (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 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
Systems Engineering	Various	Various : Various	1.915	0.000		0.000		0.000		-		0.000	0.000	1.915	-
Systems Engineering	C/CPFF	Classified Contract : Classified Contract	1.591	0.230	Jan 2018	0.444	Jan 2019	0.000		-		0.000	0.000	2.265	-
Subtotal			3.506	0.230		0.444		0.000		-		0.000	0.000	4.180	N/A
Test and Evaluation (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 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	Various	Various : Various	0.991	0.000		0.000		0.000		-		0.000	0.000	0.991	-
Developmental Test & Evaluation	WR	SSC LANT : Charleston, SC	0.000	0.095	Nov 2017	0.183	Nov 2018	0.000		-		0.000	0.000	0.278	-
Subtotal			0.991	0.095		0.183		0.000		-		0.000	0.000	1.269	N/A

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Management Services (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 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	1.273	0.000		0.000		0.000		-		0.000	0.000	1.273	-
Program Management Support	WR	SSC PAC : San Diego, CA	0.673	0.110	Nov 2017	0.212	Nov 2018	0.000		-		0.000	0.000	0.995	-
Subtotal			1.946	0.110		0.212		0.000		-		0.000	0.000	2.268	N/A
			Prior Years	FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			22.791	2.355		4.544		0.000		-		0.000	0.000	29.690	N/A
Remarks FY20 cost data is provided under PE 0304785N Project 3091.															

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Exhibit R-4, RDT&E Schedule Profile: PB 2020 Navy		Date: March 2019
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0204574N / <i>Cryptologic Direct Support</i>	Project (Number/Name) 3091 / <i>Advanced Cryptological Sys Eng (CCOP)</i>

CLASSIFICATION:								
EXHIBIT R4, Schedule Profile								
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-7			PROJECT NUMBER AND NAME 3091 Advanced Cryptologic Systems Engineering (CCOP) / 3091					
Fiscal Year	2018				2019			
	1	2	3	4	1	2	3	4
Prototype Phase								
System Development		 SDR				 SDR		
Software Delivery								
T&E Milestones Operational Assessment				 QA				 QA

Efforts in FY20 and out are funded under PE 0304785N Proj 3091.

Exhibit R-4, Program Schedule Profile

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Exhibit R-4A, RDT&E Schedule Details: PB 2020 Navy		Date: March 2019
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0204574N / <i>Cryptologic Direct Support</i>	Project (Number/Name) 3091 / <i>Advanced Cryptological Sys Eng (CCOP)</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Proj 3091</i>				
Prototype Phase - 2018	1	2018	4	2018
Prototype Phase - 2019	1	2019	4	2019
System Design Review (SDR) - 2018	2	2018	2	2018
System Design Review (SDR) - 2019	2	2019	2	2019
Software Delivery - 2018	3	2018	4	2018
Software Delivery - 2019	3	2019	4	2019
Operational Assessment (OA) - 2018	4	2018	4	2018
Operational Assessment (OA) - 2019	4	2019	4	2019