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Exhibit R-2, RDT&E Budget Item Justification: PB 2021 Navy **Date:** February 2020

Appropriation/Budget Activity 1319: <i>Research, Development, Test & Evaluation, Navy / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0305251N / <i>CYBERSPACE OPERATIONS FORCES & FORCE SPT</i>
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COST (\$ in Millions)	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
Total Program Element	0.000	0.000	0.000	34.967	-	34.967	36.969	37.971	37.975	38.876	Continuing	Continuing
2958: <i>Cyberspace Activities</i>	0.000	0.000	0.000	34.967	-	34.967	36.969	37.971	37.975	38.876	Continuing	Continuing

Note

Starting in FY21, funds realigned from PE 0204575N.

A. Mission Description and Budget Item Justification

Navy is developing foundational tools in support of the Cyber Mission Force in accordance with requirements, guidance, and previous work completed. (Additional details held at a higher classification)

Funding provided for the following:

- Cyberspace support facilities, infrastructure lease and fit-up of additional space
- Program office, program management, engineering, administrative, and security support
- Specialized Cyberspace technical, engineering, and management capabilities
- Expand Cyberspace Activities development network and network support
- Cyberspace hardware and software reverse engineering
- Research and Development (R&D) activities
- Cyberspace tool development
- Cyberspace activity logistics support costs

B. Program Change Summary (\$ in Millions)

	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021 Base</u>	<u>FY 2021 OCO</u>	<u>FY 2021 Total</u>
Previous President's Budget	0.000	0.000	0.000	-	0.000
Current President's Budget	0.000	0.000	34.967	-	34.967
Total Adjustments	0.000	0.000	34.967	-	34.967
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Program Adjustments	0.000	0.000	35.000	-	35.000
• Rate/Misc Adjustments	0.000	0.000	-0.033	-	-0.033

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Appropriation/Budget Activity
1319: *Research, Development, Test & Evaluation, Navy / BA 7: Operational Systems Development*

R-1 Program Element (Number/Name)
PE 0305251N / *CYBERSPACE OPERATIONS FORCES & FORCE SPT*

Change Summary Explanation

Project 2958: Increase of \$5.967 million between FY20 and FY21 is a phased increase that started in FY19 to advance and improve the Navy's capacity for tool development to meet the demands of the cyber mission forces as US Cyber Command completes transition of all foundational tool development to the Services (Navy, Army, and Air Force). Funds expand and build on establishment of highly skilled and capable subject matter expertise (\$ 1.41 million) and development infrastructure and engineering (\$0.37 million) needed to meet the challenges of offensive cyber operations to support great power competition. Software testing will be expanded (\$.47 million). An operational rehearsal system that incorporates real hardware constructively in a virtual environment will be developed (\$3.29 million). Development of a tactical delivery platform for cyber effects will be defined, and a requirements document written (\$.43 million).

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Exhibit R-2A, RDT&E Project Justification: PB 2021 Navy **Date:** February 2020

Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0305251N / CYBERSPACE OPERATIONS FORCES & FORCE SPT	Project (Number/Name) 2958 / Cyberspace Activities
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COST (\$ in Millions)	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
2958: <i>Cyberspace Activities</i>	0.000	0.000	0.000	34.967	-	34.967	36.969	37.971	37.975	38.876	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

Note

Starting in FY21, funds realigned from PE 0204575N, project 2958.

A. Mission Description and Budget Item Justification

Navy is developing foundational tools in support of the Cyber Mission Force in accordance with requirements, guidance, and previous work completed. (Additional details held at a higher classification)

Funding provided for the following:

- Cyberspace support facilities, infrastructure lease and fit-up of additional space
- Program office, program management, engineering, administrative, and security support
- Specialized Cyberspace technical, engineering, and management capabilities
- Expand Cyberspace Activities development network and network support
- Cyberspace hardware and software reverse engineering
- Research and Development (R&D) activities
- Cyberspace tool development
- Cyberspace activity logistics support costs

Starting in FY21, funds realigned from PE 0204575N, project 2958. Funds provided to advance/improve the capacity for tool development to meet cyber mission forces demands as U.S. Cyber Command completes transition of all foundational tool development to the Services (Navy, Army, and Air Force). Highly skilled and capable Subject Matter Expertise (SME) is required to meet the challenges of offensive cyber operations to support great power competition. An operational rehearsal system that incorporates real hardware constructively in a virtual environment will be developed. Development of a tactical delivery platform for cyber effects will be defined, and a document of requirements will be written.

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

	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Title: Cyber Mission Activities	0.000	0.000	34.967	0.000	34.967
Articles:	-	-	-	-	-
FY 2020 Plans:					

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Exhibit R-2A, RDT&E Project Justification: PB 2021 Navy				Date: February 2020	
Appropriation/Budget Activity 1319 / 7		R-1 Program Element (Number/Name) PE 0305251N / CYBERSPACE OPERATIONS FORCES & FORCE SPT		Project (Number/Name) 2958 / Cyberspace Activities	
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)					
N/A					
FY 2021 Base Plans:					
Identify and document requirements for Navy's tactical delivery platform for delivery of cyber effects from the Joint Cyber Warfare Architecture.					
<ul style="list-style-type: none"> - Contract to increase software capacity for cyber mission forces - Test government-developed software capabilities prior to delivery to operational forces. - Ensure signature diversity. - Conduct vulnerability analysis. - Perform configuration management. - Deliver software documentation. - Deliver specific, well-defined tools to operational cyber mission forces. - Sustain previously developed tools to maintain relevancy. 					
FY 2021 OCO Plans:					
N/A					
FY 2020 to FY 2021 Increase/Decrease Statement:					
FY21 funds were realigned from PE 0204575N, project 2958. This is not a new start since it is a PE change only.					
Funding with PE 0204575N in FY20 was \$29 million. The increase of \$5.967 million between FY20 and FY21 is a phased increase that started in FY19 to advance and improve the Navy's capacity for tool development to meet the demands of the cyber mission forces as US Cyber Command completes transition of all foundational tool development to the Services (Navy, Army, and Air Force). Funds expand and build on establishment of highly skilled and capable subject matter expertise (\$ 1.41 million) and development infrastructure and engineering (\$0.37 million) needed to meet the challenges of offensive cyber operations to support great power competition. Software testing will be expanded (\$0.47 million). An operational rehearsal system that incorporates real hardware constructively in a virtual environment will be developed (\$3.29 million). Development of a tactical delivery platform for cyber effects will be defined, and a requirements document written (\$0.43 million).					
Accomplishments/Planned Programs Subtotals					
	0.000	0.000	34.967	0.000	34.967
C. Other Program Funding Summary (\$ in Millions)					
N/A					

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C. Other Program Funding Summary (\$ in Millions)

Remarks

D. Acquisition Strategy

This project is designated non-ACAT.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 Navy											Date: February 2020				
Appropriation/Budget Activity 1319 / 7						R-1 Program Element (Number/Name) PE 0305251N / CYBERSPACE OPERATIONS FORCES & FORCE SPT					Project (Number/Name) 2958 / Cyberspace Activities				

Product Development (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 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 Development	C/FFP	CWG-6 : Maryland	0.000	0.000		0.000		1.362	Oct 2020	-		1.362	Continuing	Continuing	Continuing
Support Development	WR	NIWC PAC : San Diego	0.000	0.000		0.000		1.340	Oct 2020	-		1.340	Continuing	Continuing	Continuing
Support Development	C/CPFF	INL : Idaho	0.000	0.000		0.000		3.577	Oct 2020	-		3.577	Continuing	Continuing	Continuing
General Engineering	C/CPFF	PSU ARL : Pennsylvania	0.000	0.000		0.000		3.100	Oct 2020	-		3.100	Continuing	Continuing	Continuing
Hardware and Software engineering (1)	C/CPFF	Classified : Classified	0.000	0.000		0.000		1.350	Oct 2020	-		1.350	Continuing	Continuing	Continuing
Engineering	C/CPFF	JHU APL : Not specified	0.000	0.000		0.000		2.500	Oct 2020	-		2.500	Continuing	Continuing	Continuing
System engineering	WR	NRL : Washington	0.000	0.000		0.000		1.750	Oct 2020	-		1.750	Continuing	Continuing	Continuing
Development	Various	Classified : Classified	0.000	0.000		0.000		7.722	Oct 2020	-		7.722	Continuing	Continuing	Continuing
Subtotal			0.000	0.000		0.000		22.701		-		22.701	Continuing	Continuing	N/A

Remarks
1-Due to classification category, will not be on GENSER classified exhibits.

Support (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 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
Program Infrastructure	C/FFP	CWG-6 : Maryland	0.000	0.000		0.000		0.260	Oct 2020	-		0.260	Continuing	Continuing	Continuing
Software Support	MIPR	JHU APL : Not Specified	0.000	0.000		0.000		0.378	Oct 2020	-		0.378	Continuing	Continuing	Continuing
Software Support	WR	NIWC LANT : Virginia	0.000	0.000		0.000		0.636	Oct 2020	-		0.636	Continuing	Continuing	Continuing
Hardware & Software development support	C/CPFF	PSU ARL : Pennsylvania	0.000	0.000		0.000		1.175	Oct 2020	-		1.175	Continuing	Continuing	Continuing
General Engineering support	C/CPFF	PSU ARL : Pennsylvania	0.000	0.000		0.000		1.970	Oct 2020	-		1.970	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 Navy **Date:** February 2020

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Support (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 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
Studies & Analysis	C/CPFF	PSU ARL : Pennsylvania	0.000	0.000		0.000		0.430	Oct 2020	-		0.430	Continuing	Continuing	Continuing
Software Support	C/CPFF	CMU SEI : Pennsylvania	0.000	0.000		0.000		3.510	Oct 2020	-		3.510	Continuing	Continuing	Continuing
Development Support	C/CPFF	SNS One : Maryland	0.000	0.000		0.000		1.486	Oct 2020	-		1.486	Continuing	Continuing	Continuing
Development Support	C/FFP	CWG-6 : Maryland	0.000	0.000		0.000		0.062	Oct 2020	-		0.062	Continuing	Continuing	Continuing
Subtotal			0.000	0.000		0.000		9.907		-		9.907	Continuing	Continuing	N/A

Remarks
1-Due to classification category, will not be on GENSER classified exhibits.

Test and Evaluation (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 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
Mod, Sim, and testing	Various	Various : Florida/Utah	0.000	0.000		0.000		0.209	Oct 2020	-		0.209	Continuing	Continuing	Continuing
testing and Evaluation	C/CPFF	PSU ARL : Pennsylvania	0.000	0.000		0.000		0.470	Oct 2020	-		0.470	0.000	0.470	Continuing
Subtotal			0.000	0.000		0.000		0.679		-		0.679	Continuing	Continuing	N/A

Remarks
1-Due to classification category, will not be on GENSER classified exhibits.

Management Services (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 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
Program Management Service (1)	Various	Classified : Classified	0.000	0.000		0.000		1.680	Oct 2020	-		1.680	Continuing	Continuing	Continuing
Subtotal			0.000	0.000		0.000		1.680		-		1.680	Continuing	Continuing	N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 Navy **Date:** February 2020

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Management Services (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			

Remarks
1-Due to classification category, will not be on GENSER classified exhibits.

	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	0.000	0.000	34.967	-	34.967	Continuing	Continuing	N/A

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2021 Navy **Date:** February 2020

Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0305251N / CYBERSPACE OPERATIONS FORCES & FORCE SPT	Project (Number/Name) 2958 / Cyberspace Activities
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Proj 2958	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025							
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q				
Cyber Space Activities:																																
	Cyber Foundry Development and Enhancement																															
	Hardware																															
	Software																															
	Software Engineer Service																															
	Networks Support																															
	Engineering																															
	Test and Evaluation																															
	Modeling and Simulation																															
Remote Development	Remote Development																															

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Exhibit R-4A, RDT&E Schedule Details: PB 2021 Navy		Date: February 2020
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0305251N / <i>CYBERSPACE OPERATIONS FORCES & FORCE SPT</i>	Project (Number/Name) 2958 / <i>Cyberspace Activities</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Proj 2958				
Cyber Space Activities:: Cyber Foundry Development and Enhancement	1	2021	4	2025
Cyber Space Activities:: Engineering Hardware	1	2021	4	2025
Cyber Space Activities:: Engineering Software	1	2021	4	2025
Cyber Space Activities:: Engineering Software Engineering	1	2021	4	2025
Cyber Space Activities:: Engineering Dev	1	2021	4	2025
Cyber Space Activities:: Engineering	1	2021	4	2025
Cyber Space Activities:: Engineering Tand E	1	2021	4	2025
Cyber Space Activities:: Engineering M and S	1	2021	4	2025
Remote Development: Remote Development	1	2021	4	2025