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Exhibit R-2, RDT&E Budget Item Justification: PB 2022 Navy **Date:** May 2021

Appropriation/Budget Activity 1319: <i>Research, Development, Test & Evaluation, Navy / BA 5: System Development & Demonstration (SDD)</i>	R-1 Program Element (Number/Name) PE 0604574N / <i>Navy Tactical Computer Resources</i>
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COST (\$ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
Total Program Element	20.201	3.604	3.836	4.290	-	4.290	-	-	-	-	-	-
3360: <i>Common Processing System (CPS)</i>	6.715	1.445	1.498	1.459	-	1.459	-	-	-	-	-	-
3361: <i>Common Display System (CDS)</i>	13.486	2.159	2.338	2.831	-	2.831	-	-	-	-	-	-

A. Mission Description and Budget Item Justification

Common Processing System (CPS) and Common Display System (CDS) programs support developing computing infrastructure in a competitively sourced environment. The Common Display System (CDS) & Common Processing System (CPS) provide technical replacements for obsolete display and processing equipment (such as AN/UYQ-70) for multiple warfare systems aboard Surface Combatants and Large Deck class ships.

CPS equipment suite provides computer processing and memory, data storage and extraction, network systems, and Input/Output (I/O) interfaces to host software applications of Navy combat systems. These upgrades support AEGIS Modernization, AEGIS new construction, AEGIS Ashore, Ship Self Defense System (SSDS) MK2 modernization and new construction for all large deck platforms, Surface Electronic Warfare Improvement Program (SEWIP), and other Navy programs. Funding provides for technical management and Engineering Change Proposals (ECP) development for the common baseline. Funding also supports future tech refresh development efforts. Procurement and development funds provided by user programs support program unique requirements.

CDS suite consists of the Technology Insertion (TI) 16 MOD 1 configuration, a follow-on to previous designs beginning with the TI 12 variant. The Navy's TI 16 MOD 1 display and peripheral solutions include Common Display System (CDS) consoles, Thin Client Displays (TCDs), Multi-Mission Displays (MMDs), and peripheral equipment. Upgrades that include these support AEGIS modernization, AEGIS new construction, AEGIS Ashore, DDG-1000, Ship Self Defense System (SSDS) MK 2, Gun Weapon System (GWS), SEWIP, and other Navy programs. Funding provides for technical management and Engineering Change Proposals (ECP) development for the common baseline along with future tech refresh development efforts. Procurement and development funds provided by user programs support program unique requirements.

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Appropriation/Budget Activity 1319: <i>Research, Development, Test & Evaluation, Navy / BA 5: System Development & Demonstration (SDD)</i>	R-1 Program Element (Number/Name) PE 0604574N / <i>Navy Tactical Computer Resources</i>
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B. Program Change Summary (\$ in Millions)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Previous President's Budget	3.692	3.853	4.397	-	4.397
Current President's Budget	3.604	3.836	4.290	-	4.290
Total Adjustments	-0.088	-0.017	-0.107	-	-0.107
• Congressional General Reductions	-	-0.017			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.088	0.000			
• Program Adjustments	0.000	0.000	-0.037	-	-0.037
• Rate/Misc Adjustments	0.000	0.000	-0.070	-	-0.070

Change Summary Explanation

The FY22 funding request was reduced by \$107K for Total Force Manpower Savings and Inflation Rate adjustments.

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Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy										Date: May 2021		
Appropriation/Budget Activity 1319 / 5					R-1 Program Element (Number/Name) PE 0604574N / Navy Tactical Computer Resources				Project (Number/Name) 3360 / Common Processing System (CPS)			
COST (\$ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
3360: Common Processing System (CPS)	6.715	1.445	1.498	1.459	-	1.459	-	-	-	-	-	-
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

CPS equipment suite provides computer processing and memory, data storage and extraction, network systems, and Input/Output (I/O) interfaces to host software applications of Navy combat systems. These upgrades support AEGIS Modernization, AEGIS new construction, AEGIS Ashore, Ship Self Defense System (SSDS) MK2 modernization and new construction for all large deck platforms, Surface Electronic Warfare Improvement Program (SEWIP), and other Navy programs. Funding provides for technical management and Engineering Change Proposals (ECP) development for the common baseline. Funding also supports future tech refresh development efforts. Procurement and development funds provided by user programs support program unique requirements.

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

	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Title: Common Processing System (CPS)	1.445	1.498	1.459	0.000	1.459
Articles:	-	-	-	-	-
FY 2021 Plans: Continue system engineering support of CPS development efforts required to support various Combat and Weapon System Configurations. Support Engineering Analysis of issues identified within fielded configurations to develop resolution plan to improve reliability, readiness, or reduce operating costs					
FY 2022 Base Plans: Continue system-engineering support of CPS development efforts required to support various Combat and Weapon System Configurations. Development efforts include but are not limited to continued qualification of cabinets along with associated parts and procurement of testing equipment, both of which impact SSDS, SEWIP, and other Navy programs. Address obsolescence issues as they are identified within the CPS equipment suite and future tech refresh development efforts.					
FY 2022 OCO Plans: N/A					
FY 2021 to FY 2022 Increase/Decrease Statement: Decrease reflects Total Force Manpower Savings.					
Accomplishments/Planned Programs Subtotals	1.445	1.498	1.459	0.000	1.459

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Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604574N / Navy Tactical Computer Resources	Project (Number/Name) 3360 / Common Processing System (CPS)

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

N/A

Remarks

D. Acquisition Strategy

CPS Contract Award.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Navy **Date:** May 2021

Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604574N / Navy Tactical Computer Resources	Project (Number/Name) 3360 / Common Processing System (CPS)
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Product Development (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 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			
Systems Engineering	WR	NSWC : PHD	0.397	0.152	Oct 2019	0.163	Oct 2020	0.141	Oct 2021	-		0.141	-	-	-
Systems Engineering	WR	NSWC : Dahlgren	3.624	0.709	Oct 2019	0.710	Oct 2020	0.698	Oct 2021	-		0.698	-	-	-
Systems Engineering	C/CPIF	TBD : TBD	2.441	0.000	Oct 2019	0.000	Oct 2020	0.000		-		0.000	-	-	-
Subtotal			6.462	0.861		0.873		0.839		-		0.839	-	-	N/A

Management Services (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 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			
Program Management Services	Various	Various : Various	0.253	0.584	Oct 2019	0.625	Oct 2020	0.620	Oct 2021	-		0.620	-	-	-
Subtotal			0.253	0.584		0.625		0.620		-		0.620	-	-	N/A

Prior Years	FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			6.715	1.445	1.498	1.459	-	1.459	-	-	N/A	

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604574N / Navy Tactical Computer Resources	Project (Number/Name) 3360 / Common Processing System (CPS)

Fiscal Year	2020				2021				2022			
	1	2	3	4	1	2	3	4	1	2	3	4
	RDT&E,N/BA-5											
PE 0604574N / Navy Tactical Computer Resources												
3360 / Common Processing System (CPS)												
Common Processing System (CPS) TI12 H Sustainment Contract												
	Support Production Contract											
Common Processing System (CPS) TI 16 (MK6 MOD 0)												
Common Processing System (CPS) TI 16 (MK6 MOD 1)												

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Exhibit R-4A, RDT&E Schedule Details: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604574N / Navy Tactical Computer Resources	Project (Number/Name) 3360 / Common Processing System (CPS)

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Proj 3360				
Common Processing System (CPS): TI12H Sustainment Contract	1	2020	4	2022
Common Processing System (CPS): TI16 (MK6 MOD0) Production Contract	1	2020	4	2021
Common Processing System (CPS): TI16 (MK6 MOD1) Production Contract	2	2020	4	2022

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Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy										Date: May 2021		
Appropriation/Budget Activity 1319 / 5					R-1 Program Element (Number/Name) PE 0604574N / Navy Tactical Computer Resources				Project (Number/Name) 3361 / Common Display System (CDS)			
COST (\$ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
3361: Common Display System (CDS)	13.486	2.159	2.338	2.831	-	2.831	-	-	-	-	-	-
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

CDS suite consists of the Technology Insertion (TI) 16 MOD 1 configuration, a follow-on to previous designs beginning with the TI 12 variant. The Navy's TI 16 MOD 1 display and peripheral solutions include Common Display System (CDS) consoles, Thin Client Displays (TCDs), Multi-Mission Displays (MMDs), and peripheral equipment. Upgrades that include these support AEGIS modernization, AEGIS new construction, AEGIS Ashore, DDG-1000, Ship Self Defense System (SSDS) MK 2, Gun Weapon System (GWS), SEWIP, and other Navy programs. Funding provides for technical management and Engineering Change Proposals (ECP) development for the common baseline along with future tech refresh development efforts. Procurement and development funds provided by user programs support program unique requirements.

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

	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Title: Common Display System (CDS)	2.159	2.338	2.831	0.000	2.831
Articles:	-	-	-	-	-
FY 2021 Plans: Continue system engineering support of CDS development efforts required to support various Combat and Weapon System Configurations. Address Obsolescence's issues as they are identified within the CDS configurations. Support Engineering Analysis of issues identified within fielded configurations to develop resolution plan to improve reliability, readiness, or reduce operating costs.					
FY 2022 Base Plans: Continue system engineering support of CDS development efforts required to support various Combat and Weapon System Configurations. Development efforts include but are not limited to drawing updates and upgrade of equipment design, both of which impact SSDS, SEWIP, and other Navy programs. Address obsolescence's issues as they are identified within the CDS equipment suite. Support engineering analysis of issues identified within field configuration to develop resolution plan to improve reliability, readiness, or reduce operating costs, and future tech refresh development efforts.					
FY 2022 OCO Plans: N/A					
FY 2021 to FY 2022 Increase/Decrease Statement:					

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Exhibit R-2A, RDT&E Project Justification: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604574N / Navy Tactical Computer Resources	Project (Number/Name) 3361 / Common Display System (CDS)

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Increase due to additional Cyber requirements.					
Accomplishments/Planned Programs Subtotals	2.159	2.338	2.831	0.000	2.831

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

N/A

Remarks

D. Acquisition Strategy

CDS Contract award.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Navy **Date:** May 2021

Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604574N / Navy Tactical Computer Resources	Project (Number/Name) 3361 / Common Display System (CDS)
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Product Development (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 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			
Systems Engineering	WR	NSWC : PHD	0.745	0.187	Dec 2019	0.198	Dec 2020	0.398	Oct 2021	-		0.398	-	-	-
Systems Engineering	WR	NSWC : Dahlgren	8.044	0.920	Oct 2019	0.919	Oct 2020	1.154	Oct 2021	-		1.154	-	-	-
Systems Engineering	C/CPFF	General Dynamics : Fairfax, VA	1.515	0.462	Oct 2019	0.518	Oct 2020	0.506	Oct 2021	-		0.506	-	-	-
Systems Engineering	C/CPIF	DRS Technologies : Gaithersburg, MD	1.630	0.462	Dec 2019	0.528	Dec 2020	0.628	Oct 2021	-		0.628	-	-	-
Systems Engineering	C/CPIF	TBD : TBD	1.067	0.128	Oct 2019	0.175	Oct 2020	0.145	Oct 2021	-		0.145	-	-	-
Subtotal			13.001	2.159		2.338		2.831		-		2.831	-	-	N/A

Management Services (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 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			
Program Management Services	Various	Various : Various	0.485	0.000		0.000		0.000		-		0.000	-	-	-
Subtotal			0.485	0.000		0.000		0.000		-		0.000	-	-	N/A

Project Cost Totals	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	Cost To Complete	Total Cost	Target Value of Contract
	13.486	2.159	2.338	2.831	-	2.831	-	-	N/A

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604574N / Navy Tactical Computer Resources	Project (Number/Name) 3361 / Common Display System (CDS)

Fiscal Year	2020				2021				2022			
	1	2	3	4	1	2	3	4	1	2	3	4
	Common Display System (CDS) TI12 Sustainment Contract					Expected Award ▲	—————					
Common Display System (CDS) TI 16 (MK6 MOD 0)	Support Production Contract —————											
Common Display System (CDS) TI 16 (MK6 MOD 1)			Contract Award ▲		Production Contract —————							

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Exhibit R-4A, RDT&E Schedule Details: PB 2022 Navy		Date: May 2021
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604574N / Navy Tactical Computer Resources	Project (Number/Name) 3361 / Common Display System (CDS)

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Proj 3361				
Common Display System (CDS): T112H Sustainment Contract Award	2	2021	2	2021
Common Display System (CDS): T112H Sustainment Contract	2	2021	2	2022
Common Display System (CDS): T116 (MK6 MOD0) Production Contract	1	2020	2	2021
Common Display System (CDS): T116 (MK6 MOD1) Production Contract Award	3	2020	3	2020
Common Display System (CDS): T116 (MK6 MOD1) Production Contract	3	2020	4	2022