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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Navy **Date:** May 2017

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>							
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	3.884	4.053	3.098	4.817	-	4.817	4.727	4.097	4.062	4.144	Continuing	Continuing
3360: <i>Common Processing System (CPS)</i>	1.297	1.347	0.892	1.685	-	1.685	1.627	1.471	1.502	1.533	Continuing	Continuing
3361: <i>Common Display System (CDS)</i>	2.587	2.706	2.206	3.132	-	3.132	3.100	2.626	2.560	2.611	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Common Processing System (CPS) and Common Display System (CDS) programs support developing technology insertions in a competitively sourced environment. CPS & CDS 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 provides computer processing and memory, data storage and extraction, and Input/Output (I/O) interface to support hosting Navy combat system software applications and computing resources. These upgrades support AEGIS Modernization, AEGIS new construction, AEGIS Ashore, Ship Self Defense System (SSDS) MK2, 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. Procurement and development funds provided by user programs to support program unique requirements.

CDS provides operator display consoles with a common human machine interface to support the Combat System operations. These upgrades support AEGIS modernization, AEGIS new construction, AEGIS Ashore, DDG-1000, Ship Self Defense System (SSDS) MK 2, Gun Weapon System (GWS), and SEWIP. Funding provides for technical management and Engineering Change Proposals (ECP) development for the common baseline. Procurement and development funds provided by user programs to support program unique requirements.

B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	4.096	3.098	4.839	-	4.839
Current President's Budget	4.053	3.098	4.817	-	4.817
Total Adjustments	-0.043	0.000	-0.022	-	-0.022
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.043	0.000			
• Program Adjustments	0.000	0.000	-0.018	-	-0.018

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PE 0604574N: *Navy Tactical Computer Resources*
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Exhibit R-2A, RDT&E Project Justification: FY 2018 Navy										Date: May 2017		
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 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
3360: Common Processing System (CPS)	1.297	1.347	0.892	1.685	-	1.685	1.627	1.471	1.502	1.533	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Common Processing System (CPS) program supports developing open architecture computer processing hardware and storage technology in a competitively sourced environment. CPS provides technical replacements for obsolete processing equipment (such as AN/UYQ-70) for multiple warfare systems aboard Surface Combatants and Large Deck class ships. CPS provides computer processing and memory, data storage and extraction, and Input/Output (I/O) interface to support hosting Navy combat system software applications and computing resources. These upgrades support AEGIS Modernization, AEGIS new construction, Ship Self Defense System (SSDS) MK2, 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. Procurement and development funds provided by user programs to support program unique requirements.

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

	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Title: Common Processing System (CPS)	1.347	0.892	1.685	0.000	1.685
Articles:	-	-	-	-	-
FY 2016 Accomplishments: Conducted system engineering support of CPS TI-16 development efforts required to support various Combat and Weapon System Configurations. Supported Engineering Analysis of issues identified within field configuration TI-12 to develop resolution plan to improve reliability, readiness, or reduce operating costs. Supported System Engineering efforts required to achieve Production Readiness Review (PRR) milestone.					
FY 2017 Plans: Continue system engineering support of CPS TI-16 development efforts required to support various Combat and Weapon System Configurations. Support Engineering Analysis of issues identified within field configuration TI-12 to develop resolution plan to improve reliability, readiness, or reduce operating costs. Support System Engineering efforts required to achieve In-Progress Review for TI-20 milestone.					
FY 2018 Base Plans: Continue system engineering support of CPS TI-12 / TI-16 development efforts required to support various Combat and Weapon System Configurations. Support Engineering Analysis of issues identified within field configuration TI-12 to develop resolution plan to improve reliability, readiness, or reduce operating costs.					

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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)	
<u>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</u>					
	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Support System Engineering efforts required to achieve In-Progress Review for TI-20 milestone. FY18 increase is due to additional efforts required to support Technology Insertion (TI) MK 6 MOD 1 Equipment Suite CPS modifications to support the Critical Design Review (CDR), Test Readiness Review (TRR) and delivery of the initial Technical Data Package (TDP) all in FY18. MK 6 MOD 1 includes CPS Capability updates, DMS resolution and ACB-20 NCD derived requirement improvements. In addition, initial design work for TI MK 7 CPS will commence in FY18.					
<i>FY 2018 OCO Plans:</i> N/A					
Accomplishments/Planned Programs Subtotals	1.347	0.892	1.685	0.000	1.685
<u>C. Other Program Funding Summary (\$ in Millions)</u> N/A					
<u>Remarks</u>					
<u>D. Acquisition Strategy</u> CPS TI-16: Award build to Print Indefinite Delivery Indefinite Quantity (IDIQ) production contract for FY16-FY21.					
<u>E. Performance Metrics</u> Major Milestones: CPS TI-12 Build-To-Print Contract Award (Procurement Order Available until second quarter FY17. CPS TI-16 Preliminary Design Review first quarter FY16. CPS TI-16 Critical Design Review second quarter FY16. CPS TI-16 Test Readiness Review third quarter FY16. CPS TI-16 Production Readiness Review fourth quarter FY16. CPS TI-20 In Process Review No. 1 third quarter FY17. CPS TI-20 In Process Review No. 2 first quarter FY18. CDP TI-20 Preliminary Design Review third quarter FY18. CPS TI-20 Production Readiness Review fourth quarter FY19.					

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Exhibit R-2A, RDT&E Project Justification: FY 2018 Navy										Date: May 2017		
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 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
3361: Common Display System (CDS)	2.587	2.706	2.206	3.132	-	3.132	3.100	2.626	2.560	2.611	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		
A. Mission Description and Budget Item Justification												
The Common Display System (CDS) programs support developing technology insertions in a competitively sourced environment. CDS 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. CDS provides operator display consoles with a common human machine interface to support the Combat System operations. These upgrades support AEGIS modernization, AEGIS new construction, AEGIS Ashore, DDG-1000, Ship Self Defense System (SSDS) MK 2, Gun Weapon System (GWS), and SEWIP. Funding provides for technical management and Engineering Change Proposals (ECP) development for the common baseline. Procurement and development funds provided by user programs to support program unique requirements.												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)								FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Title: Common Display System (CDS) Articles: FY 2016 Accomplishments: Conducted system engineering support of CDS TI-16 development efforts required to support various Combat and Weapon System Configurations. Supported Engineering Analysis of issues identified within field configuration TI-12 to develop resolution plan to improve reliability, readiness, or reduce operating costs. Supported System Engineering efforts required to achieve Production Readiness Review (PRR) milestone. FY 2017 Plans: Continue system engineering support of CDS TI-16 development efforts required to support various Combat and Weapon System Configurations. Support Engineering Analysis of issues identified within field configuration TI-12 to develop resolution plan to improve reliability, readiness, or reduce operating costs. Support System Engineering efforts required to achieve In-Progress Review for TI-20 milestone. FY 2018 Base Plans: Continue system engineering support of CDS TI-12 / TI-16 development efforts required to support various Combat and Weapon System Configurations. Support Engineering Analysis of issues identified within field configuration TI-12 to develop resolution plan to improve reliability, readiness, or reduce operating costs. Support System Engineering efforts required to achieve In-Progress Review for TI-20 milestone. FY18 increase								2.706	2.206	3.132	0.000	3.132
								-	-	-	-	-

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<u>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</u>						
		FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
<p>is due to additional efforts required to support Technology Insertion (TI) MK 6 MOD 1 Equipment Suite CDS modifications to support the Critical Design Review (CDR), Test Readiness Review (TRR) and delivery of the initial Technical Data Package (TDP) all in FY18. MK 6 MOD 1 includes CDS Capability updates, DMS resolution and ACB-20 NCD derived requirement improvements. In addition, initial design work for TI MK 7 CDS will commence in FY18.</p> <p><i>FY 2018 OCO Plans:</i> N/A</p>						
Accomplishments/Planned Programs Subtotals		2.706	2.206	3.132	0.000	3.132
<u>C. Other Program Funding Summary (\$ in Millions)</u> N/A						
<u>Remarks</u>						
<u>D. Acquisition Strategy</u> Contracts: CDS TI-16: Award build to Print IDIQ production contract for FY16-FY21.						
<u>E. Performance Metrics</u> Major Milestones: CDS TI-12 Build-To-Print Contract Award (Procurement Order Available until second quarter FY17. CDS TI-16 Preliminary Design Review first quarter FY16. CDS TI-16 Critical Design Review second quarter FY16. CDS TI-16 Test Readiness Review third quarter FY16. CDS TI-16 Production Readiness Review fourth quarter FY16. CDS TI-20 In Process Review No. 1 third quarter FY17. CDS TI-20 In Process Review No. 2 first quarter FY18. CDS TI-20 Preliminary Design Review third quarter FY18. CDS TI-20 Production Readiness Review fourth quarter FY19.						