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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2019 Navy	<b>Date:</b> February 2018
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<b>Appropriation/Budget Activity</b>	<b>R-1 Program Element (Number/Name)</b>											
1319: <i>Research, Development, Test &amp; Evaluation, Navy I BA 5: System Development &amp; Demonstration (SDD)</i>	PE 0605024N I (U) <i>Anti-Tamper Technology Support</i>											
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
Total Program Element	0.000	0.500	3.410	5.618	-	5.618	6.252	7.175	7.313	7.464	Continuing	Continuing
2801: <i>Anti-Tamper</i>	0.000	0.000	0.000	1.379	-	1.379	1.404	1.433	1.463	1.492	Continuing	Continuing
3414: <i>Anti-Tamper Technology Support</i>	0.000	0.500	3.410	4.239	-	4.239	4.848	5.742	5.850	5.972	Continuing	Continuing

**Note**

PU 2801 moved in FY19 from 0605853N

**A. Mission Description and Budget Item Justification**

Develops new and novel Anti-Tamper technologies for all Department of Navy weapon and combat systems. The technologies to be developed will be new countermeasures to prevent reverse engineering of critical U.S. military systems. The technologies include secure processing, sensors, architecture components, and enabling technologies.

This program is funded under SYSTEM DEVELOPMENT AND DEMONSTRATION because it includes those projects that have passed Milestone B approval and are conducting engineering and manufacturing development tasks aimed at meeting validated requirement prior to full-rate production decision.

<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>
Previous President's Budget	2.500	3.410	4.318	-	4.318
Current President's Budget	0.500	3.410	5.618	-	5.618
Total Adjustments	-2.000	0.000	1.300	-	1.300
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Program Adjustments	0.000	0.000	1.389	-	1.389
• Rate/Misc Adjustments	0.000	0.000	-0.089	-	-0.089
• Congressional Directed Reductions	-2.000	-	-	-	-
Adjustments					

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<b>Appropriation/Budget Activity</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy I BA 5: System Development &amp; Demonstration (SDD)</i>		<b>R-1 Program Element (Number/Name)</b> PE 0605024N I (U) <i>Anti-Tamper Technology Support</i>
<b><u>Change Summary Explanation</u></b> Schedule: Not Applicable Technical: Not Applicable		

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy										Date: February 2018		
Appropriation/Budget Activity 1319 / 5					R-1 Program Element (Number/Name) PE 0605024N / (U)Anti-Tamper Technology Support				Project (Number/Name) 2801 / Anti-Tamper			
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
2801: Anti-Tamper	0.000	0.000	0.000	1.379	-	1.379	1.404	1.433	1.463	1.492	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		
Note PU moved from 0605853N starting in FY19												
A. Mission Description and Budget Item Justification Anti-Tamper Program - performs as the Navy Technical Process Owner for the Anti Tamper systems engineering activity that is intended to prevent and/or delay the exploitation of critical technologies in U.S. systems; manages the research, design, development, implementation, and testing of Anti Tamper measures and coordinates with Department of Defense Anti Tamper Executive Agent.												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)												
<b>Title:</b> Anti Tamper Support  <b>Articles:</b>  <b>FY 2018 Plans:</b> N/A  <b>FY 2019 Base Plans:</b> Continue championing new technology with a focused and disciplined approach of development, assessment, evaluation, and transition to meet Navy program AT requirements. Maintain role in Anti-Tamper policy development for implementation and execution by the SYSCOMs incorporating Navy program AT requirements. Provide secure facilities, networks, computers, video/telephone conference and support personnel for collateral and Special Program operational environments to enable Anti-Tamper (AT) implementation and execution by SYSCOM's programs, incorporating AT requirements.  <b>FY 2019 OCO Plans:</b> N/A  <b>FY 2018 to FY 2019 Increase/Decrease Statement:</b> The increase of \$1.379M is due to a Project Unit consolidation from PE 0605853N to PE 0605024N. This funding will provide development, assessment, evaluation, and transition in order to meet the Navy program Anti Tamper requirements.							FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	
							0.000	0.000	1.379	0.000	1.379	
							-	-	-	-	-	
Accomplishments/Planned Programs Subtotals							0.000	0.000	1.379	0.000	1.379	

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Exhibit R-2A, RDT&E Project Justification: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0605024N / (U)Anti-Tamper Technology Support	Project (Number/Name) 2801 / Anti-Tamper
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A		
<b>Remarks</b>		
<b>D. Acquisition Strategy</b> The program will fund project to provide secure facilities, networks, computers, video/telephone conference and support personnel for collateral and Special Program operational environments		
<b>E. Performance Metrics</b> Manage the research, design, development, implementation and testing of Anti-Tamper measures for the Department of the Navy. Manage Information Security for all navy programs throughout their lifecycles.		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Navy													Date: February 2018		
Appropriation/Budget Activity 1319 / 5						R-1 Program Element (Number/Name) PE 0605024N / (U)Anti-Tamper Technology Support					Project (Number/Name) 2801 / Anti-Tamper				
Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 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	WR	NAWCWD : China Lake, CA	0.000	0.000		0.000		1.079	Dec 2018	-		1.079	Continuing	Continuing	Continuing
Subtotal			0.000	0.000		0.000		1.079		-		1.079	Continuing	Continuing	N/A
Management Services (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 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 Support	WR	NAWCWD : China Lake, CA	0.000	0.000		0.000		0.300	Nov 2018	-		0.300	Continuing	Continuing	Continuing
Subtotal			0.000	0.000		0.000		0.300		-		0.300	Continuing	Continuing	N/A
			Prior Years	FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			0.000	0.000		0.000		1.379		-		1.379	Continuing	Continuing	N/A
Remarks															

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PE 0605024N: (U)Anti-Tamper Technology Support  
Navy

R-1 Line #161

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 Navy		Date: February 2018
Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0605024N / (U)Anti-Tamper Technology Support	Project (Number/Name) 2801 / Anti-Tamper

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Proj 2801				
Product Development: Anti Tamper Technology Development of Weapon Systems	1	2019	4	2023
Product Development: Anti Tamper Technology Development of Combat Systems	1	2019	4	2023

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2019 Navy										<b>Date:</b> February 2018		
<b>Appropriation/Budget Activity</b> 1319 / 5					<b>R-1 Program Element (Number/Name)</b> PE 0605024N / (U)Anti-Tamper Technology Support				<b>Project (Number/Name)</b> 3414 / Anti-Tamper Technology Support			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
3414: Anti-Tamper Technology Support	0.000	0.500	3.410	4.239	-	4.239	4.848	5.742	5.850	5.972	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

**Note**  
New start

**A. Mission Description and Budget Item Justification**  
This project develops new and novel Anti-Tamper technologies for all Department of Navy weapon and combat systems. The technologies to be developed will be new countermeasures to prevent reverse engineering of critical U.S. military systems. The technologies include secure processing, sensors, architecture components, and enabling technologies. Low technology readiness level projects will be tested for maturation and implemented to protect US technologies. Government laboratory expertise will mature in Anti Tamper technologies and techniques. Integration of various techniques will enhance the strength of the protection scheme which limits the opportunities to exploit our technological advantage on the battlefield.

<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>
<b>Title:</b> Anti Tamper Technology Development	0.500	3.410	4.239	0.000	4.239
<b>Articles:</b>	-	-	-	-	-
<b>Description:</b> This project develops new and novel Anti-Tamper technologies for all Department of Navy weapon and combat systems. The technologies to be developed will be new countermeasures to prevent reverse engineering of critical U.S. military systems. The technologies include secure processing, sensors, secure architecture components, and enabling technologies.					
<b>FY 2018 Plans:</b> Continue development of new and novel technologies that will become reverse engineering countermeasures for Department of the Navy (DoN) weapon and combat systems. The project will include awarding technology development contracts and securing engineering support from DoN engineering facilities. Test and perform technical evaluations of low technical readiness level projects for implementation to protect US technologies.					
<b>FY 2019 Base Plans:</b> Continue development of new and novel technologies that will become reverse engineering countermeasures for Department of the Navy (DoN) weapon and combat systems. The project will include awarding technology					



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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2019 Navy				<b>Date:</b> February 2018		
<b>Appropriation/Budget Activity</b> 1319 / 5		<b>R-1 Program Element (Number/Name)</b> PE 0605024N / (U)Anti-Tamper Technology Support		<b>Project (Number/Name)</b> 3414 / Anti-Tamper Technology Support		
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>						
		<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019 Base</b>	<b>FY 2019 OCO</b>	<b>FY 2019 Total</b>
development contracts and securing engineering support from DoN engineering facilities. Test and perform technical evaluations of low technical readiness level projects for implementation to protect US technologies.						
<b>FY 2019 OCO Plans:</b> N/A						
<b>FY 2018 to FY 2019 Increase/Decrease Statement:</b> The increase of \$0.829M will allow for development of new countermeasures in support of Anti-Tamper technologies.						
<b>Accomplishments/Planned Programs Subtotals</b>		0.500	3.410	4.239	0.000	4.239
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A						
<b>Remarks</b>						
<b>D. Acquisition Strategy</b> This is a non-ACAT program. The strategy will be to issue technology development contracts and use Department of Navy (DoN)labs for technology development, along with using DoN engineering organizations for engineering support.						
<b>E. Performance Metrics</b> The project will fund between 4 and 8 technology development projects that will be focused on bringing anti-tamper technologies that transition to the DoN programs. The project will have a greater than 67% transition rate.						

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Navy												Date: February 2018			
Appropriation/Budget Activity 1319 / 5						R-1 Program Element (Number/Name) PE 0605024N / (U)Anti-Tamper Technology Support				Project (Number/Name) 3414 / Anti-Tamper Technology Support					
Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 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
Primary Hardware Dev	WR	NAWCWD : China Lake, CA	0.000	0.500	Jun 2017	2.000	Nov 2017	2.955	Nov 2018	-		2.955	Continuing	Continuing	Continuing
Subtotal			0.000	0.500		2.000		2.955		-		2.955	Continuing	Continuing	N/A
Test and Evaluation (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 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 and Evaluation	WR	NAWCWD : China Lake, CA	0.000	0.000		1.410	Nov 2017	1.284	Nov 2018	-		1.284	Continuing	Continuing	Continuing
Subtotal			0.000	0.000		1.410		1.284		-		1.284	Continuing	Continuing	N/A
			Prior Years	FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			0.000	0.500		3.410		4.239		-		4.239	Continuing	Continuing	N/A
Remarks															

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<b>Exhibit R-4, RDT&amp;E Schedule Profile:</b> PB 2019 Navy																<b>Date:</b> February 2018			
<b>Appropriation/Budget Activity</b> 1319 / 5								<b>R-1 Program Element (Number/Name)</b> PE 0605024N / (U)Anti-Tamper Technology Support								<b>Project (Number/Name)</b> 3414 / Anti-Tamper Technology Support			

	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023			
	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
<b>Proj 3414</b>																												
Product Development: Anti Tamper Technology Development of Weapon Systems																												
Product Development: Anti Tamper Technology Development of Combat Systems																												
Test and Development: Technical Evaluation of Anti-Tamper Weapons Systems																												
Test and Development: Technical Evaluation of Anti-Tamper Combat Systems																												

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2019 Navy			<b>Date:</b> February 2018
<b>Appropriation/Budget Activity</b> 1319 / 5	<b>R-1 Program Element (Number/Name)</b> PE 0605024N / (U) <i>Anti-Tamper Technology Support</i>	<b>Project (Number/Name)</b> 3414 / <i>Anti-Tamper Technology Support</i>	

**Schedule Details**

<b>Events by Sub Project</b>	<b>Start</b>		<b>End</b>	
	<b>Quarter</b>	<b>Year</b>	<b>Quarter</b>	<b>Year</b>
<b><i>Proj 3414</i></b>				
Product Development: Anti Tamper Technology Development of Weapon Systems	1	2017	4	2023
Product Development: Anti Tamper Technology Development of Combat Systems	1	2017	4	2023
Test and Development: Technical Evaluation of Anti-Tamper Weapons Systems	1	2018	4	2023
Test and Development: Technical Evaluation of Anti-Tamper Combat Systems	1	2018	4	2023