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Exhibit R-2, RDT&E Budget Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation/Budget Activity 1319: <i>Research, Development, Test & Evaluation, Navy / BA 4: Advanced Component Development & Prototypes (ACD&P)</i>	R-1 Program Element (Number/Name) PE 0603597N / (U)Automated Test and Analysis
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COST (\$ in Millions)	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
Total Program Element	9.639	7.816	23.000	0.000	-	0.000	8.000	8.000	8.000	8.160	Continuing	Continuing
9B88: <i>Automated Test and Analysis</i>	9.639	7.816	23.000	0.000	-	0.000	8.000	8.000	8.000	8.160	Continuing	Continuing

A. Mission Description and Budget Item Justification

Prior to FY2016, the Navy developed a capability called Automated Test and Retest (ATRT). ATRT supported reproducible and quantitative testing and analysis of Naval Ship Combat Systems Integration, AEGIS Combat System Advanced Capability Build (ACB) 12, Antisubmarine Warfare Integrated Common Processor/Acoustic Rapid Commercial Off The Shelf Insertion (ARCI), and Littoral Combat Ship (LCS) Mission Module development. Funding also supported expansion of ATRT to other NAVSEA-affiliated programs. The success of ATRT in reducing the time to complete critical testing, improve and speed test analysis, find and correct critical design flaws has led to an expansion of the capability to a Naval enterprise wide effort, not just a Navy Ship effort.

In FY2016, ATRT was expanded to include the entire Naval enterprise and renamed Automated Test and Analysis (ATA). ATA expands the automated test methods currently in use such as Automated Test and Re-Test, adds new methods of testing and use of automated test technologies, and standardizes automated test practices, methods and tools. In addition, funding supports the development of enterprise level strategies to apply ATA technology to the software-intensive acquisition programs.

The FY2015 ATRT project was funded on Program Element 0603597N under Project Unit 9B88: "Automated Test and Re-Test". Starting in FY16 and through the out-years, the project is renamed "Automated Test and Analysis" on Program Element 0603597N under Project Unit 9B88.

B. Program Change Summary (\$ in Millions)	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Previous President's Budget	8.115	8.000	8.000	-	8.000
Current President's Budget	7.816	23.000	0.000	-	0.000
Total Adjustments	-0.299	15.000	-8.000	-	-8.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	15.000			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.299	0.000			
• Program Adjustments	0.000	0.000	-8.000	-	-8.000
• Rate/Misc Adjustments	0.000	0.000	0.000	-	0.000

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Appropriation/Budget Activity
1319: *Research, Development, Test & Evaluation, Navy / BA 4: Advanced Component Development & Prototypes (ACD&P)*

R-1 Program Element (Number/Name)
PE 0603597N / (U)*Automated Test and Analysis*

Change Summary Explanation

FY16: Per Congressional decision, an additional \$15M is added to FY16's budget for ATA to expand its use to as many programs as possible in order to maximize the return on investment.

FY17: As a result of the FY16 Congressional action, FY17's budget is reduced to account for carryover.

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Exhibit R-2A, RDT&E Project Justification: PB 2017 Navy										Date: February 2016		
Appropriation/Budget Activity 1319 / 4					R-1 Program Element (Number/Name) PE 0603597N / (U)Automated Test and Analysis				Project (Number/Name) 9B88 / Automated Test and Analysis			
COST (\$ in Millions)	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
9B88: Automated Test and Analysis	9.639	7.816	23.000	0.000	-	0.000	8.000	8.000	8.000	8.160	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Prior to FY2016, the Navy developed a capability called Automated Test and Retest (ATRT). ATRT supported reproducible and quantitative testing and analysis of Naval Ship Combat Systems Integration, AEGIS Combat System Advanced Capability Build (ACB) 12, Antisubmarine Warfare Integrated Common Processor/Acoustic Rapid Commercial Off The Shelf Insertion (ARCI), and Littoral Combat Ship (LCS) Mission Module development. Funding also supported expansion of ATRT to other NAVSEA-affiliated programs. The success of ATRT in reducing the time to complete critical testing, improve and speed test analysis, find and correct critical design flaws has led to an expansion of the capability to a Naval enterprise wide effort, not just a Navy Ship effort.

In FY2016, ATRT was expanded to include the entire Naval enterprise and renamed Automated Test and Analysis (ATA). ATA expands the automated test methods currently in use such as Automated Test and Re-Test, adds new methods of testing and use of automated test technologies, and standardizes automated test practices, methods and tools. In addition, funding supports the development of enterprise level strategies to apply ATA technology to the software-intensive acquisition programs.

The FY2015 ATRT project was funded on Program Element 0603597N under Project Unit 9B88: "Automated Test and Re-Test". Starting in FY16 and through the out-years, the project is renamed "Automated Test and Analysis" on Program Element 0603597N under Project Unit 9B88.

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

	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Title: Automated Test and Re-Test	7.816	0.000	0.000	0.000	0.000
Articles:	-	-	-	-	-
FY 2015 Accomplishments:					
The Automated Test and Retest (ATRT) program has continued with nine ATRT efforts increasing the use of automated testing in software intensive program execution. The NAVSEA FY15 investments in automated testing supported the analysis of 7 developmental tests/operational tests or Combat System Ships Qualification Trials (CSSQT) At-Sea-Tests, 3 installation tests, and 11 development, integration or certification test events. The ATRT program continues to advocate the maturation/ development of standards, specifications, and contract language that would improve test tool commonality and reuse across the Navy testing domains. NAVSEA is investigating the applicability of ATRT to Warfare System Certification Testing.					

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Exhibit R-2A, RDT&E Project Justification: PB 2017 Navy		Date: February 2016
Appropriation/Budget Activity 1319 / 4	R-1 Program Element (Number/Name) PE 0603597N / (U)Automated Test and Analysis	Project (Number/Name) 9B88 / Automated Test and Analysis

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
<p>Congressional plus up, this program is poised to improve Interoperability, SSBN Modernization, Carrier and LCS testing advances, Integration, system validation and tech refresh capabilities.</p> <p>ATA will continue with another Naval enterprise-wide data call soliciting automated test tool proposals that will spring-board from these efforts and can significantly reduce the time to complete critical testing, improve and speed test analysis, and identify and correct critical design flaws in Navy acquisition programs for further study in FY 2017. These automated testing projects will reduce errors, increase capabilities and enhance reporting timelines for critical Navy program initiatives.</p> <p>FY 2017 Base Plans: N/A</p> <p>FY 2017 OCO Plans: N/A</p>					
Accomplishments/Planned Programs Subtotals	7.816	23.000	0.000	0.000	0.000

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

Remarks

D. Acquisition Strategy
The ATA program will solicit automated test tool proposals from all qualified sources that show the potential to significantly reduce the time to complete critical testing, improve and speed test analysis, and find and correct critical design flaws in Naval acquisition programs. All valid submitted proposals will be evaluated by an Executive Steering Group (ESG) composed of Senior Executive level representatives from NAVSEA, NAVAIR, SPAWAR and US Marine Corps Systems Commands. Proposals selected by the ESG will be funded for one year, in which time they must demonstrate their ability to significantly reduce the time to complete critical testing, improve and speed test analysis, or find and correct critical design flaws in Navy acquisition programs. Successful funded proposals will be advertised and made available across the Naval enterprise for acquisition program consideration, funding, and use.

E. Performance Metrics
Progress towards meeting the objectives of the ATA efforts will be monitored via the following:
 - Quarterly ATA Executive Steering Group Meetings
 - Quarterly Program Reviews

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2017 Navy												Date: February 2016			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)							
1319 / 4				PE 0603597N / (U)Automated Test and Analysis				9B88 / Automated Test and Analysis							
Product Development (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 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
Automated Test & Retest	C/CPFF	Innovative Defense Technologies (IDT) : Ballston, VA	8.576	7.263	Jan 2015	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Automated Test & Retest	WR	Various NSWCs : Not Specified	0.613	0.352	Dec 2014	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Automated Test & Analysis	C/CPFF	Innovative Defense Technologies (IDT) : Ballston, VA	0.000	0.000		18.765	Dec 2015	0.000		-		0.000	0.000	18.765	-
Automated Test & Analysis	WR	SPAWAR Pacific : San Diego, CA	0.000	0.000		2.214	Dec 2015	0.000		-		0.000	0.000	2.214	-
Automated Test & Analysis	C/CPFF	Marine Corp : Not Specified	0.000	0.000		0.913	Dec 2015	0.000		-		0.000	0.000	0.913	-
Automated Test & Analysis	C/CPFF	Various Contractors : Not Specified	0.000	0.000		0.542	Mar 2016	0.000		-		0.000	0.000	0.542	-
Automated Test & Analysis	WR	Various NSWCs : Not Specified	0.000	0.000		0.000		0.000		-		0.000	0.000	0.000	-
Subtotal			9.189	7.615		22.434		0.000		-		0.000	-	-	-
Support (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 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
Automated Test & Analysis	C/CPFF	Gryphon Technologies : Washington, DC	0.263	0.174	May 2015	0.566	Dec 2015	0.000		-		0.000	Continuing	Continuing	Continuing
Automated Test & Analysis	C/CPFF	Alion Sciences : McLean, VA	0.187	0.027	Apr 2015	0.000		0.000		-		0.000	0.000	0.214	-
Subtotal			0.450	0.201		0.566		0.000		-		0.000	-	-	-

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2017 Navy							Date: February 2016					
Appropriation/Budget Activity 1319 / 4				R-1 Program Element (Number/Name) PE 0603597N / (U)Automated Test and Analysis			Project (Number/Name) 9B88 / Automated Test and Analysis					
	Prior Years	FY 2015		FY 2016		FY 2017 Base	FY 2017 OCO		FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	9.639	7.816		23.000		0.000	-		0.000	-	-	-

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2017 Navy		Date: February 2016
Appropriation/Budget Activity 1319 / 4	R-1 Program Element (Number/Name) PE 0603597N / (U)Automated Test and Analysis	Project (Number/Name) 9B88 / Automated Test and Analysis

FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021			
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

Proj 9B88	
Automated Test and Retest (ATRT): FY15 Project 1: Virginia Class Sub Information Assurance	██████████
Automated Test and Retest (ATRT): FY15 Project 2: CVN-68 Information Assurance	██████████
Automated Test and Retest (ATRT): FY15 Project 3: LCS Surface Warfare (SUW) Mission Planning (MP)	██████████
Automated Test and Retest (ATRT): FY15 Project 4: Electronic Chart Display and Information System - Navy (ECDIS-N)	██████████
Automated Test and Retest (ATRT): FY15 Project 5: Advanced Message Queuing Protocol (AMQP)	██████████
Automated Test and Retest (ATRT): FY15 Project 6: Real Time Use Case (RTUC)	██████████
Automated Test and Retest (ATRT): FY15 Project 7: Computer Program Change Request (CPCR)	██████████
Automated Test and Retest (ATRT): FY15 Project 8: Interoperability	██████████
Automated Test and Retest (ATRT): FY15 Project 9: Enterprise Solution	██████████
Automated Test and Analysis (ATA): FY16 Project 1: Link-16 Non-C2	██████████
Automated Test and Analysis (ATA): FY16 Project 2: Undersea Tracking Ranges	██████████

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Exhibit R-4, RDT&E Schedule Profile: PB 2017 Navy **Date:** February 2016

Appropriation/Budget Activity 1319 / 4	R-1 Program Element (Number/Name) PE 0603597N / (U)Automated Test and Analysis	Project (Number/Name) 9B88 / Automated Test and Analysis
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	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021							
	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				
Automated Test and Analysis (ATA): FY16 Project 3: Strike Force Interoperability																																
Automated Test and Analysis (ATA): FY16 Project 4: Service Oriented Architecture (SOA)																																
Automated Test and Analysis (ATA): FY16 Project 5: Tactical Group Radio IP Network																																
Automated Test and Analysis (ATA): FY16 Project 6: Digital Battlespace Environment Simulator (DBES)																																
Automated Test and Analysis (ATA): FY16 Project 7: Global Combat Support Systems - Marine Corps (GCCS-MC)																																
Automated Test and Analysis (ATA): FY16 Project 8: Common Control System (CCS)																																
Automated Test and Analysis (ATA): FY16 Project 9: Joint Mission Planning																																
Automated Test and Analysis (ATA): FY16 Project 10: Electronic Chart Display and Information System - Navy (ECDIS-N)																																
Automated Test and Analysis (ATA): Annual Startup Projects for ATA Implementation																																
Automated Test and Analysis (ATA): Development of guidance for contract and requirements language pertaining to ATA (Metrics)																																
Automated Test and Analysis (ATA): Conduct of outreach efforts to Naval programs																																

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Exhibit R-4, RDT&E Schedule Profile: PB 2017 Navy **Date:** February 2016

Appropriation/Budget Activity 1319 / 4	R-1 Program Element (Number/Name) PE 0603597N / (U)Automated Test and Analysis	Project (Number/Name) 9B88 / Automated Test and Analysis
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	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021			
	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
Automated Test and Analysis (ATA): ATA Portal/Navy Toolkit for Body of Knowledge																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2017 Navy		Date: February 2016
Appropriation/Budget Activity 1319 / 4	R-1 Program Element (Number/Name) PE 0603597N / (U)Automated Test and Analysis	Project (Number/Name) 9B88 / Automated Test and Analysis

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Proj 9B88				
Automated Test and Retest (ATRT): FY15 Project 1: Virginia Class Sub Information Assurance	1	2015	4	2015
Automated Test and Retest (ATRT): FY15 Project 2: CVN-68 Information Assurance	1	2015	4	2015
Automated Test and Retest (ATRT): FY15 Project 3: LCS Surface Warfare (SUW) Mission Planning (MP)	1	2015	4	2015
Automated Test and Retest (ATRT): FY15 Project 4: Electronic Chart Display and Information System - Navy (ECDIS-N)	1	2015	4	2015
Automated Test and Retest (ATRT): FY15 Project 5: Advanced Message Queuing Protocol (AMQP)	1	2015	4	2015
Automated Test and Retest (ATRT): FY15 Project 6: Real Time Use Case (RTUC)	1	2015	4	2015
Automated Test and Retest (ATRT): FY15 Project 7: Computer Program Change Request (CPCR)	1	2015	4	2015
Automated Test and Retest (ATRT): FY15 Project 8: Interoperability	1	2015	4	2015
Automated Test and Retest (ATRT): FY15 Project 9: Enterprise Solution	1	2015	4	2015
Automated Test and Analysis (ATA): FY16 Project 1: Link-16 Non-C2	1	2016	4	2016
Automated Test and Analysis (ATA): FY16 Project 2: Undersea Tracking Ranges	1	2016	4	2016
Automated Test and Analysis (ATA): FY16 Project 3: Strike Force Interoperability	1	2016	4	2016
Automated Test and Analysis (ATA): FY16 Project 4: Service Oriented Architecture (SOA)	1	2016	4	2016
Automated Test and Analysis (ATA): FY16 Project 5: Tactical Group Radio IP Network	1	2016	4	2016
Automated Test and Analysis (ATA): FY16 Project 6: Digital Battlespace Environment Simulator (DBES)	1	2016	4	2016

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Exhibit R-4A, RDT&E Schedule Details: PB 2017 Navy **Date:** February 2016

Appropriation/Budget Activity 1319 / 4	R-1 Program Element (Number/Name) PE 0603597N / (U)Automated Test and Analysis	Project (Number/Name) 9B88 / Automated Test and Analysis
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Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Automated Test and Analysis (ATA): FY16 Project 7: Global Combat Support Systems - Marine Corps (GCCS-MC)	1	2016	4	2016
Automated Test and Analysis (ATA): FY16 Project 8: Common Control System (CCS)	1	2016	4	2016
Automated Test and Analysis (ATA): FY16 Project 9: Joint Mission Planning	1	2016	4	2016
Automated Test and Analysis (ATA): FY16 Project 10: Electronic Chart Display and Information System - Navy (ECDIS-N)	1	2016	4	2016
Automated Test and Analysis (ATA): Annual Startup Projects for ATA Implementation	1	2016	4	2021
Automated Test and Analysis (ATA): Development of guidance for contract and requirements language pertaining to ATA (Metrics)	1	2016	4	2021
Automated Test and Analysis (ATA): Conduct of outreach efforts to Naval programs	1	2016	4	2021
Automated Test and Analysis (ATA): ATA Portal/Navy Toolkit for Body of Knowledge	1	2016	4	2021