Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Navy											Date: May 2017	
Appropriation/Budget Activity 1319: *Research, Development, Test & Evaluation, Navy I* BA 4: *Advanced Component Development & Prototypes (ACD&P)*					R-1 Program Element (Number/Name) PE 0603597N *I (U)Automated Test and Analysis*							
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	17.455	22.188	0.000	8.052	-	8.052	8.037	8.025	8.174	8.332	Continuing	Continuing
9B88: *Automated Test and Analysis*	17.455	22.188	0.000	8.052	-	8.052	8.037	8.025	8.174	8.332	Continuing	Continuing

A. Mission Description and Budget Item Justification

Prior to FY 2016, 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 FY 2016, 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 FY 2015 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 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	23.000	0.000	8.000	-	8.000
Current President's Budget	22.188	0.000	8.052	-	8.052
Total Adjustments	-0.812	0.000	0.052	-	0.052
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.812	0.000			
• Rate/Misc Adjustments	0.000	0.000	0.052	-	0.052

Change Summary Explanation

FY16: Funding reduced by $812K to support the Small Business Innovative Research (SBIR) program.

Exhibit R-2A, RDT&E Project Justification: FY 2018 Navy			Date: May 2017
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 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
9B88: *Automated Test and Analysis*	17.455	22.188	0.000	8.052	-	8.052	8.037	8.025	8.174	8.332	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Prior to FY 2016, 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 FY 2016, 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 FY 2015 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 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Title: Automated Test and Analysis	22.188	0.000	8.052	0.000	8.052
Articles:	-	-	-	-	-
FY 2016 Accomplishments: As of December 2015 twenty six proposals were selected based on their ability to best describe technical merit for ten criteria to include extensibility, enhanced coverage, improved fidelity and reduction in Total Ownership Cost by the Executive Steering Group, which includes Senior Executive level representatives from Naval Sea, Naval Air, Space and Naval Warfare, and US Marine Corps Systems Commands. Initially Executed Projects: With the initial budget of $8M, ATA was able to provide support to ten projects - Link-16 Non-C2 - Undersea Tracking Ranges - Strike Force Interoperability - Service Oriented Architecture (SOA)					

Exhibit R-2A, RDT&E Project Justification: FY 2018 Navy		Date: May 2017
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 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
- Tactical Ground Radio IP Network - Digital Battlespace Environment Simulator (DBES) - Global Combat Support Systems - Marine Corps (GCCS-MC) - Common Control System (CCS) - Joint Mission Planning System (JMPS) - Electronic Chart Display and Information System - Navy (ECDIS-N) Additional Projects: With the $15M received in a December Congressional Plus up, ATA was able to provide support to an additional sixteen projects - Joint Ultra-High Frequency MILSATCOM Network Integrated Control System (JMINI CS) - Test Manager Enhancements - Rapid Control and Automation Tool (RCAT) - Dark Ether Enhancement - Automated SONAR Operation and Analysis Reporting - CVN-68 SCS Cybersecurity - Enterprise Solution Enhancements - Tomahawk Mission Planning Center (TMPC) - SPY-6 Software Development (AMDR System T&E) - Ship Self Defense System (SSDS) - Ballistic Missile Submarine (SSBN) Modernization - LCS SUW MP - Continuous Integration - LCS Mission Modules CSA - Scientific Test and Analysis Techniques for ATA - (SQQ-89) Automated Combat SoS Integration The ATA Program continued with another Naval enterprise-wide data call soliciting automated test tool proposals that will spring-board from some of 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					

Exhibit R-2A, RDT&E Project Justification: FY 2018 Navy		Date: May 2017
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 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
further study in FY 2017. These automated testing projects will reduce errors, increase capabilities and enhance reporting timelines for critical Navy program initiatives. ***FY 2017 Plans:*** N/A ***FY 2018 Base Plans:*** Continue to improve on the automated testing and analysis investments to date. Reevaluate selected ATA FY 2017 proposals for potential suitability in FY 2018. FY 2018 plans will also build upon the results and lessons learned from the FY 2016 and FY 2017 selection process for improved ATA program planning, selection, execution and analysis with the ATA ESG. The Navy intends to continue improvements in the quality of end products, reducing the time to plan, evaluate, analyze and/or report testing requirements, identify cost savings and determine the reduction in total ownership costs for each ATA project. The Navy will also determine enterprise solutions that significantly reduce test and evaluation man-hours, positively impact fleet training, and improve test plans and procedures. The Navy will continue: - Assessing undersea warfare capabilities or fleet modernization and future Navy testing competencies - Evaluating best practices and research platform network resiliency and system function validation - Determining common elements through ATA analysis - Identify synergies in development, implementation and training across multiple SYSCOMs - Augmenting both surface and air Mission Planning for requirements traceability. Specific topics include but are not limited to: - Continuing advanced Combat System development/enhancements (SSDS and AEGIS) - Testing of shipboard navigation or mechanical systems and tactical data links analysis (Link-16) - Integrating test and analyses among various Strike Force Interoperability platforms - Implementing test planning/manager improvements					

Exhibit R-2A, RDT&E Project Justification: FY 2018 Navy		Date: May 2017
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 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
The Navy will conduct another Naval enterprise-wide data call soliciting automated test tool proposals that can significantly reduce the time to complete critical testing, improve and speed test analysis, and identify and correct critical design flaws in testing of Naval acquisition programs for further study in FY 2019. ***FY 2018 OCO Plans:*** N/A					
Accomplishments/Planned Programs Subtotals	22.188	0.000	8.052	0.000	8.052

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

The ATA program solicits 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 testing of 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 testing of Naval 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

FY 2016 Program Management was directed to assess ATA projects for:
- Technical improvements/quality of the end-product,
- Use of automation to optimize resource efficiencies for test planning, execution, analysis and reporting
- Cost savings to the program
- Length of time to see the return on investment

Progress towards meeting these objectives of ATA efforts is being monitored via the following:
- Monthly Project Manager technical reports, expenditures and risk assessments
- Quarterly Program Reviews
- Bi-Annual ATA Executive Steering Group Meetings