Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Navy

R-1 Program Element (Number/Name)

Appropriation/Budget Activity

1319: Research, Development, Test & Evaluation, Navy I BA 4: Advanced Component Development & Prototypes (ACD&P)

PE 0603597N I (U)Automated Test and Re-Test (ATRT)

Date: February 2015

COST (\$ in Millions)	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
Total Program Element	0.000	9.639	8.115	8.000	-	8.000	8.000	8.000	8.000	8.000	Continuing	Continuing
9B88: Automated Test and Re- Test	0.000	9.639	8.115	8.000	-	8.000	8.000	8.000	8.000	8.000	Continuing	Continuing

## A. Mission Description and Budget Item Justification

From FY2015 and prior, the Navy, through Automated Test and Re-Test (ATRT) is developing an automated test/analysis capability, which is applicable at phases within system development and integration which provides reproducible and quantitative evaluation of system performance with reduced levels of effort and schedule in order to support one of the Navy's priority initiatives of reduction of Total Ownership Cost (TOC). Funding will provide additional work towards ongoing testing and analysis efforts within the Combat Systems Integration, AEGIS Combat System Advanced Capability Build (ACB) 12, Antisubmarine Warfare Integrated Common Processor/ Acoustic Rapid Commercial Off The Shelf (COTS) Insertion, the Littoral Combat Ship (LCS) Mission Module development and other major acquisition programs. In addition, funding will support the development of guidance to facilitate NAVSEA-affiliated programs' adoption of this TOC-reducing discipline and technology.

Starting in FY2016 and through the out-years, the project has been renamed Automated Test and Analysis (ATA). ATA will extend the use of automated test methods currently in use such as Automated Test and Re-Test, research new methods of testing and use of automated test technologies, and standardize test practices, methods and tools across the Naval Enterprise. In addition, funding will support the development of enterprise level strategies to apply ATA to the software-intensive acquisition programs, establish standards, specifications, and guidance, as well as use business case analysis to select future pilot projects and applications.

The ATRT project is funded on Program Element 0603597N under Project Unit 9B88: "Automated Test and Re-Test". Starting in FY16 and through the out-years, the project will be renamed "Automated Test and Analysis" on Program Element 0603597N under Project Unit 9B88 to be consistent with the program's enterprise approach to develop automated test tools.

B. Program Change Summary (\$ in Millions)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Previous President's Budget	10.005	8.115	8.236	-	8.236
Current President's Budget	9.639	8.115	8.000	-	8.000
Total Adjustments	-0.366	-	-0.236	-	-0.236
<ul> <li>Congressional General Reductions</li> </ul>	-	-			
<ul> <li>Congressional Directed Reductions</li> </ul>	-	-			
<ul> <li>Congressional Rescissions</li> </ul>	-	-			
<ul> <li>Congressional Adds</li> </ul>	-	-			
<ul> <li>Congressional Directed Transfers</li> </ul>	-	-			
<ul> <li>Reprogrammings</li> </ul>	-	-			
SBIR/STTR Transfer	-0.366	-			
Program Adjustments	-	-	-0.236	-	-0.236

PE 0603597N: (U)Automated Test and Re-Test (ATRT) Navy

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xhibit R-2, RDT&E Budget Item Justification: PB 2016 Navy		Date: February 2015
Appropriation/Budget Activity 319: 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 Re-Test (ATRT)	
Change Summary Explanation The FY 2016 funding request was reduced by \$.236 million to account	nt for the availability of prior years execution balances.	

PE 0603597N: *(U)Automated Test and Re-Test (ATRT)*Navy

Exhibit R-2A, RDT&E Project Ju	stification	: PB 2016 N	lavy							Date: Febr	uary 2015			
Appropriation/Budget Activity 1319 / 4			R-1 Program Element (Number/Name) PE 0603597N / (U)Automated Test and Re- Test (ATRT) Project (Number/Name) 9B88 / Automa							mber/Name) mated Test and Re-Test				
COST (\$ in Millions)	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost		
9B88: Automated Test and Re- Test	-	9.639	8.115	8.000	-	8.000	8.000	8.000	8.000	8.000	Continuing	Continuing		
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-				

### A. Mission Description and Budget Item Justification

From FY2015 and prior, the Navy, through Automated Test and Re-Test (ATRT) is developing an automated test/analysis capability, which is applicable at phases within system development and integration which provides reproducible and quantitative evaluation of system performance with reduced levels of effort and schedule in order to support one of the Navy's priority initiatives of reduction of Total Ownership Cost (TOC). Funding will provide additional work towards ongoing testing and analysis efforts within the Combat Systems Integration, AEGIS Combat System Advanced Capability Build (ACB) 12, Antisubmarine Warfare Integrated Common Processor/ Acoustic Rapid Commercial Off The Shelf (COTS) Insertion, the Littoral Combat Ship (LCS) Mission Module development and other major acquisition programs. In addition, funding will support the development of guidance to facilitate NAVSEA-affiliated programs' adoption of this TOC-reducing discipline and technology.

Starting in FY2016 and through the out-years the project moves from N96 to N84 and has been renamed Automated Test and Analysis (ATA). ATA will extend the use of automated test methods currently in use such as Automated Test and Re-Test, research new methods of testing and use of automated test technologies, and standardize test practices, methods and tools across the Naval Enterprise. In addition, funding will support the development of enterprise level strategies to apply ATA to the software-intensive acquisition programs, establish standards, specifications, and guidance, as well as use business case analysis to select future pilot projects and applications.

The ATRT project is funded on Program Element 0603597N under Project Unit 9B88: "Automated Test and Re-Test". Starting in FY16 and through the out-years, the project will be renamed "Automated Test and Analysis" on Program Element 0603597N under Project Unit 9B88 to be consistent with the program's enterprise approach to develop automated test tools.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)			FY 2016	FY 2016	FY 2016
	FY 2014	FY 2015	Base	oco	Total
Title: Automated Test and Re-Test	9.639	8.115	8.000	-	8.000
Articles:	-	-	-	-	-
FY 2014 Accomplishments:					
In FY14, the ATRT program successfully completed eight (8) FY13 ATRT projects to be employed on Navy					
Surface, Undersea, Littoral, and Mine Warfare Combat System Programs. These Programs are strategically					
transitioning developed ATRT capabilities into test processes for further use. The ATRT program awarded nine					
(9) new projects via the ATRT Executive Selection Panel (ESP) to NAVSEA-affiliated PEOs. Projects were					

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Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy				Date: Febr	uary 2015		
Appropriation/Budget Activity 1319 / 4	,	R-1 Program Element (Number/Name) PE 0603597N I (U)Automated Test and Re- Test (ATRT)					
B. Accomplishments/Planned Programs (\$ in Millions, Article Quan	ntities in Each)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	
evaluated and prioritized by an ATRT Screening Panel represented by a made recommendations to the Executive Committee for final selections							
The program has continued to mature training modules and share best be further developed in FY15 to the Navy automated testing community Congressional taskers for both the Chief of Naval Operations and the S	. The Program successfully completed						
FY 2015 Plans: The ATRT program will continue a number of ATRT efforts with the interautomated testing in software intensive program execution. Also, the AT the maturation/development of standards, specifications, and contract la commonality and reuse across the Navy testing domains. NAVSEA will Warfare System Certification Testing.	FRT program will continue to advocate anguage that would improve test tool						
FY 2016 Base Plans: The ATA program will continue to explore enterprise-level pilot projects part of acquisition program development across the Navy. As part of the institute a governance structure that will establish an overarching enterpracticipation and ensure the use of ATA across all SYSCOMs (NAVSEA automated test technologies. Also, the ATA program will continue to adstandards, specifications, and contract language that would improve test Navy testing domains.	is enterprise approach, the Navy will prise perspective, broaden stakeholder A, NAVAIR, SPAWAR) that can use these dvocate the maturation/development of						
FY 2016 OCO Plans: N/A							

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

N/A

**Remarks** 

# D. Acquisition Strategy

The Program Strategy for the ATA program includes the following:

PE 0603597N: (U)Automated Test and Re-Test (ATRT) Navy

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9.639

8.115

8.000

8.000

**Accomplishments/Planned Programs Subtotals** 

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy			Date: February 2015	
Appropriation/Budget Activity	R-1 Program Element (Number/Name)	Project (N	umber/Name)	
1319 / 4	PE 0603597N I (U)Automated Test and Re-	9B88 / Aut	omated Test and Re-Test	
	Test (ATRT)			

- Investigation of applicable similarities to industry standards, specifications, and processes that are relevant to ATA program to recognize best practices and leverage opportunities
- Development of standards and specifications for ATA tools/processes
- Funding and execution of ATA startup projects within acquisition programs per submission of proposals and Business Case Analyses (BCA)
- Development of training and outreach efforts to promote awareness of automated test technologies and tools/processes
- Setup and maintenance of an ATA portal for the collection and dissemination of body of knowledge

### **E. Performance Metrics**

Progress towards meeting the objectives of the ATA efforts will be monitored via the following:

- Progress Briefs at Quarterly ATA Executive Steering Group Meetings
- Bi- Monthly ATA Program Reviews
- Return-on-Investment Metrics based on work hours for test process execution before and after automation
- Return-on-Investment Metrics based on work hours for test process execution before and after automation

PE 0603597N: (U)Automated Test and Re-Test (ATRT)

Exhibit R-3, RDT&E	Project C	ost Analysis: PB 2	2016 Navy	y								Date:	February	2015	
Appropriation/Budg 1319 / 4	et Activity	1					ogram Ele 3597N / ( TRT)					( <b>Numbe</b> i Automate		d Re-Tes	<u>!</u>
Product Developme	ent (\$ in M	illions)		FY 2	2014	FY 2	2015		2016 ise	FY 2		FY 2016 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	Total Cost	Target Value of Contract
Auto Test & Retest	C/CPFF	Innovative Defense Technologies (IDT) : Ballston, VA	0.000	8.576	Mar 2014	7.575	Jan 2015	7.166	Jan 2016	-		7.166	Continuing	Continuing	Continuing
Auto Test & Retest	WR	Various NSWCs : Not Specified	0.000	0.613	Apr 2014	0.389	Jan 2015	0.578	Jan 2016	-		0.578	Continuing	Continuing	Continuing
		Subtotal	0.000	9.189		7.964		7.744		-		7.744	-	-	-
Support (\$ in Million	ns)			FY 2	2014	FY 2	2015		2016 ise	FY 2		FY 2016 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	Total Cost	Target Value of Contract
Auto Test & Retest	C/BA	Gryphon Technologies : Washington, DC	0.000	0.263	Jul 2014	0.151	Jan 2015	0.256	Jan 2016	-		0.256	Continuing	Continuing	Continuing
Auto Test & Retest	C/BA	Alion Sciences : McLean, VA	0.000	0.187	Jul 2014	-		-		-		-	-	0.187	-
		Subtotal	0.000	0.450		0.151		0.256		-		0.256	-	-	-
		Project Cont T ( )	Prior Years		2014		2015	Ва	2016 ise	FY 2		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
		Project Cost Totals	0.000	9.639		8.115		8.000		-		8.000	-	-	-

Remarks

PE 0603597N: *(U)Automated Test and Re-Test (ATRT)*Navy

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hibit R-4, RDT&E Schedule Profile: PB 2016 Noropriation/Budget Activity 19 / 4	lavy	R-1 Program Element (Number/Name) PE 0603597N / (U)Automated Test and Re- Test (ATRT)  Date: Februa Project (Number/Name) 9B88 / Automated Test and Re-											ame)	)		est					
	1 2	2014	4 1	FY 20		4 1	FY 2	016	1	FY 2	2017	. 1	 2018 3		1	FY 2	019 3		1	FY 20	20 3 4
Proj 9B88	1 2	3	<del></del>   '		<b>3</b>	<del></del>		3   4	'		3   4	'   '	 <b>J</b>	-	<u> </u>		3	-	<u> </u>		<b>5</b>   -
Automated Test and Analysis (ATA): Annual Startup Projects for ATRT/ATA Implementation																					
Automated Test and Analysis (ATA): Participation in Existing Government and Industrial Standards Boards																					
Automated Test and Analysis (ATA): Evaluation of Business Case Analyses (BCA) of potential ATRT/ATA investments																					
Automated Test and Analysis (ATA): Development of training and lessons learned for ATRT/ATA																					
Automated Test and Analysis (ATA): Development of guidance for contract and requirements language pertaining to ATRT/ATA																					
Automated Test and Analysis (ATA): Conduct of outreach efforts to NAVSEA programs and industry																					
Automated Test and Analysis (ATA): ATRT/ATA Portal/Navy Toolkit for Body of Knowledge																					

Exhibit R-4A, RDT&E Schedule Details: PB 2016 Navy			Date: February 2015
1	,	, ,	umber/Name) comated Test and Re-Test

# Schedule Details

	St	art	E	nd
Events by Sub Project	Quarter	Year	Quarter	Year
Proj 9B88				
Automated Test and Analysis (ATA): Annual Startup Projects for ATRT/ATA Implementation	1	2014	4	2020
Automated Test and Analysis (ATA): Participation in Existing Government and Industrial Standards Boards	1	2014	4	2020
Automated Test and Analysis (ATA): Evaluation of Business Case Analyses (BCA) of potential ATRT/ATA investments	1	2014	4	2020
Automated Test and Analysis (ATA): Development of training and lessons learned for ATRT/ATA	1	2014	4	2020
Automated Test and Analysis (ATA): Development of guidance for contract and requirements language pertaining to ATRT/ATA	1	2014	4	2020
Automated Test and Analysis (ATA): Conduct of outreach efforts to NAVSEA programs and industry	1	2014	4	2020
Automated Test and Analysis (ATA): ATRT/ATA Portal/Navy Toolkit for Body of Knowledge	1	2014	4	2020