Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Navy											DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*					R-1 ITEM NOMENCLATURE PE 0204571N: *Consolidated Trng Sys Dev*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	240.776	38.055	20.229	45.124	-	45.124	45.763	47.929	24.786	20.602	Continuing	Continuing
0604: *Training Range & Instr Dev*	128.747	6.547	3.482	3.460	-	3.460	3.520	3.566	3.646	3.704	Continuing	Continuing
1427: *Surface Tactical Team Trainer (STTT)*	36.215	23.376	12.596	11.000	-	11.000	16.799	13.440	12.006	10.577	Continuing	Continuing
2124: *Air Warfare Training*	25.968	1.821	1.640	1.595	-	1.595	1.620	1.639	1.684	1.712	Continuing	Continuing
3093: *TACTS/LATR Replacement*	49.846	6.311	2.511	19.532	-	19.532	16.900	21.570	4.958	4.609	Continuing	Continuing
3356: *High Fidelity Surface Trainers*	0.000	0.000	0.000	9.537	-	9.537	6.924	7.714	2.492	0.000	0.000	26.667
MDAP/MAIS Code(s): 223												

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

A. MISSION DESCRIPTION:

0604 - The Training Range and Instrumentation Development Systems (TRIDS) program provides development of range systems including Large Area Tracking Range (LATR), Test & Training Enabling Architecture (TENA) interoperability and Tactical Training Ranges (TTR) infrastructure improvements.

1427 - Surface Tactical Team Trainer (STTT) develops modifications during sustainment of Battle Force Tactical Training (BFTT) system. This is required to maintain capabilities and interfaces to provide realistic combat system coordinated team, unit and Fleet Synthetic Training (FST) collective Group/Force level training events. In addition, BFTT supports the embedded trainer "family of systems" approach for the development of a Total Ship Training Capability (TSTC). Specific improvements include improved integration with the Navy Continuous Training Environment (NCTE) and development of a High Level Architecture (HLA) capable, integrated shipboard network to meet increasing Commander Naval Surface Forces (CNSF) and United States Fleet Forces Command (USFFC) FST requirements. The need for transforming training is documented within the DoD Training Transformation Plan, the Chief of Naval Operations Fleet Response Plan and Commander United States Fleet Forces Command Fleet Readiness Training Plan.

2124 - The Air Warfare Training Development (AWTD) program provides advanced component technology development, transition and risk mitigation for aviation training systems, including mission preview/rehearsal simulation technologies, Live-Virtual Constructive (LVC) and the Aviation Training Technology Integration Facility

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(ATTIF). The ATTIF provides for incremental development, prototype evaluation, technology readiness level assessment and final fleet Test and Evaluation prior to technology transition.

3093 - The Tactical Combat Training System (TCTS) will provide the Navy a replacement for the Tactical Aircrew Combat Training System (TACTS) and LATR systems. TCTS will provide fleet deployable instrumentation for at sea training and tactics development. By providing a rangeless capability, the system will greatly increase the area where live instrumented training can be conducted. The program incorporates evolutionary development (incremental) towards an encrypted system capable of supporting a broad spectrum of naval platforms through weapons simulations, participant weapons system stimulation and open architecture.

3356- Funds FCA, high fidelity Aegis Integrated Air and Missile Defense (IAMD) individual and team trainers for all Advanced Capability Build (ACB) and below Aegis baselines.

B. Program Change Summary ($ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	42.244	20.229	29.813	-	29.813
Current President's Budget	38.055	20.229	45.124	-	45.124
Total Adjustments	-4.189	0.000	15.311	-	15.311
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-3.132	0.000			
• SBIR/STTR Transfer	-1.057	0.000			
• Program Adjustments	0.000	0.000	13.376	-	13.376
• Rate/Misc Adjustments	0.000	0.000	1.935	-	1.935

Change Summary Explanation

0604: R-4/R-4A reflects the following program changes: LATR-OPSEC posture improvements Systems Development/Production Milestone ending 4th Qtr FY2014 vice 4th Qtr FY2013 due to added requirement of establishing a LATR baseline following a LATR technology refresh and required Acquisition documentation. LATR-Ship Rotary Platform Tracking set beginning 3rd Qtr FY2013 vice 1st Qtr FY2014 due to anticipated increase in time required for capability development. LATR EW interface development completed 4th Qtr FY2012 vice 1st Qtr FY2015 due to added resources in FY2012 to complete effort. TTR-Shipboard/Rotary Platform Tracking Set Systems Development/Production Milestone ending 4th Qtr FY2014 vice 1st Qtr FY2013 due to an extended review of requirements due to multiple end user inputs.

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Navy	DATE: April 2013
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2124: R-4/R-4A reflects the following program changes: Human/Instructional Systems Integration-DMRT-Class Debrief APAARS Systems Development ending 2nd Qtr FY2013 vice 2nd Qtr FY2012 due to an approved schedule change in the ONR Technology Transition Agreement (TTA) driven by changing fleet test dates. Human/Instructional Systems Integration-Hypoxia/Spatial Disorientation Technology (Fixed/Rotary) Systems Development/Production Milestone ending 4th Qtr FY2015 vice 4th Qtr FY2014 due to an added associated Spatial Disorientation (SD) syllabus review by the Navy.
Sensors and Environment-Comms/EW Systems Development/Production Milestone ending 4th Qtr FY2018 vice 4th Qtr FY2017 due to a planned new application of the technology to the Unmanned Combat Air Vehicle effort during FY18. Training Common Architecture (TRACE) began 4th Qtr FY2012 ending 4th Qtr 2014 to reduce trainer costs by developing a common interface solution.

3093: R-4/R-4A reflects the following program changes: As a result of delays in developing an encryption solution and corresponding budget reductions, the following program changes to occurred: TACTS/LATR Replacement-Acquisition Milestone Encryption MS B from 3th Qtr FY2012 to 3th Qtr FY2014. TACTS/LATR Replacement-Acquisition Milestone Encryption MS C from 4th Qtr FY2015 to 3th Qtr FY2017. TACTS/LATR Replacement-Production Milestone Increment 2 Encrypted Datalink Capability from 4th Qtr FY2015 to 4th Qtr FY2017.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy			DATE: April 2013
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COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
0604: *Training Range & Instr Dev*	128.747	6.547	3.482	3.460	-	3.460	3.520	3.566	3.646	3.704	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

This project develops specialized instrumentations for fleet readiness training while minimizing life cycle costs. Tasks include development of the following: Large Area Training Range (LATR) improvements and Tactical Training Range(TTR) infrastructure improvements to include: the Joint Display Subsystem (JDS), Low Activity Pre-Processor (LAPP), Radar Acquistion Display Subsystem, Electronic Warfare (EW) server, Link 16 interface, TTR shipboard rotary platform technology improvements and Radiant Mercury (RM) Cross Domain Solution (CDS).

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: LATR	2.390	2.166	2.051
Articles:	0	0	0

Description: Design, integrate and test modules to eliminate obsolete components in the LATR Pod. Design, integrate and test LATR software baseline upgrades. Design, integrate and test Participant Instrumentation Packages (PIP) modules to address obsolescence, high failure components and to improve operability and performance. Conduct and complete installation of the Ground System Rehosts. Conduct and complete security testing and assessment for LATR system certification and accreditation for Ground System Rehosts. Develop, test and integrate software and hardware modifications to system test sets. Develop, test and integrate LATR data translators. Conduct studies to identify sub-projects required through FY16. Complete ground system and PIP refresh sub-projects, in conjuction with, semi-annual system block upgrades. Conduct LATR Operational Security (OPSEC) Posture Improvements Sub-Project.

FY 2012 Accomplishments:

Developed and tested LATR ground software version 5.6.0. Continued LATR OPSEC posture improvements sub-project and complete phase II Link-16 interface. Continued LATR EW interface development.

FY 2013 Plans:

Develop and test LATR ground software version 5.7.0. Continue LATR EW interface development. Continue LATR Operational Security Posture Improvements.

FY 2014 Plans:

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy		DATE: April 2013
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Develop and test LATR ground software version 5.8.0. Continue to develop LATR ship/rotary tracking solution set. Complete LATR OPSEC posture improvements.			
Title: TENA	0.800	0.800	0.800
Articles:	0	0	0
Description: Develop and test Tactical Training Ranges (TTR) Object Model (OM) for use with the Office of the Secretary of Defense (OSD) Test & Training Enabling Architecture (TENA) Software Development Agency (SDA) TENA Middleware versions 5.0-11.0. Develop TTR TENA Gateway for use with the TTR Electronic Warfare (EW) server and Joint Display System (JDS) and Tactical Combat Training System instrumentation set. Develop TTR TENA Monitoring Tool for diagnostic use by TTR personnel and TTR System Support Activities. Develop and test TTR TENA product upgrades to be compatible with TENA SDA Middleware. Host TENA on the TTR EW server and JDS. ***FY 2012 Accomplishments:*** Developed Graphical User Interface (GUI) for TTR TENA Monitoring Tool as requested by Fleet users. Developed and tested TTR TENA 7.0 product upgrades to be compatible with evolving TENA SDA Middleware. Developed interfaces with evolving Joint TENA training events. ***FY 2013 Plans:*** Develop GUI for TTR TENA Monitoring Tool as requested by Fleet users. Develop and test TTR TENA 8.0 product upgrades to be compatible with evolving TENA SDA Middleware. Develop interfaces with evolving Joint TENA training events. ***FY 2014 Plans:*** Develop GUI for TTR TENA Monitoring Tool as requested by Fleet users. Develop and test TTR TENA 9.0 product upgrades to be compatible with evolving TENA SDA Middleware. Develop interfaces with evolving Joint TENA training events.			
Title: TTR	3.357	0.516	0.609
Articles:	0	0	0
Description: Develop and test upgrades to the JDS, Low Activity Pre-Processor (LAPP), Radar Acquisition Display Subsystem (RADS), and EW server. Develop and test upgrades to the Link-16 Interface, JDS, LAPP, RADS, and EW server. Develop and test TTR shipboard and rotary platform tracking solution set. ***FY 2012 Accomplishments:*** Developed and tested 2012.1 & 2012.2 upgrades to the JDS, LAPP, RADS, and EW server. Completed Phase I of sub-project to develop and test TTR shipboard and rotary platform tracking solution set. ***FY 2013 Plans:***			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy		DATE: April 2013
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Develop and test 2013.1 & 2013.2 upgrades to the JDS, LAPP, RADS, and EW server. Continue TTR ship/rotary platform tracking set development. ***FY 2014 Plans:*** Develop and test 2014.1 & 2014.2 upgrades to the JDS, LAPP, RADS, and EW server. Complete TTR ship/rotary platform tracking set.			
Accomplishments/Planned Programs Subtotals	6.547	3.482	3.460

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

The Training Range and Instrumentation Development (TRID) program is a non-ACAT program. The integrated program teams that develop new TRID capabilities include government and contractor engineering personnel.

E. Performance Metrics

Metric/Description:
NAWC-AD: # of Large Area Tracking Range (LATR) software product improvements and new capabilities. Successful application of system engineering processes. Design and development of improvements. Site acceptance of product improvements with no Priority 1 or 2 problem reports. Completion of 1 upgrade per year.

Tybrin Corp: # of Training Enabling Architecture software product improvements and new capabilities. Successful design, development and testing of product improvements and new capabilities. Site acceptance of product improvements with no Priority 1 or 2 problem reports.

NAWC-WD: # of Tactical Training range (TTR) upgrades per year. Successful application of system engineering processes. Design and development of improvements. Site acceptance of product improvements with no Priority 1 or 2 problem reports. Completion of 2 upgrade per year.

Tybrin Corp: # of TTR software product improvements and new capabilities. Successful design, development, and testing of product improvements and new capabilities. Site acceptance of product improvements with no Priority 1 or 2 problem reports.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy		DATE: April 2013
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Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Systems Engineering	WR	NAWC-AD:PAX RIVER, MD	5.780	0.771	Nov 2011	0.704	Nov 2012	0.899	Nov 2013	-		0.899	Continuing	Continuing	Continuing
Systems Engineering	WR	NAWC-WD:CHINA LAKE, CA	5.095	0.215	Nov 2011	0.670	Nov 2012	0.670	Nov 2013	-		0.670	Continuing	Continuing	Continuing
Systems Engineering	C/CPFF	TYBRIN CORP:RIDGECREST, CA	7.979	3.375	Nov 2011	1.480	Nov 2012	1.480	Nov 2013	-		1.480	0.000	14.314	14.314
Systems Engineering	C/CPFF	L-3 CORP:RIDGECREST,CA	0.000	0.100	Nov 2011	0.400	Nov 2012	0.300	Nov 2013	-		0.300	0.000	0.800	0.800
Systems Engineering	WR	NSWC:CORONA, CA	1.360	1.286	Nov 2011	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Systems Engineering	WR	NAWC-WD:PT MUGU	0.000	0.250	Jan 2012	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Systems Engineering	WR	CDSA:DAM NECK	0.000	0.200	Jun 2012	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Systems Engineering	WR	NRL:WASHINGTON, DC	0.000	0.100	Nov 2011	0.100	Dec 2012	0.000		-		0.000	Continuing	Continuing	Continuing
Prior Year Prod Dev No Longer Funded in the Budget or Out Years (Systems Engineering)	Various	Various:Various	90.145	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
		Subtotal	110.359	6.297		3.354		3.349		0.000		3.349			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Prior Year Support No Longer Funded in the Budget or Out Years (Software Development)	Various	Various:Various	10.576	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
		Subtotal	10.576	0.000		0.000		0.000		0.000		0.000			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy		DATE: April 2013
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Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Prior Year T&E No Longer Funded in the Budget or Out Years (Development Test & Evaluation)	Various	Various:Various	5.299	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
		Subtotal	5.299	0.000		0.000		0.000		0.000		0.000			

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support	WR	NAWC-TSD:ORLANDO, FL	2.513	0.250	Nov 2011	0.128	Nov 2012	0.111	Nov 2013	-		0.111	Continuing	Continuing	Continuing
		Subtotal	2.513	0.250		0.128		0.111		0.000		0.111			

	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	128.747	6.547		3.482		3.460		0.000		3.460			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Navy		DATE: April 2013
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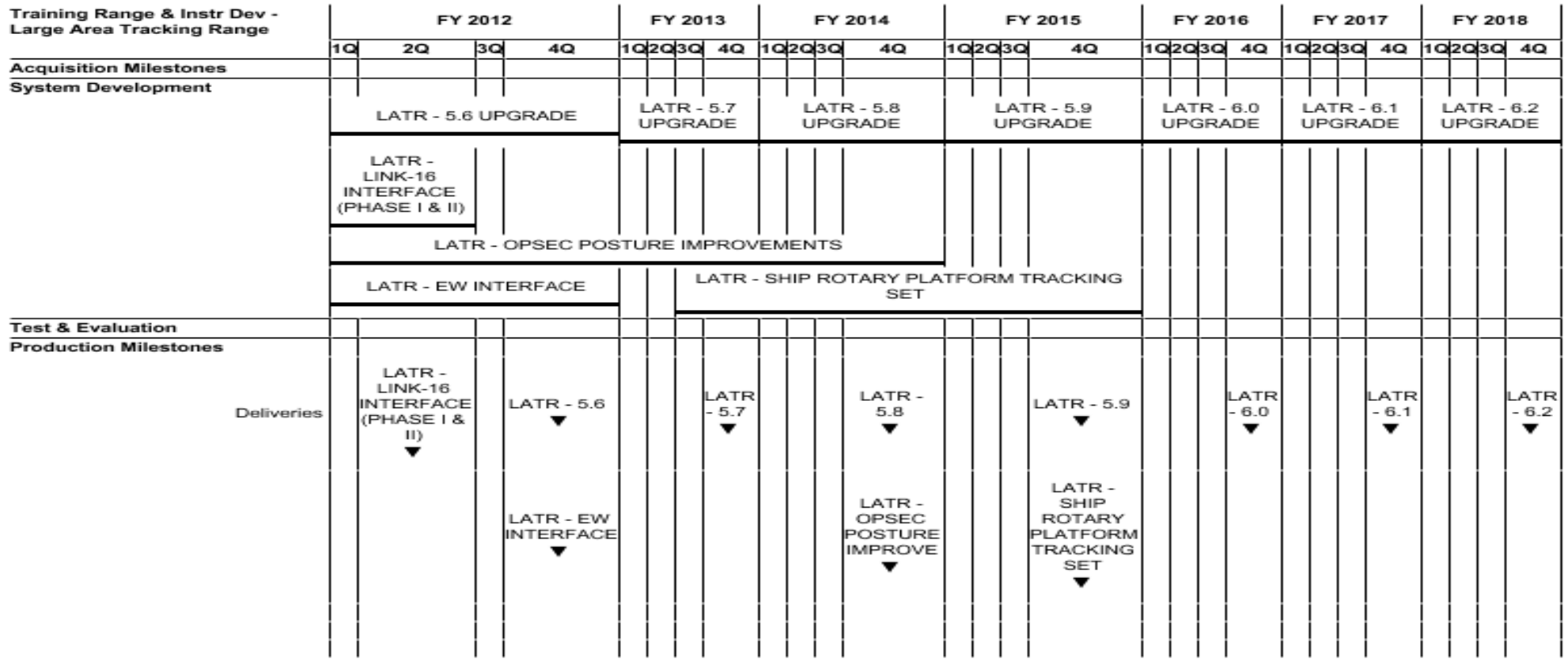

2014PB - 0204571N - 0604

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Navy		DATE: April 2013
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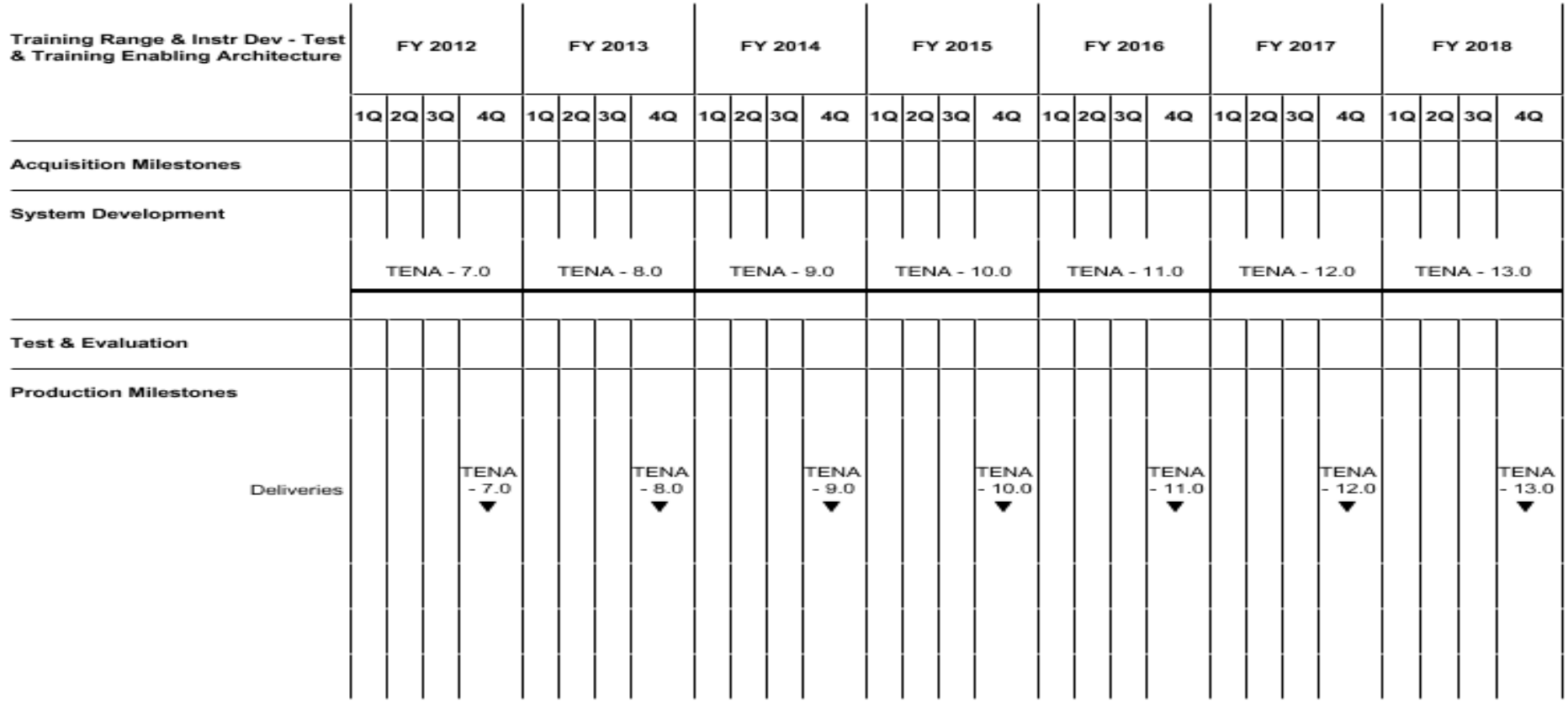

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Exhibit R-4, RDT&E Schedule Profile: PB 2014 Navy		DATE: April 2013
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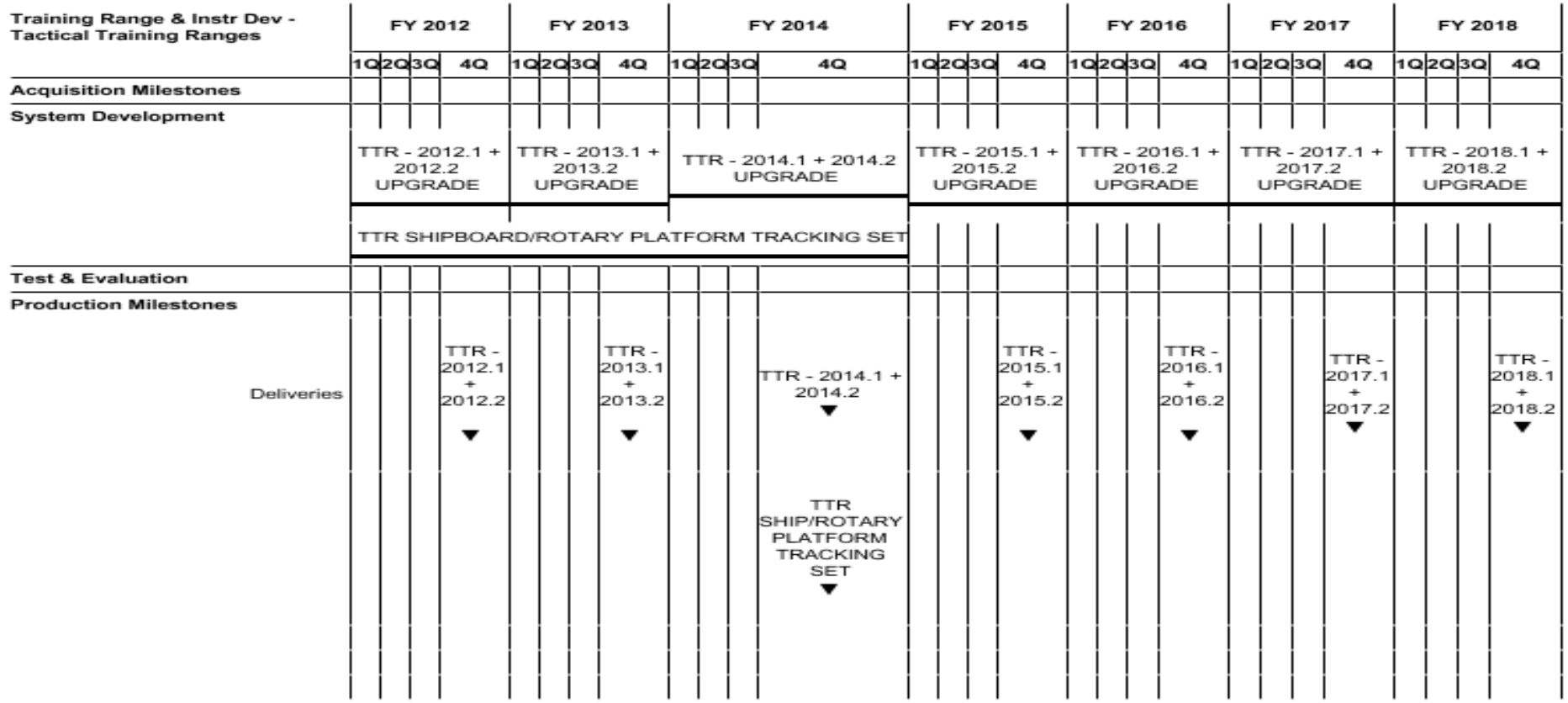

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Exhibit R-4A, RDT&E Schedule Details: PB 2014 Navy		DATE: April 2013
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Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Training Range & Instr Dev - Large Area Tracking Range				
System Development: LATR - 5.6 UPGRADE	1	2012	4	2012
System Development: LATR - 5.7 UPGRADE	1	2013	4	2013
System Development: LATR - 5.8 UPGRADE	1	2014	4	2014
System Development: LATR - 5.9 UPGRADE	1	2015	4	2015
System Development: LATR - 6.0 UPGRADE	1	2016	4	2016
System Development: LATR - 6.1 UPGRADE	1	2017	4	2017
System Development: LATR - 6.2 UPGRADE	1	2018	4	2018
System Development: LATR - LINK-16 INTERFACE (PHASE I & II)	1	2012	2	2012
System Development: LATR - OPSEC POSTURE IMPROVEMENTS	1	2012	4	2014
System Development: LATR - SHIP ROTARY PLATFORM TRACKING SET	3	2013	4	2015
System Development: LATR - EW INTERFACE	1	2012	4	2012
Production Milestones: Deliveries: LATR - 5.6 UPGRADE	4	2012	4	2012
Production Milestones: Deliveries: LATR - 5.7 UPGRADE	4	2013	4	2013
Production Milestones: Deliveries: LATR - 5.8 UPGRADE	4	2014	4	2014
Production Milestones: Deliveries: LATR - 5.9 UPGRADE	4	2015	4	2015
Production Milestones: Deliveries: LATR - 6.0 UPGRADE	4	2016	4	2016
Production Milestones: Deliveries: LATR - 6.1 UPGRADE	4	2017	4	2017
Production Milestones: Deliveries: LATR - 6.2 UPGRADE	4	2018	4	2018
Production Milestones: Deliveries: LATR - LINK-16 INTERFACE (PHASE I & II)	2	2012	2	2012
Production Milestones: Deliveries: LATR - OPSEC POSTURE IMPROVEMENTS	4	2014	4	2014

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Navy		DATE: April 2013
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	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Production Milestones: Deliveries: LATR - SHIP ROTARY PLATFORM TRACKING SET	4	2015	4	2015
Production Milestones: Deliveries: LATR - EW INTERFACE	4	2012	4	2012
Training Range & Instr Dev - Test & Training Enabling Architecture				
System Development: TENA - 7.0	1	2012	4	2012
System Development: TENA - 8.0	1	2013	4	2013
System Development: TENA - 9.0	1	2014	4	2014
System Development: TENA - 10.0	1	2015	4	2015
System Development: TENA - 11.0	1	2016	4	2016
System Development: TENA - 12.0	1	2017	4	2017
System Development: TENA - 13.0	1	2018	4	2018
Production Milestones: Deliveries: TENA - 7.0	4	2012	4	2012
Production Milestones: Deliveries: TENA - 8.0	4	2013	4	2013
Production Milestones: Deliveries: TENA - 9.0	4	2014	4	2014
Production Milestones: Deliveries: TENA - 10.0	4	2015	4	2015
Production Milestones: Deliveries: TENA - 11.0	4	2016	4	2016
Production Milestones: Deliveries: TENA - 12.0	4	2017	4	2017
Production Milestones: Deliveries: TENA - 13.0	4	2018	4	2018
Training Range & Instr Dev - Tactical Training Ranges				
System Development: TTR - 2012.1 + 2012.2 UPGRADE	1	2012	4	2012
System Development: TTR - 2013.1 + 2013.2 UPGRADE	1	2013	4	2013
System Development: TTR - 2014.1 + 2014.2 UPGRADE	1	2014	4	2014
System Development: TTR - 2015.1 + 2015.2 UPGRADE	1	2015	4	2015
System Development: TTR - 2016.1 + 2016.2 UPGRADE	1	2016	4	2016
System Development: TTR - 2017.1 + 2017.2 UPGRADE	1	2017	4	2017
System Development: TTR - 2018.1 + 2018.2 UPGRADE	1	2018	4	2018

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Navy		DATE: April 2013
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	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
System Development: TTR SHIPBOARD/ROTARY PLATFORM TRACKING SET	1	2012	4	2014
Production Milestones: Deliveries: TTR - 2012.1 + 2012.2 UPGRADE	4	2012	4	2012
Production Milestones: Deliveries: TTR - 2013.1 + 2013.2 UPGRADE	4	2013	4	2013
Production Milestones: Deliveries: TTR - 2014.1 + 2014.2 UPGRADE	4	2014	4	2014
Production Milestones: Deliveries: TTR - 2015.1 + 2015.2 UPGRADE	4	2015	4	2015
Production Milestones: Deliveries: TTR - 2016.1 + 2016.2 UPGRADE	4	2016	4	2016
Production Milestones: Deliveries: TTR - 2017.1 + 2017.2 UPGRADE	4	2017	4	2017
Production Milestones: Deliveries: TTR - 2018.1 + 2018.2 UPGRADE	4	2018	4	2018
Production Milestones: Deliveries: TTR SHIPBOARD/ROTARY PLATFORM TRACKING SET	4	2014	4	2014

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0204571N: *Consolidated Trng Sys Dev*	PROJECT 1427: *Surface Tactical Team Trainer (STTT)*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
1427: *Surface Tactical Team Trainer (STTT)*	36.215	23.376	12.596	11.000	-	11.000	16.799	13.440	12.006	10.577	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

BFTT Program provides realistic joint warfare training across the spectrum of armed conflict, realistic unit level team training in all warfare areas (e.g. BMD missions to support IAMD capabilities). BFTT will link ships together via USFFC NCTE. BFTT is evolving to an open distributed architecture with maximum commonality across ship classes, integrating existing training systems and evolving to High Level Architecture (HLA) protocols. BFTT provides ships' Commanding Officers and Battle Group/Battle Force Commanders with the ability to conduct coordinated realistic, high stress, combat system level team training as an integral part of the Afloat Training Organization, the Tactical Training Groups and C2F/C3F FSTs. BFTT provides a baseline capability/system that meets the Operational Requirements Document (ORD). Without an operating BFTT system, the ship will be unable to complete system level testing impacting overall combat system operational testing.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: Surface Tactical Team Trainer (STTT)	23.376	12.596	11.000
Articles:	0	0	0
FY 2012 Accomplishments: Completed development and started testing & certification of BFTT 3.5.1. Started development of BFTT Build 5.0 (CVN 78 & Aegis 9B with back fit to various ships)to provide Dual Band Radar interface, Corporative Engagement Capability Training Adjunct replacement along with AN/SPY-1 & AEGIS Combat Training System (ACTS) improvements allows Engage On Remote Training capability supporting NIFC-CA requirements, allows HLA path from NCTE to SQQ-89 for ASW training and SLQ-32 for Electronic Warfare (EW) training, database and modeling improvements along with IA improvements & supportability investments.			
FY 2013 Plans: Certify and field BFTT 3.5.1. Continue development of Build 5.0. Start requirements definition of BFTT Build 6.0/ACB 16 including de-integrating Scenario Generation & Control, Data Collection, Fusion & Debrief to create a common Combat System capability that supports the Combat System Product Line Architecture.			
FY 2014 Plans: Certify and field BFTT Build 5.0. Start development of Build 6.0. Begin AEGIS Intergrated Training: Develop Hawklink Simulation/ Stimulation unit. Develop interface updates between BFTT, SQQ-89 and NCTE to allow simulated Vertical Launch Anti-Submarine Rocket (VLASROC) fly-outs for use by other assets in integrated training events. Develop Air Asset training			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0204571N: *Consolidated Trng Sys Dev*	PROJECT 1427: *Surface Tactical Team Trainer (STTT)*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
simulation/stimulation interfaces to the common data link and provide simulated EW, ASW and Radar contacts, as seen from a simulated ASW Air Asset. Develop interface and user documentation updates to support transfer and control of simulated CU reports from CEC. Develop modifications to control simulated engagements, process simulated gun rounds within integrated training simulation environment. Develop training system Human Machine Interface (HMI) changes to allow launch commands to AEGIS embedded threat models and commands to control Kill Assessment outcomes. Modify external shipboard interface to extend simulated launch and kill assessment controls to remote training users. Includes documentation, testing, safety, information assurance compliance and Combat System Certification. Begin Ship Self Defense System (SSDS) Intergrated Training: Develop a common service to generate synthetic to Combat System Track correlation. Publish validation failures, association messages and operational status. Develop modifications to enhance user situational awareness of training and operational system status. Develop an Air Asset training simulation/ stimulation capability that provides simulated remote EW, ASW and Radar contacts. Develop training interface into UPX-24. Process simulated modes 1, 2, 3, 4, 5, C&S. Includes documentation, testing, safety and Information Assurance compliance and Combat System Certification. Includes documentation, HMI changes, testing, safety and Information Assurance compliance and Combat System Certification.			
Accomplishments/Planned Programs Subtotals	23.376	12.596	11.000

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• OPN 276200: *(Surface BFTT/ TSTC portion only)*	24.142	36.639	35.916		35.916	41.313	37.090	38.947	38.079	0.000	296.409

Remarks

D. Acquisition Strategy

The BFTT acquisition strategy for system development utilizes the Advanced Capability Build (ACB) development model, as mandated by OPNAV. Incremental acquisition and fielding, utilizing commercial off-the-shelf technology to the extent possible, is in accordance with OPNAV LTR Ser N86/9U179029 dtd 31 Jul 09.

E. Performance Metrics

NSWC Dam Neck: Number of BFTT modification product improvements and new capabilities. Successful design, development, testing and fielding of product improvements, and new capabilities. Site acceptance of product improvements with no Priority 1 or 2 problem reports. Completion of one upgrade per ACB.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0204571N: *Consolidated Trng Sys Dev*	PROJECT 1427: *Surface Tactical Team Trainer (STTT)*

NSWC Dahlgren: Number of Test events completed. Training system interface problem resolutions documented. Safety Reviews in direct support of Element Certification.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0204571N: *Consolidated Trng Sys Dev*	PROJECT 1427: *Surface Tactical Team Trainer (STTT)*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Hardware Development	WR	NSWC Dam Neck:Dam Neck	11.926	1.110	Feb 2012	2.264	Feb 2013	1.600	Dec 2013	-		1.600	Continuing	Continuing	Continuing
Systems Engineering	WR	SEA02/NSWC Dam Neck/NSWC Dahlgren/NAVSEA 02:NAVSEA/ Dam Neck/NSWC Dahlgren	7.377	4.594	Feb 2012	2.329	Feb 2013	1.300	Dec 2013	-		1.300	0.000	15.600	
		Subtotal	19.303	5.704		4.593		2.900		0.000		2.900			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Software Development	WR	NSWC Dam Neck/ NAVSEA 02:WR/ REQN	9.794	13.553	Feb 2012	5.025	Mar 2013	5.100	Dec 2013	-		5.100	0.000	33.472	
		Subtotal	9.794	13.553		5.025		5.100		0.000		5.100	0.000	33.472	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	WR	NSWC PHD/NSWC Dam Neck/NAVSEA 02:WR/REQN	3.162	2.697	Feb 2012	1.495	Feb 2013	1.650	Dec 2013	-		1.650	0.000	9.004	
		Subtotal	3.162	2.697		1.495		1.650		0.000		1.650	0.000	9.004	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0204571N: *Consolidated Trng Sys Dev*	PROJECT 1427: *Surface Tactical Team Trainer (STTT)*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Government Engineering Support	WR	NSWC Dam Neck/NSWC Dahlgren:WR/REQN	3.956	1.422	Feb 2012	1.483	Dec 2012	1.350	Dec 2013	-		1.350	0.000	8.211	
		Subtotal	3.956	1.422		1.483		1.350		0.000		1.350	0.000	8.211	

	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	36.215	23.376		12.596		11.000		0.000		11.000			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0204571N: *Consolidated Trng Sys Dev*	PROJECT 1427: *Surface Tactical Team Trainer (STTT)*

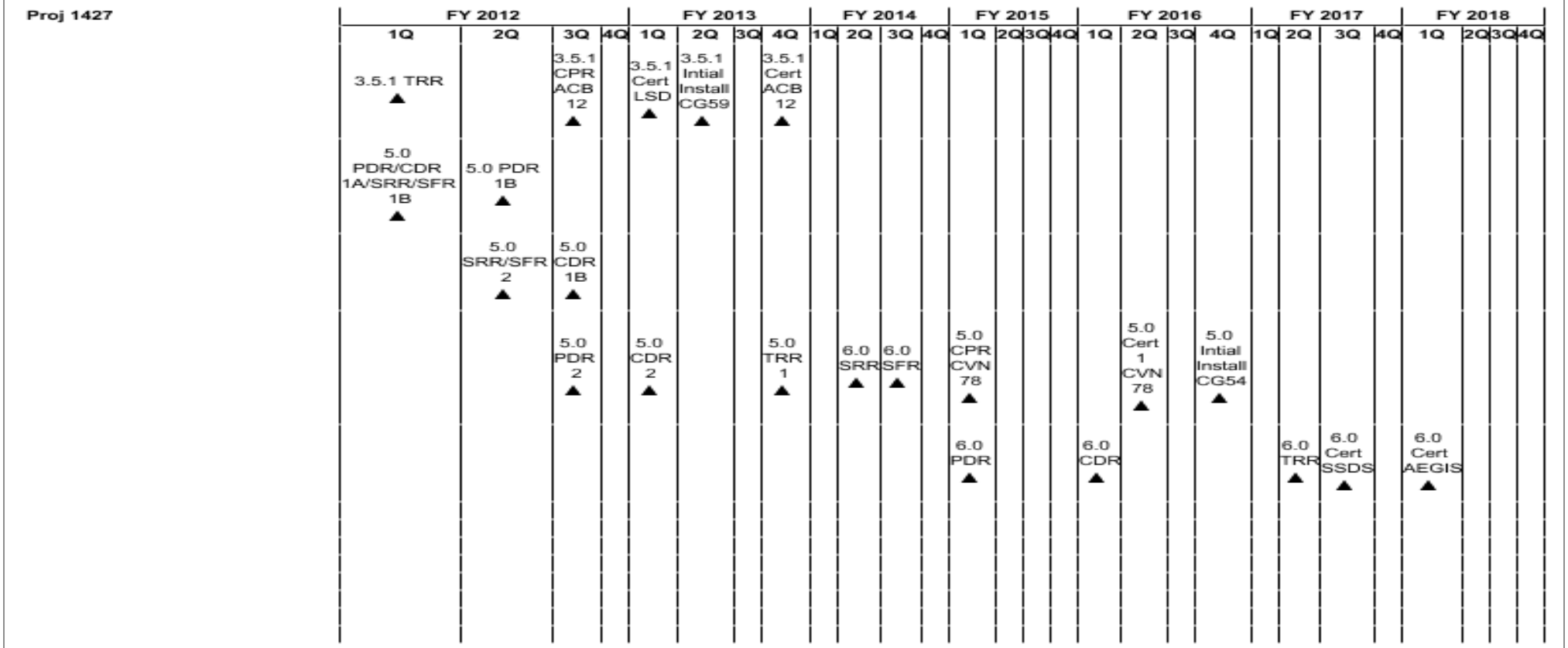

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Exhibit R-4A, RDT&E Schedule Details: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0204571N: *Consolidated Trng Sys Dev*	**PROJECT** 1427: *Surface Tactical Team Trainer (STTT)*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 1427				
BFTT 3.5.1 TRR	1	2012	1	2012
BFTT 3.5.1 CPR ACB 12	3	2012	3	2012
BFTT 3.5.1 Certification LSD	1	2013	1	2013
BFTT 3.5.1 Intial Install CG59	2	2013	2	2013
BFTT 3.5.1 Certification ACB12	4	2013	4	2013
BFTT 5.0 PDR/CDR 1A/SRR/SFR 1B	1	2012	1	2012
BFTT 5.0 PDR 1B	2	2012	2	2012
BFTT 5.0 SRR/SFR 2	2	2012	2	2012
BFTT 5.0 CDR 1B	3	2012	3	2012
BFTT 5.0 PDR 2	3	2012	3	2012
BFTT 5.0 CDR 2	1	2013	1	2013
BFTT 5.0 TRR 1	4	2013	4	2013
BFTT 5.0 CPR CVN 78	1	2015	1	2015
BFTT 5.0 Certification 1 CVN 78	2	2016	2	2016
BFTT 5.0 Certification Intial Install CG54	4	2016	4	2016
BFTT 6.0 SRR	2	2014	2	2014
BFTT 6.0 SFR	3	2014	3	2014
BFTT 6.0 PDR	1	2015	1	2015
BFTT 6.0 CDR	1	2016	1	2016
BFTT 6.0 TRR	2	2017	2	2017
BFTT 6.0 Certification for SSDS	3	2017	3	2017

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Navy		DATE: April 2013
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	Start		End	
Events by Sub Project	Quarter	Year	Quarter	Year
BFTT 6.0 Certification for AEGIS	1	2018	1	2018

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0204571N: *Consolidated Trng Sys Dev*	PROJECT 2124: *Air Warfare Training*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
2124: *Air Warfare Training*	25.968	1.821	1.640	1.595	-	1.595	1.620	1.639	1.684	1.712	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

This project transitions new training system technologies for use in Naval Aviation training. Products from this effort are directly tied to the Navy Aviation Simulation Master Plan (NASMP), NASMP technology upgrades, MH-60R/S master plan, Unmanned Aerial Systems (UAS) master plan, UAS Common Control Station (CCS), Live Virtual Constructive (LVC), F/A-18C-F Requirements Procurement Plan (RPP), multiple platform technology refresh efforts and the Multi-Mission Maritime Aircraft (MMA/P-8) programs. These efforts will support the development and design of future naval aviation training/preview/mission rehearsal systems (fixed, deployed and unmanned). Tasks include: Advanced training systems specification development to provide for common, modular, High Level Assembly (HLA) compliant, high fidelity Distributed Mission Training (DMT) and mission rehearsal capabilites ashore and afloat. Technologies to be developed and integrated include: intelligent semi-automated forces technologies, automated performance measurement technology, advanced net-ready weapons simulation, Air to Air/Air to Ground (AA/AG), visual/sensor enhancement, sensor weather server, common Mission Training Station (MTS) technologies, tablet mission preview technology, advanced visual-sensor technology, high resolution helmet mounted, and/or flat panel displays, 20-20 visual acuity image generation, NAVAIR Portable Source Initiative (NSPI), common correlated data set technologies, common link, common software/database reuse technologies, advanced environmental effects modeling, fused radar/infra-red/ electro-optic and acoustic sensor simulations, physics-based infra-red simulations, comms degradation modeling and final T&E within the Aviation Training Technology Integration Facility (ATTIF), NAWCAD, which is a man-in-the loop test bed for the integration of software, hardware and operational equipment. This Manned-Flight Simulator (MFS) capability provides a window to fleet aviators for critical comment, evaluation and fine tuning of new, interoperable, and innovative technologies such as Training Common Architecture (TRACE) components, before final transition to the fleet. MTS, debrief/After Action Review (AAR) and intelligent training tools for the virtual environment are focused on human performance enhancements for fleet readiness and distributed mission training at all levels.

Metrics: These technology transitions seek to lower Total Ownership Costs (TOC) of the training systems and life cycle costs, including: increasing software re-use, reduced instructor manning profiles, software-based fidelity enhancements and increased fleet readiness by enhancing overall system fidelity to the projected operating environments. NASMP readiness improvements are conservatively forecasted at 12-35% following associated technology upgrades to stand-alone and networked simulators. Individual technology transition investments have routinely exceeded 300+% financial Return On Investment (ROI). Technology Readiness Levels (TRL), Training and Readiness, fleet readiness, and financial metrics are used.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: HUMAN/INSTRUCTIONAL SYSTEMS INTEGRATION	0.702	0.515	0.516
Articles:	0	0	0

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy		DATE: April 2013
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014

Description: Develop common and platform-unique MTS, Intelligent Tactical Semi-Automated-Forces (SAF) and high fidelity simulator component technologies. MTS and Intelligent SAF designs lower NASMP upgrade and simulator life-cycle costs. Integrate Voice-Capable SAF component technologies, improve common instructor interface effectiveness and provide for multi-SAF exercise utilization. Analyze, develop, and integrate common architecture components for F/A-18C-F, MH-60R/S, UAS platforms, E-2C/D & USMC mission areas, intelligent instructor operator components, automated performance measurement technologies, Tactical Aircraft (TACAIR)/ Multi-Mission Maritime Aircraft (MMA) / Reduced Oxygen Breathing Device-Spatial Disorientation (ROBD-SD) devices common graphic user interface initiatives, common threat system formats and new Next Generation Threat System technology transitions, Joint SAF compatability, cross platform post mission performance measurement, and after action review/ debrief innovations, thereby maximizing return on investment for mission training station-related technology investments.

FY 2012 Accomplishments:
Provided modular Mission Training System (MTS) designs for P8-A, ROBD-SD, E-2C and Common Simulation Products (CSP) IPT's to lower NASMP/Platform simulator upgrade life-cycle costs. Completed common instructor debrief interface for improved effectiveness and provide for multi-SAF exercise utilization. Initiated first phase of Post-Mission Assessment for Tactical Training (PMATT). Continued to analyze, develop, and integrate common architecture components for FA-18C-F, MH-60R/S, UAS, E-2C/D & USMC mission areas, intelligent instructor operator components, TACAIR/MMA/ROBD-SD common graphic user interface initiatives, common L-V-C capable threat system formats and Next Generation Threat System (NGTS) connectivity, Joint SAF compatability, performance measurement, and after action review/ debrief and assessment technologies, thereby maximizing return on investment for MTS-related investments.

FY 2013 Plans:
Provide for ongoing modular MTS designs to lower Navy Aviation Simulation Master Plan (NASMP) upgrade and simulator upgrade life-cycle II costs, integrate Voice-Capable Semi-Automated-Forces (SAF) component technologies, improve P-8A and Unmanned Aerial System (UAS) common instructor interface effectiveness, PMATT phase and provide for LVC and multi-SAF exercise utilization. Continue to analyze, develop, and integrate open architecture components for Common Control Station (CCS), UAS/Broad Area Maritime Surveillance (BAMS), FIRESCOUT, F/A-18C-F, MH-60R/S, E-2C/D & USMC mission preview areas, intelligent instructor operator components, TACAIR/MMA/ROBD-SD common graphic user interface initiatives, common threat system formats and NGTS, Joint SAF compatability, performance measurement, and after-action review/ debrief, thereby maximizing fleet efficiencies and ROI for mission training technology investments.

FY 2014 Plans:

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy		DATE: April 2013
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Provide continued development and support for MTS based brief preview, debrief and tactical training assessment technologies for all Naval Aviation Platforms, to include data and trend-analysis. Provide technology in support of common simulation product lines, UAS common control stattion, debrief visualization, and Live Vertual Constructive (LVC) technology transition.			
Title: SENSORS AND ENVIRONMENT	0.494	0.450	0.400
Articles:	0	0	0
Description: Develop common and platform unique sensor visual, and environmental simulation (atmospherics on acoustics) into fidelity upgrades with Commercial Off The Shelf (COTS) and/or Government Off the Shelf Software (GOTS). Perform risk reduction, advanced displays innovation, test and evaluation, integration, and production of Inter-service Common Sensor Model (ICSM), High Fidelity Active-Acoustics Sensor Operator Training (HIFAST) and Integrated Distributed Sensor Scene Simulation System (DS-4) for Navy Distributed Mission Training (DMT), 3D weather, and new ROBD-SD and legacy device technologies. Demonstrate GOTS capability for cost-effective database materialization, Material Properties Reference Dataset (MPRD) library, associated NAVAIR Portable Source Iniative (NPSI) specifications and processes for implementation on Distributed Mission Training (DMT), deployed trainers, legacy, and new visual system upgrade programs. In support of Navy Aviation Simulation Master Plan (NASMP) upgrade efforts, develop texture storage, sensor-environmental effects, Synthetic Environmental Radiometry Engine (SERE) NPSI material reference processes/standards, automated technology applications for real time publishing, shadows, cultural lighting, combat, and weather effects and very high-resolution visualization technologies, to include tablet-based mission preview for tactical aircrew. ***FY 2012 Accomplishments:*** Continued to integrate common and platform-specific sensors/ Government Off The Shelf (GOTS) implementations. Performed risk reduction, advanced displays Test & Evaluation (T&E), integration and production of Inter-service Common Sensor Model (ICSM) for Navy DMT and legacy devices. Demonstrated ICSM, SERE GOTS capability for cost-effective environmental effects database modeling materialization, F/A-18 training device integration/demonstration, and develop associated NPSI common specifications/processes for implementation on DMT, deployed trainers, legacy, and new visual system upgrade programs (Unmanned Aerial Systems (UAS) series) in accordance with platform and NASMP priorities. Developed texture storage, weather and sensor-environmental effects, environment NPSI common material reference processes/standards, and automated technology applications for real time publishing, shadows, cultural lighting, combat, and weather effects and very high-resolution sensor visualization for simulator, or tablet-based applications. ***FY 2013 Plans:*** Continue to integrate common and platform unique real-time sensor simulation with GOTS implementations. Perform risk reduction, advanced displays T&E, integration and production of ICSM for UAS, Navy DMT and legacy devices. Demonstrate SERE GOTS capability for cost-effective environmental effects database materialization, and develop associated NPSI specifications and processes for implementation on DMT, deployed mission readiness trainers, legacy, and new visual system			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy		DATE: April 2013
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
upgrade programs in accordance with NASMP priorities. Develop texture storage, weather and sensor-environmental effects, SERE Environment NPSI material reference processes/standards, and automated technology applications for real time publishing, shadows, cultural lighting, combat, and weather effects, communication and radio frequency models and very high-resolution sensor visualization for multiple platform upgrade initiatives. ***FY 2014 Plans:*** Test, evaluate and demonstrate new platform and composite squadron mission preview sensor-prediction, Carrier Qualification (CQ) and after-action review (AAR) technologies that improve individual, squadron unit and wing readiness. Provide GOTS/ Commercial Off The Shelf (COTS) applications for common and platform unique visual/sensor technologies in all phases of training on mission preview/preparation. Perform new sensor-fusion technologiy development for Common Control Station (CCS), and other platform UAS specific applications.			
Title: SYSTEM ENGINEERING & INTEGRATION	0.300	0.000	0.250
Articles:	0		0
Description: Integrate and test new and legacy General Training/Hypoxia system components for Navy survivability and platform unique deployable readiness training devices. Provide GOTS component Technology Readiness Level (TRL) assessment for general training components, TACAIR, and maritime/Anit-Submarine Warfare (ASW) components, tactical Graphical User Interface (GUI) and performance measurement and tactical scenario-control technologies. Test and demonstrate E-2C Distributed Mission Readiness Trainer (DMRT) enhancements and General Training technologies, while maintaining or increasing fidelity. Analyze Live Virtual Contructive (LVC) Government Off The Shelf (GOTS)/ Commercial Off The Shelf (COTS) technologies, and alternatives for network centric warfare compliance connnectivity in the simulated battlespace, Navy Continuous Training Environment (NCTE) interoperability, and human mission performance measurements while reducing training system life cycle cost. Ensure proper Technology Readiness Level (TRL) levels for integrating new software components, achieve training readiness and document a financial ROI. ***FY 2012 Accomplishments:*** Integrated and provided TRL component assessments for F/A-18, GT and Tactical Aircraft (TACAIR) Maritime platforms to improve fidelity, and training effectiveness. Tested deployable readiness and mission preview/rehersal system technologies into fleet training devices. Provided GOTS component TRL assessment for General Training, intelligent synthetic forces, tactical debrief Graphical User Interface (GUIs), performance measurement and tactical scenario-control technologies. Provided early stage LVC technology test and assessment configurations in partnership with Office of Naval Research (ONR) Enabling Capability (EC) developments for both LVC and Unmanned Aerial Systems (UAS) training technology prototype efforts. ***FY 2014 Plans:***			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy		DATE: April 2013
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Continue to provide training system component-level technology assessments for: (1) TRL maturation, TRL assessment, (2) platform applicability (TACAIR, Anti-Submarine Warfare (ASW), and UAS), and (3) Information Assurance (IA)-certified Distributed Mission Training (DMT) interoperability. Perform support for fidelity improvement analysis, and fleet/T&R assessment.			
Title: LIVE VIRTUAL CONSTRUCTIVE (LVC) AND VISUALS	0.325	0.675	0.429
Articles:	0	0	0
Description: Air Warfare Training Development (AWTD) provides for risk mitigation and next generation platform, UAS, LVC and associated visualization component development for distributed mission training for stand-alone and small footprint deployable devices. Support the Navy Aviation Simulation Master Plan (NASMP) upgrade efforts and Type/Model/Series (T/M/S) programs with advanced visual system display configurations requirements. Assess trainee cognitive requirements and the development and incorporation of next generation LVC, UAS and associated visualization technologies. Additionally, AWTD provides for advanced virtual component fidelity improvements for LVC capability (such as "Mobility" Part-Task Trainers (PTT) and Distributed Mission Readiness Trainer (DMRT) class devices). ***FY 2012 Accomplishments:*** Supported technology (platform and common) development for LVC, visualizatoin, and integrated UAS distributed training capabilities. Supported NASMP and USMC/Navy LVC efforts to include both platform unique, or multi-platform common technology applications for T&R achievement or mission preview. ***FY 2013 Plans:*** Continue to support NASMP upgrades and T/M/S visual research programs (TACAIR, Maritime and UAS) to include the development of high fidelity advanced visual system display configurations that are LVC capable using next generation technology for both stand-alone and small footprint deployable devices. Apply advanced visualization to after action review systems, and mission preview applications that give "visualizations" of the battlespace in different lighting conditions, sensor views and atmospheric conditions. ***FY 2014 Plans:*** Provide continued support to incremental Live Virtual Constructive (LVC) technology development, enhanced visual, sensor, environmental, motion, aero and ocean state fidelity for new virtual training and readiness capabilities. Provide man-in-the-loop Technology Readiness Level (TRL) assessment at Manned Flight Simulator (MFS) and assess Distributed Mission Readiness Trainer (DMRT) and other mobility training applicatoin areas for improved fleet training and life-cycle cost reductions.			
Accomplishments/Planned Programs Subtotals	1.821	1.640	1.595

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0204571N: *Consolidated Trng Sys Dev*	PROJECT 2124: *Air Warfare Training*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• APN/0705: *COMMON GROUND EQUIPMENT - TRAINING*	152.186	162.371	181.768		181.768	230.904	167.798	206.111	209.560	Continuing	Continuing

Remarks

D. Acquisition Strategy

Air Warfare Training Development (AWTD) is a 6.7 RDT&E joint technology transition program tied to Navy Aviation Simulation Master Plan (NASMP) and USMC upgrades and the various platform simulation master plans with the purpose of transitioning advanced training and mission preview/rehearsal technologies. AWTD provides risk mitigation, test and evaluation, and prototype development for stand-alone, un-manned, distributed, and deployed training systems for the warfighter utilizing an Integrated Product Team approach and a combination of reimbursable and direct cite/cost-plus time and material (T&M) contracts.

E. Performance Metrics

NAWC-TSD: # of transitions to Fleet Platforms. For each transition, successful TRL testing and device Ready for Training (RFT) to Fleet platforms. Seminal transition events are either RFT or tech-refresh Authority to Operate.
NAWC-AD: Complete Technology Readiness Level (TRL) & compliance testing for NASMP and Information Assurance directives.

RSC Inc: Successful Small Business Innovation Research evaluation of device testing.

Aptima Inc: Successful Small Business Innovation Research evaluation of device testing.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0204571N: *Consolidated Trng Sys Dev*	PROJECT 2124: *Air Warfare Training*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Systems Engineering	WR	NAWC-TSD:ORLANDO, FL	15.689	0.357	Nov 2011	0.364	Nov 2012	0.523	Nov 2013	-		0.523	Continuing	Continuing	Continuing
Systems Engineering	WR	NAWC-AD:PAX RIVER, MD	1.136	0.008	Nov 2011	0.200	Nov 2012	0.250	Nov 2013	-		0.250	Continuing	Continuing	Continuing
Systems Engineering	C/CPFF	APTIMA:ORLANDO, FL	0.250	0.288	Feb 2012	0.594	Mar 2013	0.104	Mar 2014	-		0.104	0.000	1.236	1.236
Systems Engineering	C/CPFF	RSC INC.:ORLANDO, FL	0.000	0.174	Mar 2012	0.300	Mar 2013	0.300	Mar 2014	-		0.300	0.000	0.774	0.774
Systems Engineering	FFRDC	SANDIA, NATIONAL LAB:ALBUQUERQUE, NM	0.000	0.050	Feb 2012	0.000		0.100	Mar 2014	-		0.100	0.000	0.150	0.150
Systems Engineering	C/CPFF	ENGILITY INC.:ORLANDO, FL	0.000	0.200	Nov 2012	0.000		0.000		-		0.000	0.000	0.200	
Systems Engineering	WR	NPS:MONTEREY, CA	0.300	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
		Subtotal	17.375	1.077		1.458		1.277		0.000		1.277			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Prior Year Support No Longer Funded in the Budget or Out Years (Support Equipment Development)	Various	Various:Various	1.753	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
		Subtotal	1.753	0.000		0.000		0.000		0.000		0.000			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0204571N: *Consolidated Trng Sys Dev*	PROJECT 2124: *Air Warfare Training*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation (Sys Eng & Test)	WR	NAWC AD:PAX RIVER, MD	5.868	0.300	Nov 2011	0.000		0.200	Nov 2013	-		0.200	Continuing	Continuing	Continuing
		Subtotal	5.868	0.300		0.000		0.200		0.000		0.200			

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support	C/CPFF	METI CORP:PAX RIVER, MD	0.491	0.216	Dec 2011	0.167	Nov 2012	0.103	Dec 2013	-		0.103	0.000	0.977	0.977
Program Management Support	C/CPFF	L-3 CORP:RIDGECREST, CA	0.000	0.209	Jun 2012	0.000		0.000		-		0.000	0.000	0.209	0.209
Program Management Support	WR	NAWC AD:PAX RIVER, MD	0.000	0.003	Jul 2012	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Travel	PO	NAVAIR:PAX RIVER, MD	0.481	0.016	Dec 2011	0.015	Nov 2012	0.015	Dec 2013	-		0.015	Continuing	Continuing	Continuing
		Subtotal	0.972	0.444		0.182		0.118		0.000		0.118			

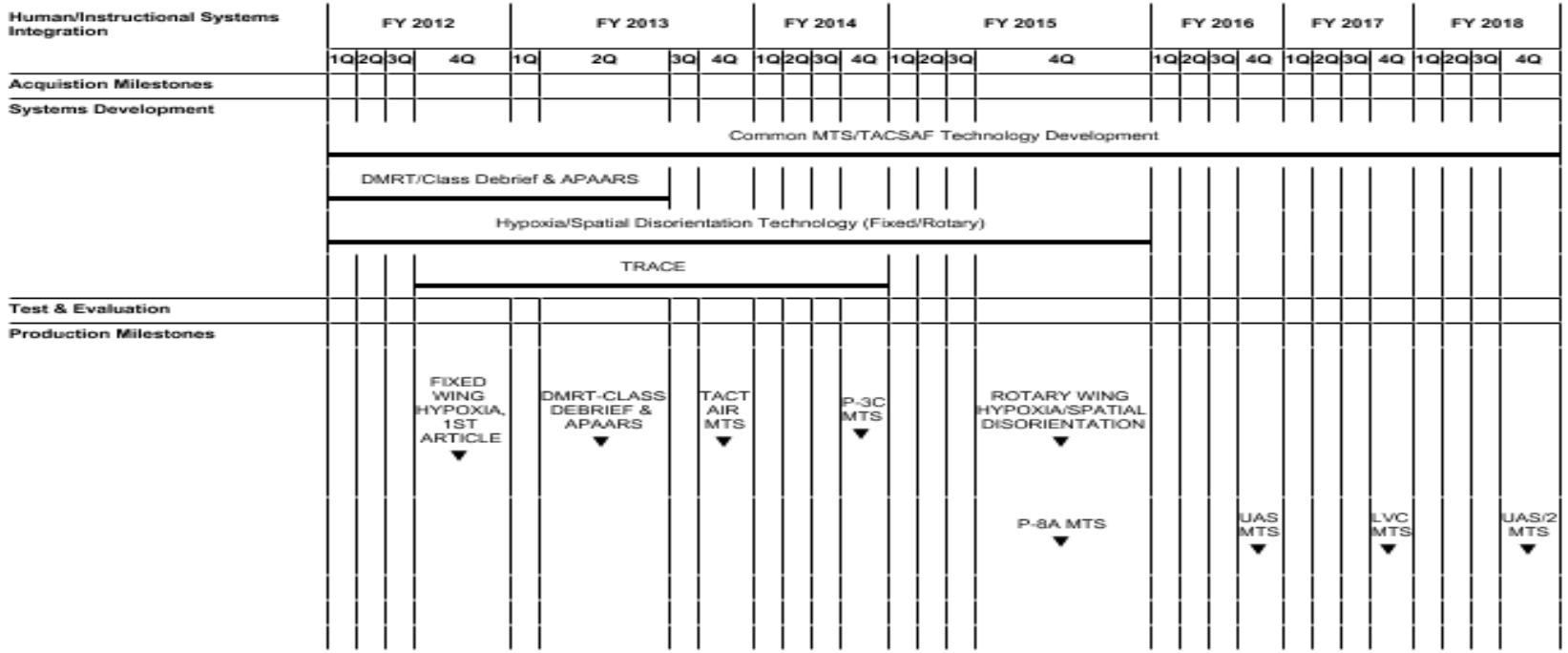
Remarks

PO used for travel orders.

	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	25.968	1.821		1.640		1.595		0.000		1.595			

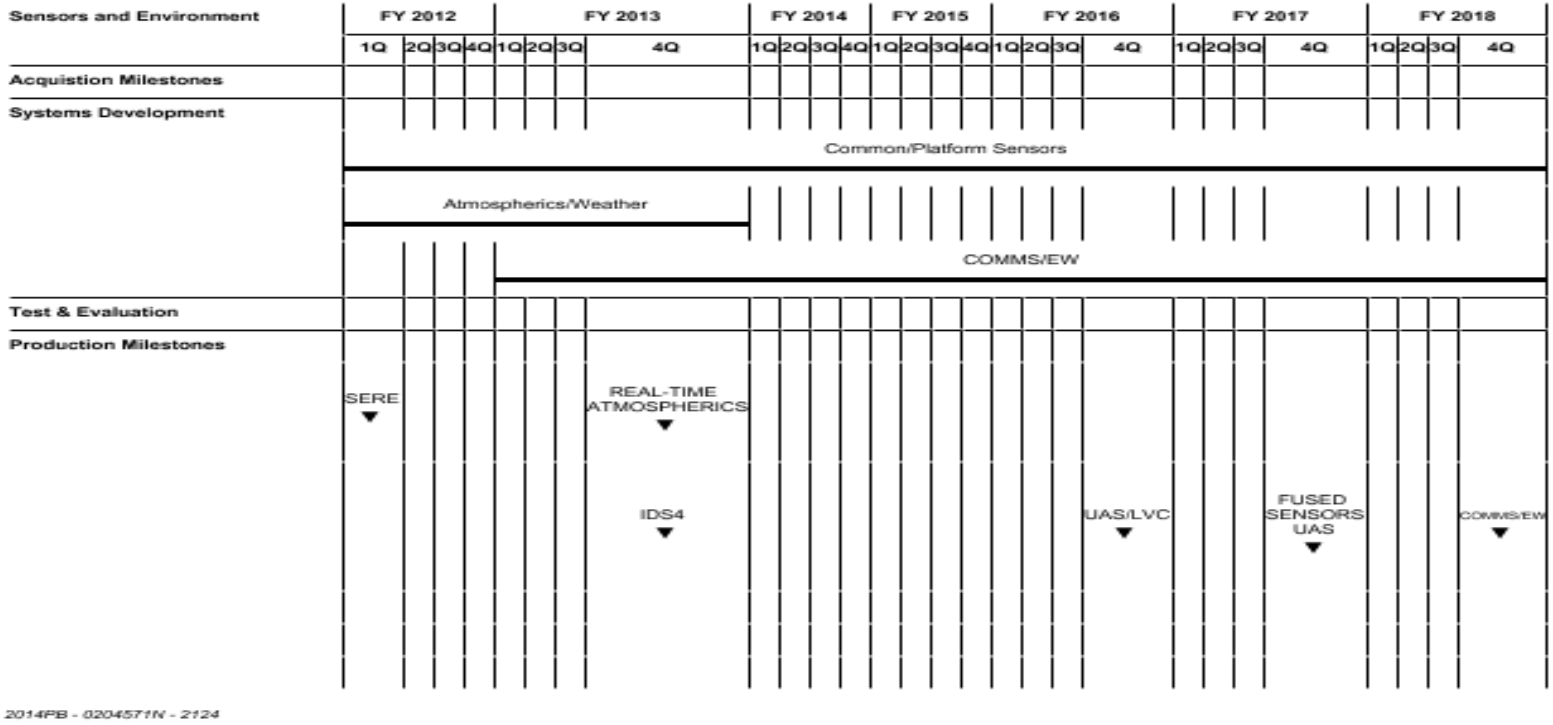
Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0204571N: *Consolidated Trng Sys Dev*	PROJECT 2124: *Air Warfare Training*



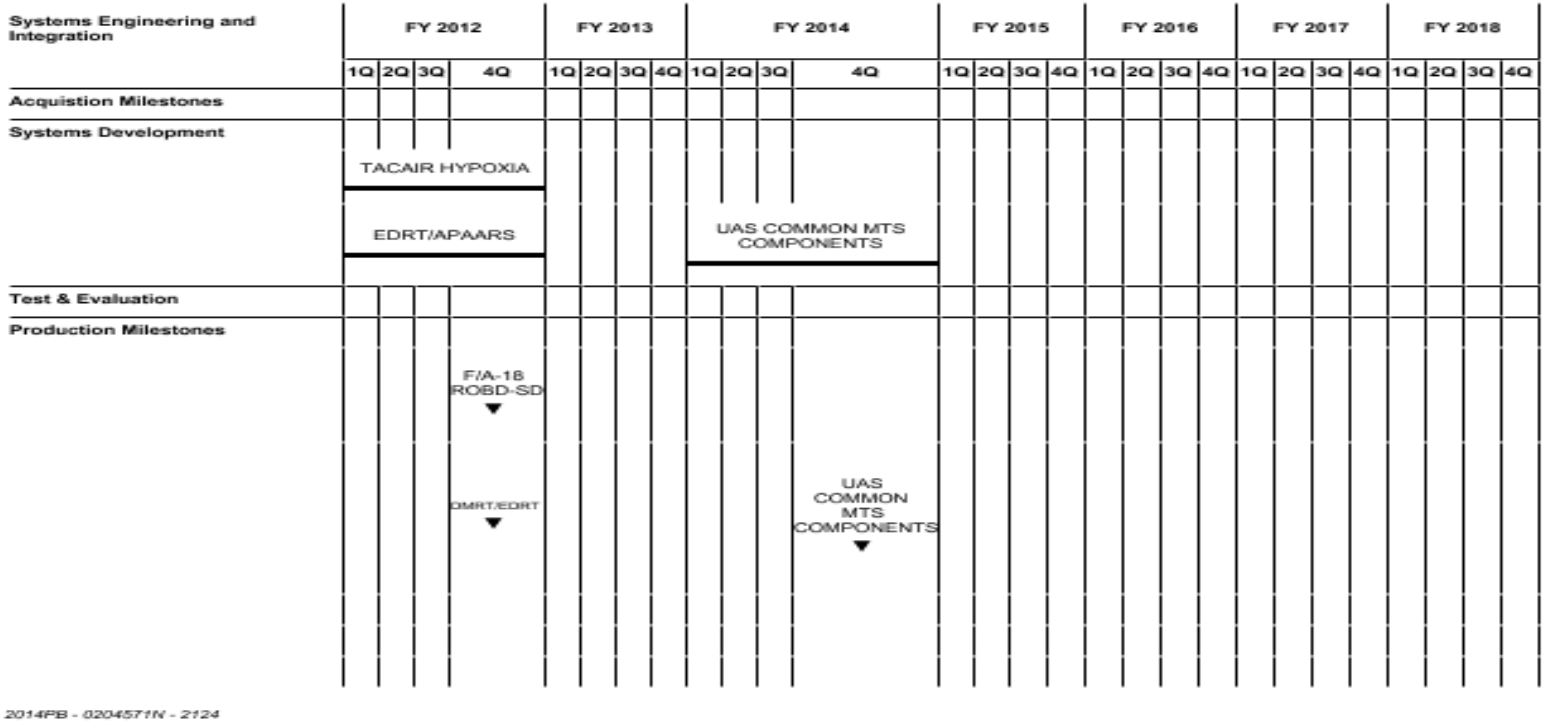
2014PB - 0204571N - 2124

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0204571N: *Consolidated Trng Sys Dev*	PROJECT 2124: *Air Warfare Training*



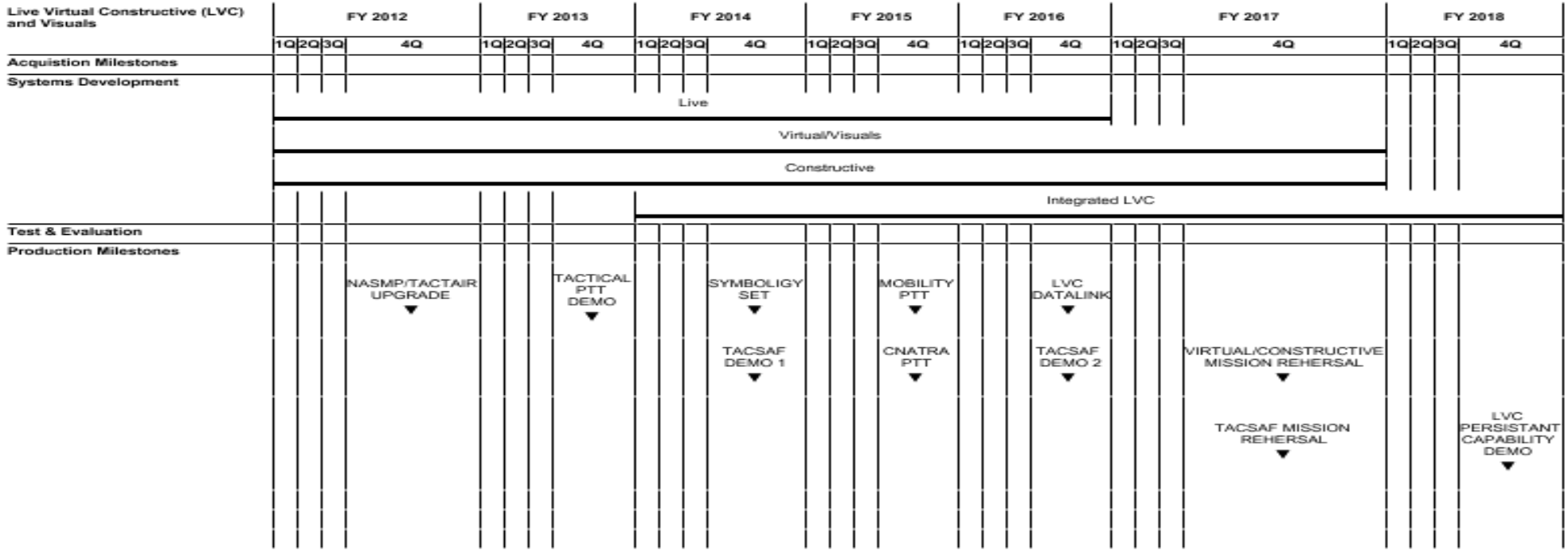
2014PB - 0204571N - 2124

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0204571N: *Consolidated Trng Sys Dev*	PROJECT 2124: *Air Warfare Training*



2014PB - 0204571N - 2124

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0204571N: *Consolidated Trng Sys Dev*	PROJECT 2124: *Air Warfare Training*



2014PB - 0204571N - 2124

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0204571N: *Consolidated Trng Sys Dev*	**PROJECT** 2124: *Air Warfare Training*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Human/Instructional Systems Integration				
Systems Development: Common MTS/TACSAF Technology Development	1	2012	4	2018
Systems Development: DMRT/Class Debrief & APAARS	1	2012	2	2013
Systems Development: Hypoxia/Spatial Disorientation Technology (Fixed/Rotary)	1	2012	4	2015
Systems Development: Training Common Architecture (TRACE)	4	2012	4	2014
Production Milestones: DMRT-CLASS DEBRIEF & APAARS, 1ST ARTICLE	2	2013	2	2013
Production Milestones: FIXED WING HYPOXIA, 1ST ARTICLE	4	2012	4	2012
Production Milestones: ROTARY WING HYPOXIA/SPATIAL DISORIENTATION (SD)	4	2015	4	2015
Production Milestones: TACT AIR MTS	4	2013	4	2013
Production Milestones: P-3C MTS/PMATT	4	2014	4	2014
Production Milestones: P-8A MTS/PMATT	4	2015	4	2015
Production Milestones: UAS MTS	4	2016	4	2016
Production Milestones: LVC MTS	4	2017	4	2017
Production Milestones: UAS/2 MTS	4	2018	4	2018
Sensors and Environment				
Systems Development: Common/Platform Sensors AND ENVIRONMENT MODELS	1	2012	4	2018
Systems Development: Weather	1	2012	4	2013
Systems Development: COMMS/EW	1	2013	4	2018
Production Milestones: SERE	1	2012	1	2012
Production Milestones: REAL-TIME ATMOSPHERICS	4	2013	4	2013
Production Milestones: IDS4	4	2013	4	2013
Production Milestones: UAS/LVC	4	2016	4	2016

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0204571N: *Consolidated Trng Sys Dev*	PROJECT 2124: *Air Warfare Training*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Production Milestones: FUSED SENSORS UAS	4	2017	4	2017
Production Milestones: COMMS/EW	4	2018	4	2018
Systems Engineering and Integration				
Systems Development: TACAIR HYPOXIA	1	2012	4	2012
Systems Development: EDRT/APAARS	1	2012	4	2012
Systems Development: UAS COMMON MTS COMPONENTS	1	2014	4	2014
Production Milestones: F/A-18 ROBD-SD	4	2012	4	2012
Production Milestones: DMRT/EDRT	4	2012	4	2012
Production Milestones: UAS COMMON MTS COMPONENTS	4	2014	4	2014
Live Virtual Constructive (LVC) and Visuals				
Systems Development: Live	1	2012	4	2016
Systems Development: Virtual/Visuals	1	2012	4	2017
Systems Development: Constructive	1	2012	4	2017
Systems Development: Integrated LVC	1	2014	4	2018
Production Milestones: SYMBOLIGY SET	4	2014	4	2014
Production Milestones: LVC DATALINK	4	2016	4	2016
Production Milestones: TACTICAL PTT DEMO	4	2013	4	2013
Production Milestones: NASMP/TACTAIR UPGRADE	4	2012	4	2012
Production Milestones: MOBILITY PTT	4	2015	4	2015
Production Milestones: CNATRA PTT	4	2015	4	2015
Production Milestones: VIRTUAL/CONSTRUCTIVE MISSION REHERSAL	4	2017	4	2017
Production Milestones: TACSAF DEMO 1	4	2014	4	2014
Production Milestones: TACSAF DEMO 2	4	2016	4	2016
Production Milestones: TACSAF MISSION REHERSAL	4	2017	4	2017
Production Milestones: LVC PERSISTANT CAPABILITY DEMO	4	2018	4	2018

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0204571N: *Consolidated Trng Sys Dev*	PROJECT 3093: *TACTS/LATR Replacement*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
3093: *TACTS/LATR Replacement*	49.846	6.311	2.511	19.532	-	19.532	16.900	21.570	4.958	4.609	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

Tactical Combat Training System (TCTS) will provide the Navy a replacement for major portions of the Tactical Aircrew Combat Training System (TACTS) and Large Area Tracking Range (LATR) systems. TCTS will also provide fleet deployable training for at-sea training and tactics development. By providing a rangeless capability, the system will greatly increase the area where live instrumented training can be conducted. Fielding of a pod system is complete at TACTS sites. The program incorporates an evolutionary development (incremental) towards an encrypted system capable of supporting a broad spectrum of naval platforms through weapons simulations, participant weapons system stimulation, open architecture and an encrypted/long range secure data link.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: TACTS/LATR REPLACEMENT	6.311	2.511	19.532
Articles:	0	0	0
Description: Tactical Combat Training System (TCTS): Qualify and complete the Rangeless Pod system fielding for CVW-5 CVN installation, including the complete Integrated Logistics products and training. Define Test & Training Enabling Achitecture (TENA) compliant interface between TCTS and an Advance Display System (ADS). Develop a Rack-Mounted subsystem for use on rotary wing and transport aircraft. Continue development of the encrypted data link. Develop related training range integration.			
FY 2012 Accomplishments: Completed acquisition activities for encryption development contract. Conducted Material Development Decision, Technical Readiness Assessment and developed cost estimates.			
FY 2013 Plans: Prepare Request for Proposal, Milestone B Review and conduct Pre-Engineering Manufacturing Development Model phase activities.			
FY 2014 Plans: Milestone B approval. Begin encryption integration activities into TCTS and conduct integration Systems Requirements Review (SRR).			
Accomplishments/Planned Programs Subtotals	6.311	2.511	19.532

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0204571N: *Consolidated Trng Sys Dev*	PROJECT 3093: *TACTS/LATR Replacement*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• OPN/4204: *Weapons Range Support Equipment (WRSE)/TCTS*	4.556	4.681	4.269		4.269	4.383	4.494	4.610	4.698	Continuing	Continuing
• APN/0725: *Other Production Charges/Tactical Combat Training System (TCTS)*	10.124	3.399	5.268		5.268	5.815	3.640	20.797	21.573	Continuing	Continuing

Remarks

D. Acquisition Strategy

Tactical Combat Training System (TCTS) will employ an evolutionary incremental acquisition strategy from base systems and provide for the development of the system to meet the full Operational Requirements Document requirements. TCTS increment one is a cooperative program with the United States Air Force (USAF) P5 Combat Training System program.

E. Performance Metrics

Rockwell Collins: National Security Agency (NSA) approved encrypted Data Link Transceiver (DLT). Successful Engineering Development Model testing of encrypted DLT requirements with NSA.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0204571N: *Consolidated Trng Sys Dev*	PROJECT 3093: *TACTS/LATR Replacement*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Prior Year Prod Dev No Longer Funded in the Budget or Out Years (Hardware Development)	Various	Various:Various	10.901	0.000		0.000		0.000		-		0.000	0.000	10.901	10.901
		Subtotal	10.901	0.000		0.000		0.000		0.000		0.000	0.000	10.901	10.901

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Software Development	TBD	TBD:TBD	0.000	0.000		0.000		15.224	Apr 2014	-		15.224	0.000	15.224	
Systems Integration	C/CPFF	TYBRIN:CHINA LAKE, CA	0.000	1.222	Aug 2012	0.000		0.000		-		0.000	0.000	1.222	1.222
Systems Integration	WR	NSWC-DL:DAHLGREN, VA	0.000	0.089	Dec 2011	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Prior Year Support No Longer Funded in the Budget or Out Years (Software Development)	Various	Various:Various	23.857	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
		Subtotal	23.857	1.311		0.000		15.224		0.000		15.224			

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Operational Test & Evaluation	WR	OPER T&E:NORFOLK, VA	0.043	0.000		0.030	Nov 2012	0.020	Nov 2013	-		0.020	Continuing	Continuing	Continuing
Developmental Test & Evaluation	WR	NAWC-AD:PAX RIVER, MD	0.300	0.251	Nov 2011	0.220	Nov 2012	0.660	Nov 2013	-		0.660	Continuing	Continuing	Continuing
Prior Year T&E No Longer Funded in the Budget or	Various	Various:Various	3.382	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0204571N: *Consolidated Trng Sys Dev*	PROJECT 3093: *TACTS/LATR Replacement*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Out Years (Developmental Test & Evaluation)															
		Subtotal	3.725	0.251		0.250		0.680		0.000		0.680			

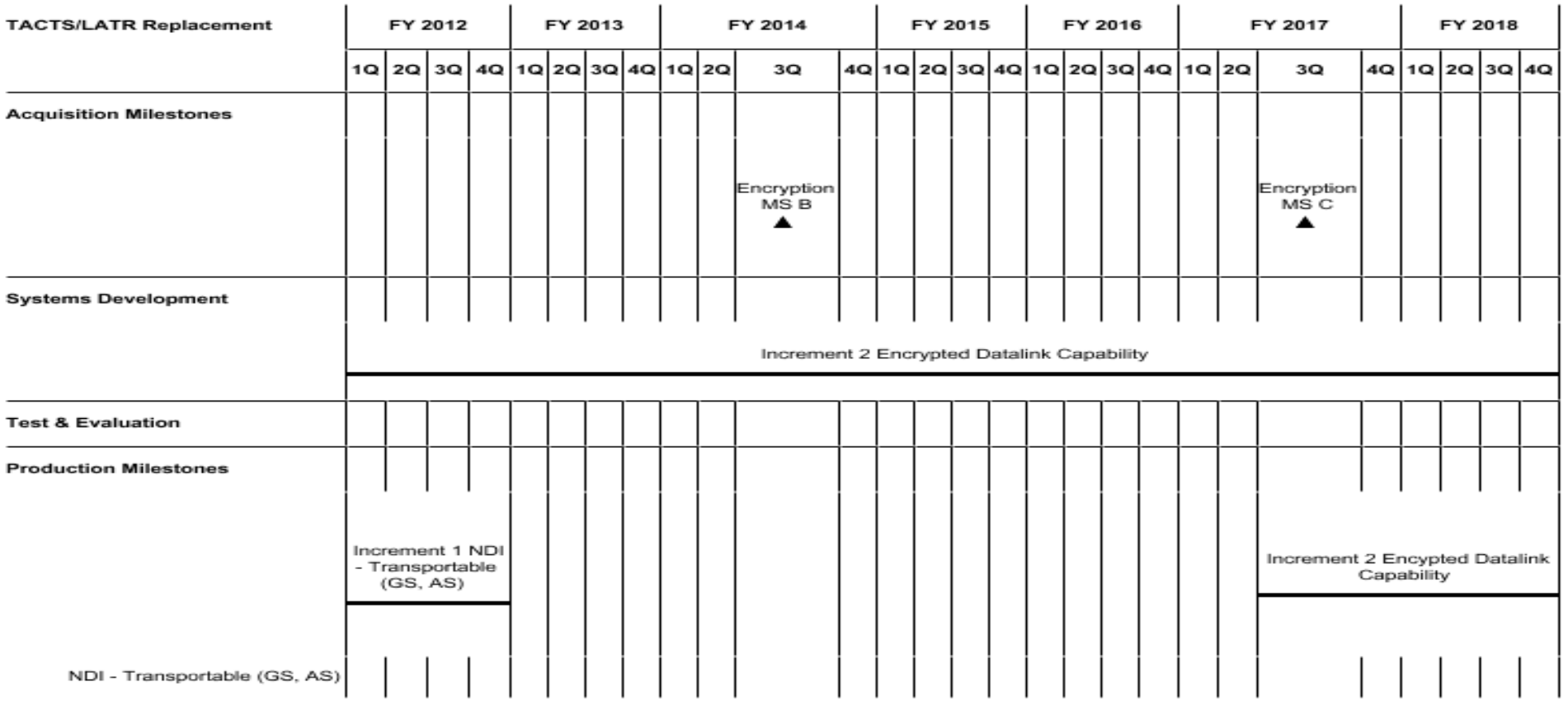
Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Contractor Engineering Support	C/CPFF	TYBRIN:CHINA LAKE, CA	2.675	1.603	Nov 2011	0.795	Nov 2012	0.680	Nov 2013	-		0.680	0.000	5.753	5.753
Government Engineering Support	WR	NAWC-WD:CHINA LAKE, CA	0.150	0.284	Nov 2011	0.548	Nov 2012	0.310	Nov 2013	-		0.310	Continuing	Continuing	Continuing
Government Engineering Support	WR	NAWC-AD:PAX RIVER, MD	1.502	2.837	Nov 2011	0.875	Nov 2012	2.615	Nov 2013	-		2.615	Continuing	Continuing	Continuing
Travel	PO	NAVAIR:PAX RIVER, MD	0.028	0.025	Nov 2011	0.043	Nov 2012	0.023	Nov 2013	-		0.023	Continuing	Continuing	Continuing
Prior Year Mgmt No Longer Funded in the Budget or Out Years (Contractor Engineering Support)	Various	Various:Various	7.008	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
		Subtotal	11.363	4.749		2.261		3.628		0.000		3.628			

	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	49.846	6.311		2.511		19.532		0.000		19.532			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0204571N: *Consolidated Trng Sys Dev*	PROJECT 3093: *TACTS/LATR Replacement*



2014PB - 0204571N - 3093

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0204571N: *Consolidated Trng Sys Dev*	**PROJECT** 3093: *TACTS/LATR Replacement*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
TACTS/LATR Replacement				
Acquisition Milestones: Encryption MS B	3	2014	3	2014
Acquisition Milestones: Encryption MS C	3	2017	3	2017
Systems Development: Increment 2 Encrypted Datalink Capability	1	2012	4	2018
Production Milestones: Increment 1 - NDI - Transportable (GS, AS)	1	2012	4	2012
Production Milestones: Increment 2 Encypted Datalink Capability	3	2017	4	2018

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0204571N: *Consolidated Trng Sys Dev*	PROJECT 3356: *High Fidelity Surface Trainers*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
3356: *High Fidelity Surface Trainers*	0.000	0.000	0.000	9.537	-	9.537	6.924	7.714	2.492	0.000	0.000	26.667
Quantity of RDT&E Articles	0	0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

This line provides SEA 21 (PMS 339) funds for development of a High Fidelity Aegis Integrated Air and Missile Defense (IAMD) trainer to enable advanced warfare training (AWT) Phase II objectives to be accomplished ashore. This line also provides funds for development of a High Fidelity Anti-Submarine Warfare (ASW) synthetic trainer to support Active and Passive Sonar Operations, Target Motion Analysis, Sonobuoy Localization, Command and Control, and execution of ASW Kill chain. Funds are provided for advanced component technology development, prototype evaluation, and technology readiness level assessment. Development of these trainers is in response to CNO Wholeness Review and COMNAVSURFOR requirements.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: IAMD Shore Tactical Trainer ***Articles:*** ***FY 2014 Plans:*** Develop a high fidelity AEGIS IAMD Shore Based Trainer (SBT), research and define advanced technologies necessary to introduce a SBT that will support scenario driven watch team practice of Standard Operating Procedures (SOPs), Tactics Techniques and Procedures (TTPs) and Pre-Planned Responses (PPRs) against advanced threats in a realistic environment.	0.000	0.000	7.570 0
Title: ASW Shore Tactical Trainer ***Articles:*** ***FY 2014 Plans:*** Develop a high fidelity ASW SBT, research and define interface messages for use with the Submarine Multimission Team Trainer (SMMTT)/Surface Anti-Submarine Warfare Synthetic Trainer (SAST) HLA interface specification and research and define hardware that maximizes the benefits of COTS equipment and reuse of tactical software components.	0.000	0.000	1.967 0
Accomplishments/Planned Programs Subtotals	0.000	0.000	9.537

C. Other Program Funding Summary ($ in Millions)

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0204571N: *Consolidated Trng Sys Dev*	PROJECT 3356: *High Fidelity Surface Trainers*

C. Other Program Funding Summary ($ in Millions)

Remarks

D. Acquisition Strategy

The software development for High Fidelity Surface Trainers is accounted for in this RDT&E line. All production kits are procured in OPN PE 0804731N BLI 5660 cost codes 1.7 and 1.8

E. Performance Metrics

NSWC Dahlgren: Approved IAMD SBT Enginnering Development Model (EDM). Successful engineering development model introducing advanced technologies necessary to simulate/stimulate the AEGIS Combat System elements required for operators stated in AEGIS Ashore Baseline 9 Weapons Specification (WS) 21200 series.

NSWC Carderock: Approved ASW SBT EDM. Successful engineering development model introducing advanced technologies necessary to 1) simulate performance of AN/SQQ-89A(V)15 sonar system in alignment with fielding plan for initial Sonar software versions with capability to receive AN/SQQ-89A(V)15 coordinated routine modernizations and 2) replicate Combat Information Center (CIC) configuration and functionalities representative of AEGIS Baseline 9.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0204571N: *Consolidated Trng Sys Dev*	PROJECT 3356: *High Fidelity Surface Trainers*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
SYSTEMS ENG	WR	NSWC DAHLGREN:DAHLGREN,VA	0.000	0.000		0.000		7.367	Nov 2013	-		7.367	0.000	7.367	
SYSTEMS ENG	WR	NSWC CARDEROCK:CARDEROCK, MD	0.000	0.000		0.000		2.170	Nov 2013	-		2.170	0.000	2.170	
		Subtotal	0.000	0.000		0.000		9.537		0.000		9.537	0.000	9.537	

	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	0.000		0.000		9.537		0.000		9.537	0.000	9.537	

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0204571N: *Consolidated Trng Sys Dev*	PROJECT 3356: *High Fidelity Surface Trainers*

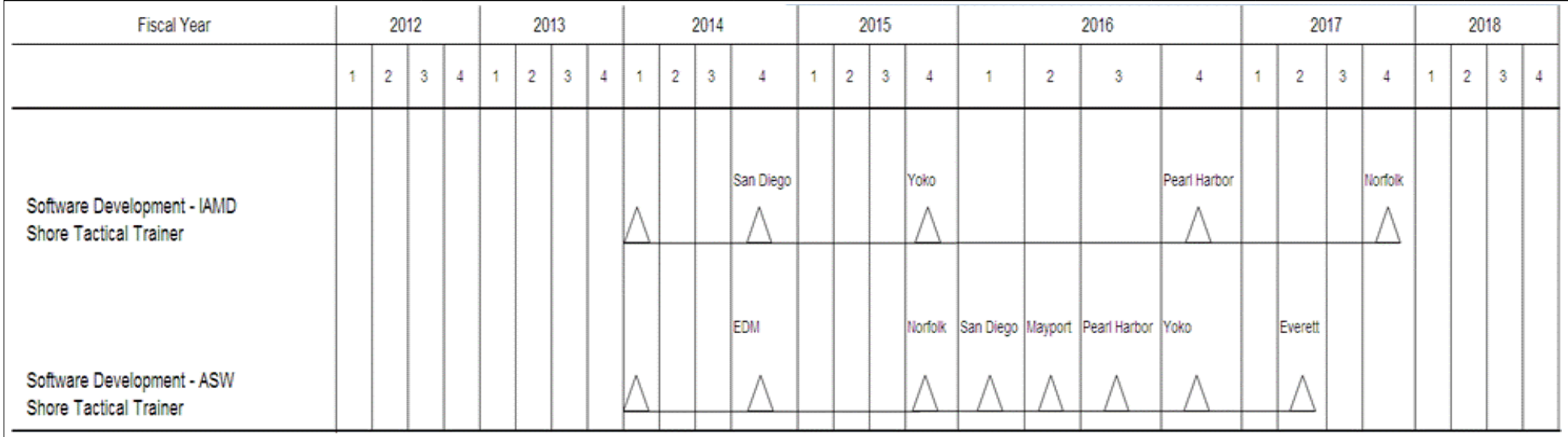


Exhibit R-4A, RDT&E Schedule Details: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0204571N: *Consolidated Trng Sys Dev*	**PROJECT** 3356: *High Fidelity Surface Trainers*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 3356				
Software Development - IAMD Shore Tactical Trainer	1	2014	4	2017
Software Development - ASW Shore Tactical Trainer	1	2014	2	2017