Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Navy												Date: March 2014
Appropriation/Budget Activity 1319: *Research, Development, Test & Evaluation, Navy I* BA 4: *Advanced Component Development & Prototypes (ACD&P)*					R-1 Program Element (Number/Name) PE 0603553N *I Surface ASW*							
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
Total Program Element	182.401	3.841	2.349	1.060	-	1.060	1.104	1.134	1.155	1.180	Continuing	Continuing
1704.: *Undersea Warfare*	182.401	3.841	2.349	1.060	-	1.060	1.104	1.134	1.155	1.180	Continuing	Continuing

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

The CNO's ASW initiative is a focused effort to identify the most promising ASW technologies through a process of discovery, assessment, experimentation, and analysis. The CNO's ASW initiative will coordinate the development of technologies which move beyond incremental or marginal improvements in ASW effectiveness. The CNO's vision of "fundamentally changing the way ASW is currently conducted to render the enemy submarine irrelevant against US and coalition forces" necessitates a change in the calculus of how the US Navy conducts ASW. Central to the CNO's ASW initiatives achieving the CNO's vision are several innovative approaches which include using the art-of-the-technologically-possible; minimizing force-on-force; reducing the ASW end-to-end time line; supporting rapid maneuver; developing off-board and distributed ASW detection systems; and finding innovative weapons solutions. To achieve these key approaches, it is essential to develop new ASW technologies and conduct at-sea experiments to prove/disprove technology concepts and collect corroborating data. An OPNAV letter of direction limits the scope of this project, beginning in FY10, to the development/test of CAS/VDS and the continuation of studies in support of the ASW Initiative thereafter. Starting in FY13, the CAS/VDS effort has been transferred to the Littoral Combat Ship PE 0603581N, Project 3129 budget, as part of the ASW Mission Module.

B. Program Change Summary ($ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	6.704	2.349	1.094	-	1.094
Current President's Budget	3.841	2.349	1.060	-	1.060
Total Adjustments	-2.863	-	-0.034	-	-0.034
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.075	-			
• Program Adjustments	-	-	-0.017	-	-0.017
• Rate/Misc Adjustments	-	-	-0.017	-	-0.017
• Congressional General Reductions Adjustments	-0.588	-	-	-	-
• Congressional Directed Reductions Adjustments	-2.200	-	-	-	-

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Navy	Date: March 2014
Appropriation/Budget Activity 1319: *Research, Development, Test & Evaluation, Navy I* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 Program Element (Number/Name)** PE 0603553N *I Surface ASW*

Change Summary Explanation

Starting in FY13, the CAS/VDS effort has been transferred to the Littoral Combat Ship PE 0603581N, Project 3129 budget, as part of the ASW Mission Module.

Exhibit R-2A, RDT&E Project Justification: PB 2015 Navy			Date: March 2014
Appropriation/Budget Activity 1319 / 4	R-1 Program Element (Number/Name) PE 0603553N / *Surface ASW*	Project (Number/Name) 1704. / *Undersea Warfare*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
1704.: *Undersea Warfare*	182.401	3.841	2.349	1.060	-	1.060	1.104	1.134	1.155	1.180	Continuing	Continuing
Quantity of RDT&E Articles	0.000	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

The CNO's ASW initiative is a focused effort to identify the most promising ASW technologies through a process of discovery, assessment, experimentation, and analysis. The CNO's ASW initiative will coordinate the development of technologies which move beyond incremental or marginal improvements in ASW effectiveness. The CNO's vision of "fundamentally changing the way ASW is currently conducted to render the enemy submarine irrelevant against US and coalition forces" necessitates a change in the calculus of how the US Navy conducts ASW. Central to the CNO's ASW initiatives achieving the CNO's vision are several innovative approaches which include using the art-of-the-technologically-possible; minimizing force-on-force; reducing the ASW end-to-end time line; supporting rapid maneuver; developing off-board and distributed ASW detection systems; and finding innovative weapons solutions. To achieve these key approaches, it is essential to develop new ASW technologies and conduct at-sea experiments to prove/disprove technology concepts and collect corroborating data. An OPNAV letter of direction limits the scope of this project, beginning in FY10, to the development/test of CAS/VDS and the continuation of studies in support of the ASW Initiative thereafter. Starting in FY13, the CAS/VDS effort has been transferred to the Littoral Combat Ship PE 0603581N, Project 3129 budget, as part of the ASW Mission Module.

The detection and identification of underwater mines based on structural acoustic features has been successfully demonstrated. This structural acoustics (SA) approach offers significant increases in coverage rates together with higher probabilities of detection and lower false alarm rates against most of the threat mines the Navy is expected to encounter in the foreseeable future. Highly successful blind tests have been carried out demonstrating high performance detection and classification with low false alarm rates. This technology is now in transition to the fleet. The work proposed here, is to develop and demonstrate a long range/high coverage rate ASW systems concept based on the Low-Frequency Broadband (LFBB) technology using a fleet sonar AN/SQQ-89 on surface combatants.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: CNO ASW Initiatives	1.810	1.109	1.060
Articles:	-	-	-
FY 2013 Accomplishments: Collected systems and performance data during select Fleet exercises and at-sea testing events. Analyzed and distributed collected data. Conducted studies and analysis of alternatives in support of the CNO ASW initiative.			
FY 2014 Plans: Collect systems and performance data during select Fleet exercises and at-sea testing events. Analyze and distribute collected data. Conduct studies and analysis of alternatives in support of the CNO ASW initiative.			
FY 2015 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Navy		Date: March 2014
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0603553N / *Surface ASW*	**Project (Number/Name)** 1704. / *Undersea Warfare*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Collect systems and performance data during select Fleet exercises and at-sea testing events. Analyze and distribute collected data. Conduct studies and analysis of alternatives in support of the CNO ASW initiative.			
Title: AN/SQS-53C Structural Acoustics Sensor Program	2.031	1.240	-
Articles:	-	-	-
Description: The detection and identification of underwater mines based on structural acoustic features has been successfully demonstrated. This structural acoustics (SA) approach offers significant increases in coverage rates together with higher probabilities of detection and lower false alarm rates against most of the threat mines the Navy is expected to encounter in the foreseeable future. Highly successful blind tests have been carried out demonstrating high performance detection and classification with low false alarm rates. This technology is now in transition to the fleet. The Navy will develop and demonstrate a long range/high coverage rate ASW systems concept based on the LFBB technology using a fleet sonar AN/SQQ-89 on surface combatants. Specifically, using a standard AN/SQQ-53C as a source and the Multi-Function Towed Array (MFTA) as a receiver. In the Speed to Fleet effort, the Navy will build a special processor that will "roll on" the surface combatant and be able to be integrated into the existing AN/SQQ-89 system. The processor will run codes already developed in the ONR programs, but now adapted to the ASW problem. Ultimately, the demonstration will involve testing and documenting the ability of the approach to distinguish and correctly identify low Doppler bottom, near bottom, submarines and false targets as a function of speed and range from target fields. ***FY 2013 Accomplishments:*** - Continued processor build. - Continued software build. ***FY 2014 Plans:*** - Continue processor build. - Continue software build. - Complete demonstration test planning. - Complete system installation. ***FY 2015 Plans:*** N/A			
Accomplishments/Planned Programs Subtotals	3.841	2.349	1.060

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

Exhibit R-2A, RDT&E Project Justification: PB 2015 Navy		Date: March 2014
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0603553N / *Surface ASW*	**Project (Number/Name)** 1704. / *Undersea Warfare*

D. Acquisition Strategy

Use Navy Laboratories and University Affiliated Research Centers (UARCs).
N/A

E. Performance Metrics

Investigate promising ASW technologies via annual at-sea experiments.
Conduct Demonstration Sea Tests 3Q14 (Gray Ship).

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Navy		Date: March 2014
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0603553N / *Surface ASW*	**Project (Number/Name)** 1704. / *Undersea Warfare*

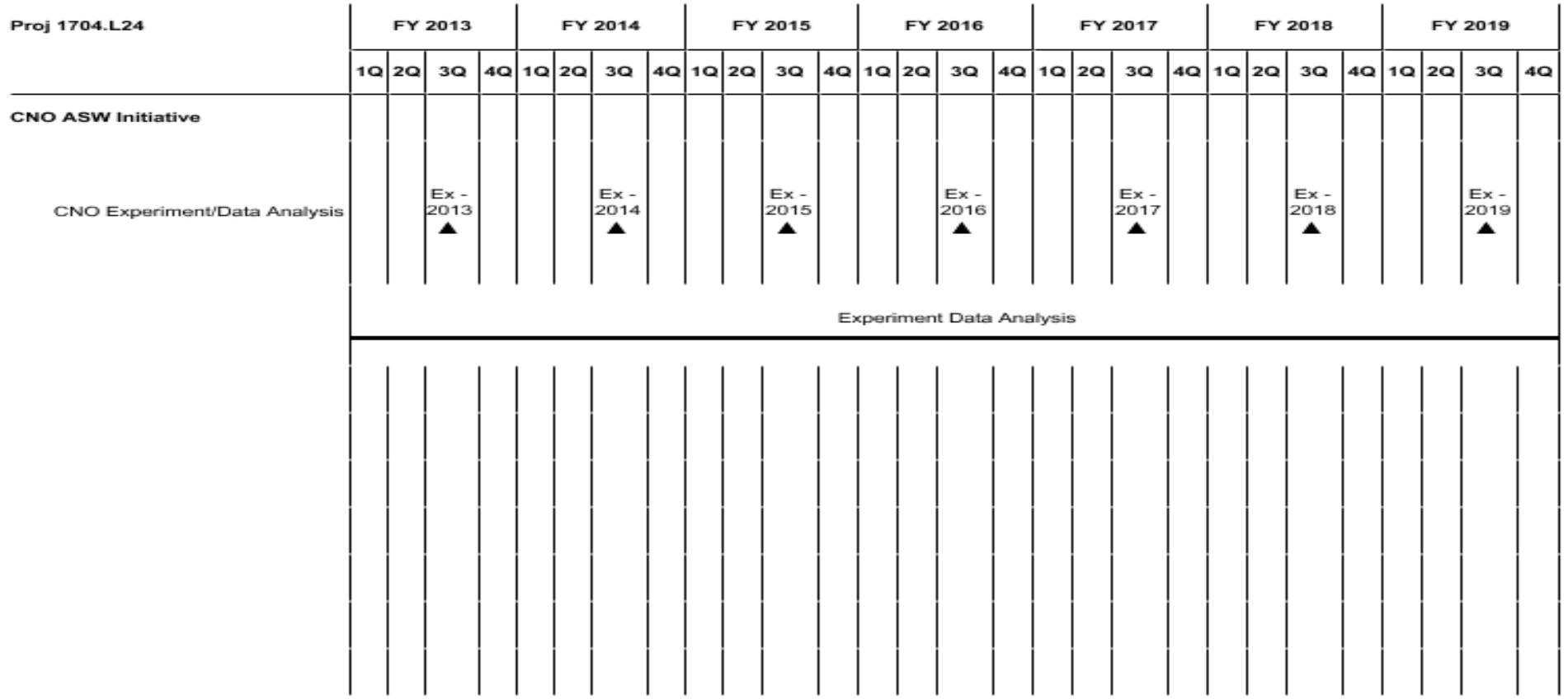

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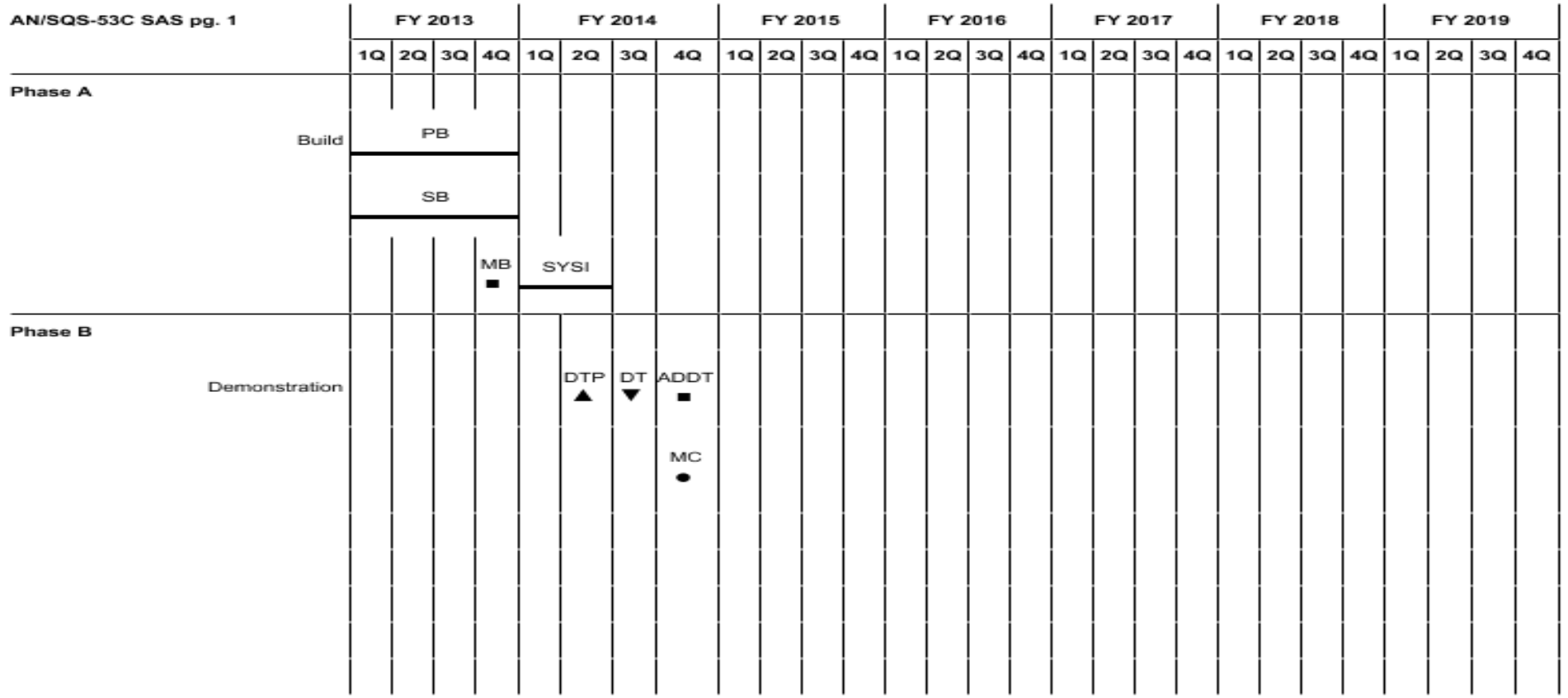
Exhibit R-4, RDT&E Schedule Profile: PB 2015 Navy		Date: March 2014
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0603553N / *Surface ASW*	**Project (Number/Name)** 1704. / *Undersea Warfare*



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