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Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Navy **Date:** March 2014

Appropriation/Budget Activity 1319: <i>Research, Development, Test & Evaluation, Navy / BA 5: System Development & Demonstration (SDD)</i>	R-1 Program Element (Number/Name) PE 0604518N / <i>Combat Information Center Conv</i>
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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	48.463	0.817	-	-	-	-	-	-	-	-	-	49.280
3094: <i>USW Decision Support</i>	48.463	0.817	-	-	-	-	-	-	-	-	-	49.280

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

A. Mission Description and Budget Item Justification

The objective of this Program Element (PE), under Project 3094, is to provide capabilities to shorten command and control (C2) decision processes for detection-to-engagement across multiple platforms, including those with low-bandwidth communications or intermittent connectivity. The Undersea Warfare Decision Support System (USW-DSS) decision support tool uses a Service Oriented Architecture (SOA) encompassing existing communication links, networks, and contact pictures comprised of sensor data from air, surface, submarine, theater, and surveillance platforms to connect sensors and weapons. The capabilities delivered by USW-DSS are critical not only for the Sea Combat Commander (SCC) but also for the Theater USW Commander (TUSWC) and Anti Submarine Warfare Commander (ASWC) to fulfill the requirement for an integrated capability to plan, conduct, and coordinate USW operations across multiple ASW platforms. USW-DSS will provide common and improved visualization, integrated USW platform sensor data sharing, reduced data entry, improved sensor performance predictions, data fusion, and reduced redundancy across USW Tactical Decision Aids (TDA). The program will provide a greater understanding of the undersea battle space by allowing the entire force (carrier/expeditionary strike group, theater, or other) to have a common and thorough understanding of the battle space with characterized uncertainties.

USW-DSS Build 2 will be hosted on the Integrated Shipboard Network System (ISNS) as one of the first Early Adopters, leveraging initial SOA Reference Implementation. USW-DSS will then be hosted on the Consolidated Afloat Networks and Enterprise Services (CANES) architecture, which will be fully SOA enabled. Build 2 Release 3 (B2R3), in response to Fleet requests, will provide improved and additional functionality and increased stability/reliability.

<u>B. Program Change Summary (\$ in Millions)</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015 Base</u>	<u>FY 2015 OCO</u>	<u>FY 2015 Total</u>
Previous President's Budget	0.918	-	-	-	-
Current President's Budget	0.817	-	-	-	-
Total Adjustments	-0.101	-	-	-	-
• Congressional General Reductions	-	-	-	-	-
• Congressional Directed Reductions	-	-	-	-	-
• Congressional Rescissions	-	-	-	-	-
• Congressional Adds	-	-	-	-	-
• Congressional Directed Transfers	-	-	-	-	-
• Reprogrammings	-	-	-	-	-
• SBIR/STTR Transfer	-0.023	-	-	-	-
• Congressional General Reductions	-0.078	-	-	-	-
Adjustments					

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<u>Change Summary Explanation</u> Technical: Not applicable. Schedule: Due to a reprioritization of requirements based on results of the Resources, Requirements Review Board (R3B) and the Sponsor's Program Proposal (SPP), USW-DSS will enter the sustainment phase after operational test and evaluation events in FY13. USW-DSS B2R3 will provide an incremental update of B2 to field as much capability to the Fleet as possible.		

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Navy **Date:** March 2014

Appropriation/Budget Activity 1319 / 5	R-1 Program Element (Number/Name) PE 0604518N / <i>Combat Information Center Conv</i>	Project (Number/Name) 3094 / <i>USW Decision Support</i>
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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
3094: <i>USW Decision Support</i>	48.463	0.817	-	-	-	-	-	-	-	-	-	49.280
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

Project 3094 will develop the USW-DSS that will provide ASW C2 capabilities which enable the CNO vision for ASW Superiority using a "coordinated, networked force of submarines, surface ships, aircraft, and Integrated Undersea Surveillance System (IUSS) assets" with "common and unambiguous views that yield operational and tactical situational awareness in the undersea environment."

USW-DSS provides capabilities to shorten C2 decision processes for detection-to-engagement across multiple platforms, including those with low-bandwidth communications or intermittent connectivity. The USW-DSS decision support tool uses a SOA encompassing existing communication links, networks, and contact pictures comprised of sensor data from air, surface, submarine, theater, and surveillance platforms to connect sensors and weapons. The capabilities delivered by USW-DSS are critical not only for the SCC but also for the TUSWC and ASWC to fulfill the requirement for an integrated capability to plan, conduct, and coordinate USW operations across multiple ASW platforms. USW-DSS will provide common and improved visualization, integrated USW platform sensor data sharing, reduced data entry, improved sensor performance predictions, data fusion, and reduced redundancy across USW TDAs. The program will provide a greater understanding of the undersea battle space by allowing the entire force (carrier/expeditionary strike group, theater, or other) to have a common and thorough understanding of the battle space with characterized uncertainties.

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

	FY 2013	FY 2014	FY 2015
Title: USW-DSS Build 2 Release 3 Operational Evaluation			
Articles:	0.817	-	-
	-	-	-
FY 2013 Accomplishments: Completed USW-DSS Build 2 Release 3 Operational Evaluation in 3Q13 and performed assessment of results.			
FY 2014 Plans: N/A			
FY 2015 Plans: N/A			
Accomplishments/Planned Programs Subtotals	0.817	-	-

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

Line Item	FY 2013	FY 2014	FY 2015	FY 2015	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	Cost To	Total Cost
			Base	OCO	Total					Complete	
• OPN/2176: <i>USW Support Equipment (Related Portion)</i>	2.054	2.690	3.589	-	3.589	3.082	2.699	4.485	0.712	Continuing	Continuing

Remarks

D. Acquisition Strategy

- Hardware/Software integration contractor funded through SBIR Phase III contract.

E. Performance Metrics

- Reduce the Detect-to-Engage timeline, false contact rate, and false alarm rate by employing a SOA between the sensors and weapons.
- ASW Search Plan/Mission Planning reduced from 6 hours to 1 hour between USW-DSS Build 1 and Build 2.

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Exhibit R-4, RDT&E Schedule Profile: PB 2015 Navy **Date:** March 2014

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Proj 3094	FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019							
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q				
USW-DSS Test & Evaluation Events																																
<i>At-Sea Operational Evaluation</i>			Op Eval ▲																													
USW-DSS Deployment (funded via OPN BLI 2176)																																
	Deployment																															

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