

# UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Navy									DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)				R-1 ITEM NOMENCLATURE PE 0603654N: JT Service Explosive Ordn Dev							
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	111.850	20.966	25.873	1.000	26.873	25.261	24.667	22.870	17.353	Continuing	Continuing
0377: JT Service Expl Ord Disp System	11.616	12.494	16.882	1.000	17.882	14.579	15.878	13.230	9.776	Continuing	Continuing
1317: EOD Diving System	2.723	3.520	3.611	0.000	3.611	2.925	2.968	3.037	3.102	Continuing	Continuing
3177: Joint Counter Radio-Controlled IED Elec Warfare	93.947	0.000	0.471	0.000	0.471	0.475	0.475	0.475	0.474	Continuing	Continuing
4023: VSW MCM/Force Protection UUV	3.564	4.952	4.909	0.000	4.909	7.282	5.346	6.128	4.001	Continuing	Continuing
A. Mission Description and Budget Item Justification											
<p>This is a Joint Service Program. This program provides for the development of Explosive Ordnance Disposal tools and equipment for use by all military services. The responsibility is assigned to the Navy as single service manager, by Department of Defense Directive 5160.62 of 26 April 1989, for management of the Joint Service Explosive Ordnance Disposal Research and Development Program. Proliferation of sophisticated types of foreign and domestic ordnance and Improvised Explosive Devices necessitate a continuing development program to provide Explosive Ordnance Disposal personnel of all military services with the special equipment and tools required to support this mission. This program also provides life support related equipment necessary to support the performance of Navy Explosive Ordnance Disposal tasks underwater. This equipment must have inherently low acoustic and magnetic signatures in order to allow the Explosive Ordnance Disposal technician to safely approach, render-safe and dispose of sea mines and other underwater ordnance. This program also provides force protection of all military services against Radio Controlled Improvised Explosive Devices (RCIED) to prevent initiation. The Navy has been designated as DOD Executive Agent and Single Manager for Military Ground-Based Counter Radio-Controlled Improvised Explosive Electronic Warfare (CREW) Technology by DOD Directive 5101.14 of 11 June 2007, requiring RDT&amp;E to develop capabilities that meet joint requirements.</p>											
<p>*Beginning in FY10 the Joint Counter Radio Controlled IED Electronic Warfare program will move to RD TEN PE 0604653N.</p>											
<p>**FY11-FY15 funding was incorrectly placed in PE 0603654N. Funds should be in PE 0604653N.</p>											
<p>***This program element includes \$.555M for the Acquisition Workforce in FY 2009.</p>											

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APPROPRIATION/BUDGET ACTIVITY		R-1 ITEM NOMENCLATURE			
1319: Research, Development, Test & Evaluation, Navy		PE 0603654N: JT Service Explosive Ordn Dev			
BA 4: Advanced Component Development & Prototypes (ACD&P)					
B. Program Change Summary (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Previous President's Budget	114.127	21.054	0.000	0.000	0.000
Current President's Budget	111.850	20.966	25.873	1.000	26.873
Total Adjustments	-2.277	-0.088	25.873	1.000	26.873
• Congressional General Reductions		-0.088			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	-2.277	0.000			
• Program Adjustments	0.000	0.000	25.873	0.000	25.873
• Rate/Misc Adjustments	0.000	0.000	0.000	1.000	1.000
Change Summary Explanation					
Technical: Not applicable.					
Schedule: Not applicable.					
FY11 from previous President's Budget is shown as zero because no FY11-15 data was presented in President's Budget 2010.					

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Navy								<b>DATE:</b> February 2010			
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0603654N: <i>JT Service Explosive Ordn Dev</i>				<b>PROJECT</b> 0377: <i>JT Service Expl Ord Disp System</i>			
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
0377: <i>JT Service Expl Ord Disp System</i>	11.616	12.494	16.882	1.000	17.882	14.579	15.878	13.230	9.776	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		
<b>A. Mission Description and Budget Item Justification</b> Provides Explosive Ordnance Disposal personnel of all military services with the specialized equipment and tools required to support their mission of detection/location, identification, render-safe, recovery, field and laboratory evaluation, and disposal of unexploded ordnance (UXO) that is a threat to military operations, installations, personnel, or material. UXO includes foreign and domestic, both conventional and non-conventional, including Improvised Explosive Devices (IEDs). Advanced EOD Robot System consists of multiple interoperable robot systems. The first class of robot and the architecture for the system will be developed first, then the other classes of robots will be developed. Project Unit 0377: FY11 OCO Request: Continuous Improvement for the MK1 & MK2 Joint Service EOD robots used by EOD technicians when responding to IED incidents in OIF and OEF. *This project unit includes \$.057M for the Acquisition Workforce in FY 2009											
<b>B. Accomplishments/Planned Program (\$ in Millions)</b>											
						<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>	
EOD FUTURE RADIOGRAPHIC SYSTEMS (FRS) AND EOD DECISION SUPPORT SYSTEMS						7.115	6.933	4.657	0.000	4.657	
<i>FY 2009 Accomplishments:</i> Conducted Full Rate Production Decision Review for JEOD DSS, initiating production.											
<i>FY 2010 Plans:</i> Conduct Production decision for EOD Future Radiographic System (FRS) and initiate development of increment one for the system.											
<i>FY 2011 Base Plans:</i> Continue development of incremental capabilities for the JEOD DSS and Future Radiographic System.											
ACQUISITION WORKFORCE FUND						0.057	0.000	0.000	0.000	0.000	

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: Funded DoD Acquisition Workforce Fund.						
JOINT LASER ORDNANCE NEUTRALIZATION SYSTEMS (JLONS)  FY 2009 Accomplishments: Conducted technology development efforts relative to the use of laser energy to neutralize or disrupt insensitive munitions.  FY 2010 Plans: Continue technology Development for JLONS in preparation for the formal acquisition program.  FY 2011 Base Plans: Initiate project to expand EOD's capability to detect and/or identify potential Weapons Mass Destruction threats.		2.244	0.961	3.287	0.000	3.287
ADVANCED EOD ROBOTICS  FY 2009 Accomplishments: Completed development of improved command and control for EOD Robotic systems.  FY 2010 Plans: Initiate Advanced EOD Robot System acquisition project. Advanced EOD Robot System consists of multiple interoperable robot systems. The first class of robot and the architecture for the system will be developed first, then the other classes of robots will be developed.  FY 2011 Base Plans: Continue development of Advanced EOD Robot System and develop improved capabilities for existing EOD robot configurations		1.200	3.100	3.857	1.000	4.857

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B. Accomplishments/Planned Program (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 OCO Plans: Planned Program OCO (\$1M): Continuous Improvement for the MK1 and MK2 Joint Service EOD robots used by EOD technicians when responding to IED incidents in OIF and OEF. Funding required to provide for development of these theater specific tools.					
TCM AN/PLT-XXX SYSTEMS  FY 2009 Accomplishments: Conducted continuous improvement sub-projects for the fielded TCM systems.  FY 2010 Plans: Make improvements to fielded TCM systems to include loadset refinements.  FY 2011 Base Plans: Initiate project to develop capability to determine the state of (or neutralize) Electronic Safe/Arm Fuzes for EOD purpose.	1.000	1.000	3.181	0.000	3.181
UNMANNED AERIAL SYSTEMS  FY 2010 Plans: Initiate project to develop EOD required capabilities Unmanned Aerial Systems.  FY 2011 Base Plans: Continue development of Unmanned Aerial Systems Capabilities for the EOD community.	0.000	0.500	1.900	0.000	1.900
Accomplishments/Planned Programs Subtotals	11.616	12.494	16.882	1.000	17.882

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Navy								<b>DATE:</b> February 2010																										
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0603654N: <i>JT Service Explosive Ordn Dev</i>			<b>PROJECT</b> 0377: <i>JT Service Expl Ord Disp System</i>																											
<p><b><u>C. Other Program Funding Summary (\$ in Millions)</u></b></p> <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;"><u>Line Item</u></th> <th style="text-align: right;"><u>FY 2009</u></th> <th style="text-align: right;"><u>FY 2010</u></th> <th style="text-align: right;"><u>FY 2011</u> <u>Base</u></th> <th style="text-align: right;"><u>FY 2011</u> <u>OCO</u></th> <th style="text-align: right;"><u>FY 2011</u> <u>Total</u></th> <th style="text-align: right;"><u>FY 2012</u></th> <th style="text-align: right;"><u>FY 2013</u></th> <th style="text-align: right;"><u>FY 2014</u></th> <th style="text-align: right;"><u>FY 2015</u></th> <th style="text-align: right;"><u>Cost To</u> <u>Complete</u></th> <th style="text-align: right;"><u>Total Cost</u></th> </tr> </thead> <tbody> <tr> <td>• OPN/5509: <i>EOD Equipment</i></td> <td style="text-align: right;">10.105</td> <td style="text-align: right;">5.303</td> <td style="text-align: right;">2.000</td> <td style="text-align: right;">0.000</td> <td style="text-align: right;">2.000</td> <td style="text-align: right;">15.200</td> <td style="text-align: right;">12.200</td> <td style="text-align: right;">12.620</td> <td style="text-align: right;">10.243</td> <td style="text-align: right;">0.000</td> <td style="text-align: right;">67.671</td> </tr> </tbody> </table> <p><b><u>D. Acquisition Strategy</u></b>            Analysis of Alternatives (AOA) studies are always conducted prior to the initiation of new subprojects. The AOA addresses and emphasizes acquisition strategies of the most cost-effective solution over the subprojects' life-cycle. The acquisition strategies observe the following hierarchy of alternatives: commercial item (including modification), non-developmental item (including modification), and lastly, developmental programs. Contracting for RDT&amp;E, if required, is always competitive and when feasible, production options are included.</p> <p><b><u>E. Performance Metrics</u></b>            Conducted Full Rate Production Decision Review for JEOD Decision Support System (DSS), initiating production. Conducted Interim Progress Review for EOD Future Radiographic System (FRS).</p>											<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u> <u>Base</u>	<u>FY 2011</u> <u>OCO</u>	<u>FY 2011</u> <u>Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>	• OPN/5509: <i>EOD Equipment</i>	10.105	5.303	2.000	0.000	2.000	15.200	12.200	12.620	10.243	0.000	67.671
<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u> <u>Base</u>	<u>FY 2011</u> <u>OCO</u>	<u>FY 2011</u> <u>Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>																							
• OPN/5509: <i>EOD Equipment</i>	10.105	5.303	2.000	0.000	2.000	15.200	12.200	12.620	10.243	0.000	67.671																							

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy											DATE: February 2010			
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)				<b>R-1 ITEM NOMENCLATURE</b> PE 0603654N: JT Service Explosive Ordn Dev				<b>PROJECT</b> 0377: JT Service Expl Ord Disp System						
<b>Product Development (\$ in Millions)</b>														
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Primary Hardware Development	WR	EODTD,IH,MD Not Specified	110.694	4.900	Oct 2009	8.093	Oct 2010	1.000		9.093	Continuing	Continuing	Continuing	
Software Development	WR	EODTD, IH, MD Not Specified	16.934	1.500	Oct 2009	1.800	Oct 2010	0.000		1.800	Continuing	Continuing	Continuing	
ILS	WR	EODTD, IH,MD Not Specified	41.670	1.250	Oct 2009	1.750	Oct 2010	0.000		1.750	Continuing	Continuing	Continuing	
<b>Subtotal</b>			169.298	7.650		11.643		1.000		12.643				
<b>Remarks</b>														
<b>Support (\$ in Millions)</b>														
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Program Management Support	C/CPFF	ITT, Arlington, VA Not Specified	5.805	0.166	Oct 2009	0.300	Oct 2010	0.000		0.300	Continuing	Continuing	Continuing	
<b>Subtotal</b>			5.805	0.166		0.300		0.000		0.300				
<b>Remarks</b>														

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy											DATE: February 2010			
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)				<b>R-1 ITEM NOMENCLATURE</b> PE 0603654N: JT Service Explosive Ordn Dev				<b>PROJECT</b> 0377: JT Service Expl Ord Disp System						
<b>Test and Evaluation (\$ in Millions)</b>														
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Developmental Test & Evaluation	WR	EODTD,IH, MD Not Specified	66.547	1.800	Oct 2009	2.300	Oct 2010	0.000		2.300	Continuing	Continuing	Continuing	
Operation Test & Evaluation	WR	EODTD, IH,MD Not Specified	8.983	0.650	Oct 2009	0.300	Oct 2010	0.000		0.300	Continuing	Continuing	Continuing	
<b>Subtotal</b>			75.530	2.450		2.600		0.000		2.600				
<b>Remarks</b>														
<b>Management Services (\$ in Millions)</b>														
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Program Manangement Support	WR	EODTD, IH, MD Not Specified	7.143	0.700	Oct 2009	0.435	Oct 2010	0.000		0.435	Continuing	Continuing	Continuing	
Miscellaneous	Various/ Various	Various Not Specified	12.620	1.528	Oct 2009	1.904	Oct 2010	0.000		1.904	Continuing	Continuing	Continuing	
<b>Subtotal</b>			19.763	2.228		2.339		0.000		2.339				
<b>Remarks</b>														

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis:</b> PB 2011 Navy							<b>DATE:</b> February 2010				
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0603654N: <i>JT Service Explosive Ordn Dev</i>			<b>PROJECT</b> 0377: <i>JT Service Expl Ord Disp System</i>				
	<b>Total Prior Years Cost</b>	<b>FY 2010</b>		<b>FY 2011 Base</b>		<b>FY 2011 OCO</b>		<b>FY 2011 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Project Cost Totals</b>	270.396	12.494		16.882		1.000		17.882			
<b>Remarks</b>											

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Navy

DATE: February 2010

## APPROPRIATION/BUDGET ACTIVITY

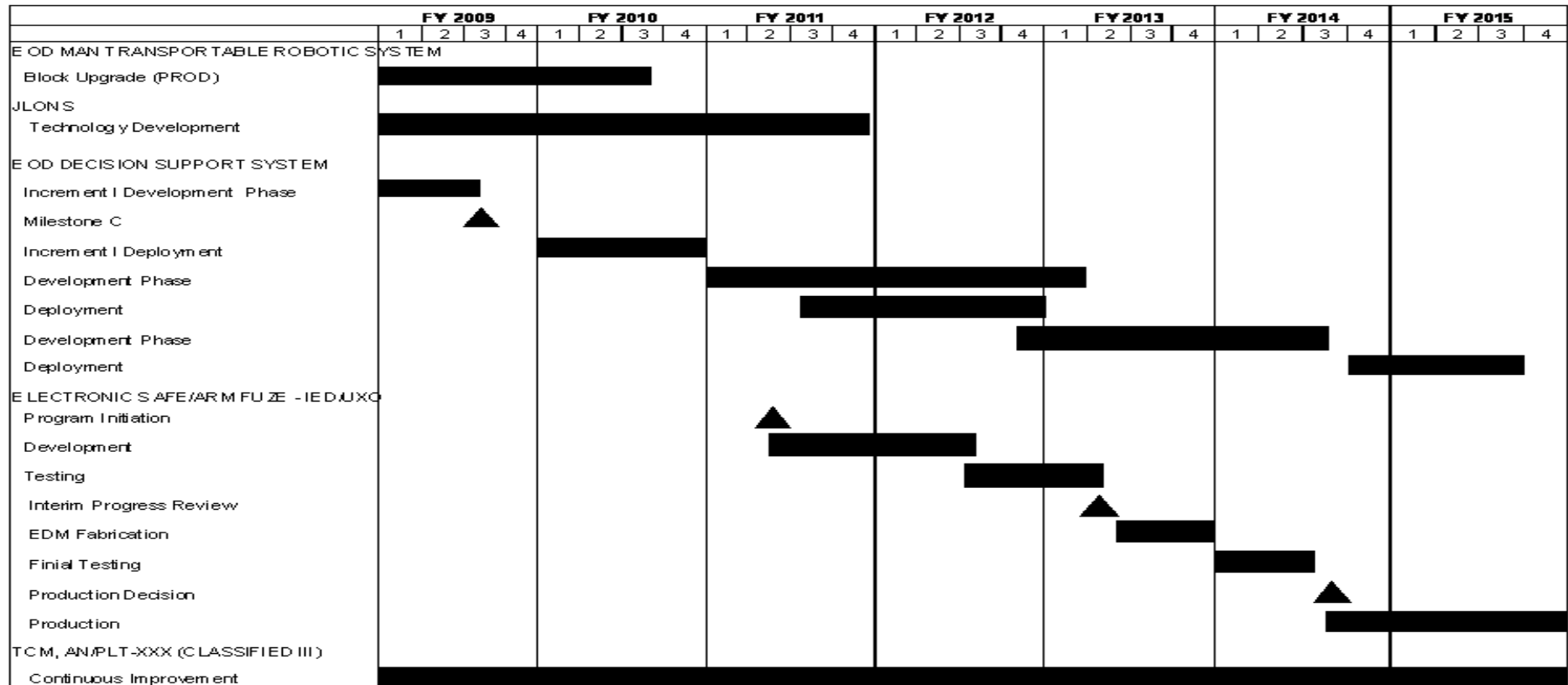
1319: Research, Development, Test & Evaluation, Navy  
BA 4: Advanced Component Development & Prototypes (ACD&P)

## R-1 ITEM NOMENCLATURE

PE 0603654N: JT Service Explosive Ordn Dev

## PROJECT

0377: JT Service Expl Ord Disp System



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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Navy

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## APPROPRIATION/BUDGET ACTIVITY

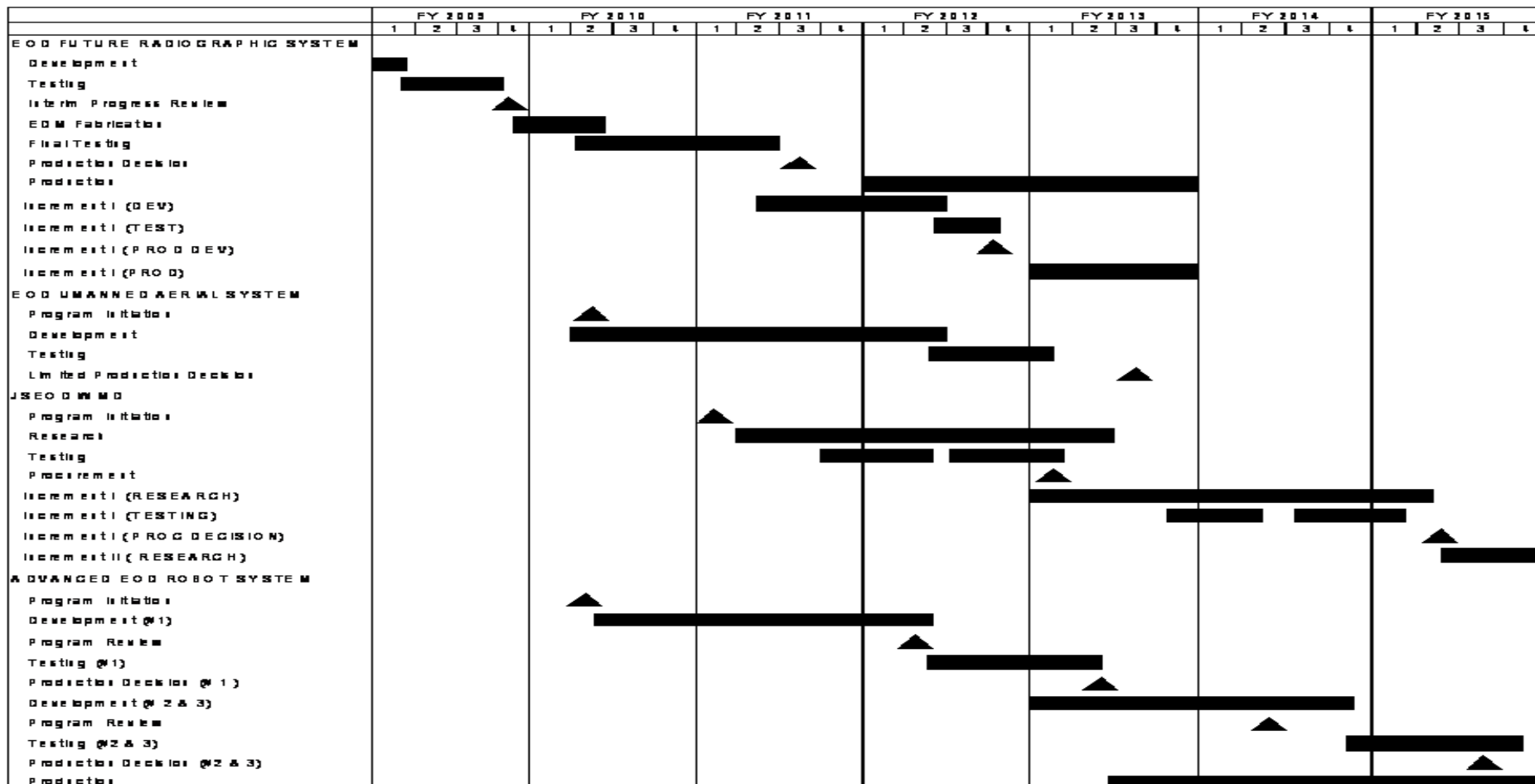
1319: Research, Development, Test & Evaluation, Navy  
BA 4: Advanced Component Development & Prototypes (ACD&P)

## R-1 ITEM NOMENCLATURE

PE 0603654N: JT Service Explosive Ordn Dev

## PROJECT

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2011 Navy			<b>DATE:</b> February 2010
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0603654N: <i>JT Service Explosive Ordn Dev</i>	<b>PROJECT</b> 0377: <i>JT Service Expl Ord Disp System</i>	

## Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
EOD MAN TRANSPORTABLE ROBOTIC SYSTEM	1	2009	1	2009
Block Upgrade (PROD)	1	2009	3	2010
JLONS	1	2009	1	2009
Technology Development	1	2009	4	2011
EOD DECISION SUPPORT SYSTEM	1	2009	1	2009
Increment I Development Phase	1	2009	3	2009
Milestone C	3	2009	3	2009
Increment I Deployment	1	2010	4	2010
Development Phase 1	1	2011	1	2013
Deployment 1	3	2011	4	2012
Development Phase 2	4	2012	3	2014
Deployment 2	4	2014	3	2015
ELECTRONIC SAFE/ARE FUZE -IED/UXO	1	2009	1	2009
Program Initiation 1	2	2011	2	2011
Development 3	2	2011	3	2012
Testing 1	3	2012	2	2013
Interim Progress Review 1	2	2013	2	2013
EDM Fabrication 1	3	2013	4	2013

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		Start		End
Event	Quarter	Year	Quarter	Year
Final Testing 1	1	2014	3	2014
Production Decision 1	3	2014	3	2014
Production 1	3	2014	4	2015
TCM, AN/PLT-XXX (CLASSIFIED III)	1	2009	1	2009
Continous Improvement	1	2009	4	2015
EOD FUTURE RADIOGRAPHIC SYSTEM	1	2009	1	2009
Development 4	1	2009	1	2009
Testing 2	2	2009	3	2009
Interim Progress Review 2	4	2009	4	2009
EDM Fabrication 2	4	2009	2	2010
Final Testing 2	2	2010	3	2011
Production Decision 2	3	2011	3	2011
Production 2	1	2012	4	2013
Increment I (DEV)	1	2011	2	2012
Increment I (TEST)	2	2012	3	2012
Increment I (PROD DEV)	3	2012	3	2012
Increment I (PROD)	1	2013	4	2013
EOD UNMANNED AERIAL SYSTEM	1	2009	1	2009
Program Initiation 2	2	2010	2	2010
Development 5	2	2010	2	2012

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Navy

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Event	Start		End	
	Quarter	Year	Quarter	Year
Testing 3	3	2012	1	2013
Limited Production Decision	3	2013	3	2013
JS EOD WMD	1	2009	1	2009
Program Initiation 3	1	2011	1	2011
Research	2	2011	2	2013
Testing 4	4	2011	1	2013
Procurement	1	2013	1	2013
Increment I (RESEARCH)	1	2013	2	2015
Increment I (TESTING)	4	2013	1	2015
Increment I (PROC DECISION)	2	2015	2	2015
Increment II (RESEARCH)	2	2015	4	2015
ADVANCED EOD ROBOT SYSTEM	1	2009	1	2009
Program Initiation 4	1	2010	1	2010
Development # 1	2	2010	2	2012
Program Review 1	2	2012	2	2012
Testing (#1)	2	2012	2	2013
Production Decision (#1)	2	2013	2	2013
Development (# 2 & 3)	1	2013	4	2014
Program Review 2	2	2014	2	2014
Testing (# 2 & 3)	4	2014	4	2015

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2011 Navy			<b>DATE:</b> February 2010	
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>		<b>R-1 ITEM NOMENCLATURE</b> PE 0603654N: <i>JT Service Explosive Ordn Dev</i>		<b>PROJECT</b> 0377: <i>JT Service Expl Ord Disp System</i>

Event	Start		End	
	Quarter	Year	Quarter	Year
Production Decision (# 2 & 3)	3	2015	3	2015
Production 3	3	2013	4	2015

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)				R-1 ITEM NOMENCLATURE PE 0603654N: JT Service Explosive Ordn Dev				PROJECT 1317: EOD Diving System			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
1317: EOD Diving System	2.723	3.520	3.611	0.000	3.611	2.925	2.968	3.037	3.102	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		
A. Mission Description and Budget Item Justification											
Provides for development of Diver Safety/Life Support Equipment, Advanced Diver Integrated Sensors and Advanced Firing Systems to support Navy Explosive Ordnance Disposal (EOD) underwater operations. The equipment must have inherently low acoustic and magnetic signatures in order to allow the EOD divers to safely approach, render-safe, recover, exploit, and dispose of underwater explosive threats to include sea mines, limpet mines and unexploded ordnance. This project supports the Naval Mine Warfare Certification Plan.											
*This project unit includes \$.013M for the Acquisition Workforce in FY 2009.											
B. Accomplishments/Planned Program (\$ in Millions)											
							FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
DIVER SAFETY & LIFE SUPORT SYSTEMS							0.254	0.831	0.879	0.000	0.879
Diver Safety & Life Support Systems: Develop diver safety tools to include more capable life support systems for EOD, and Mobile Diving & Salvage Units (MDSU) operations. Specific tools include but are not limited to Underwater Breathing Apparatus (UBA), specialized dive masks, heads-up displays, and emergency life support systems.											
FY 2009 Accomplishments: Initiated development of Improvement for Diver Safety related to EOD and UBA.											

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy				DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)		R-1 ITEM NOMENCLATURE PE 0603654N: JT Service Explosive Ordn Dev		PROJECT 1317: EOD Diving System	
B. Accomplishments/Planned Program (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2010 Plans: Develop and test improvements to the Very Shallow Water (VSW)/EOD UBA to enhance diver safety. Develop and test an EOD system (METRES) to detect and measure EOD diver and MCM equipment influence signatures.					
FY 2011 Base Plans: Complete testing and gain approval for use for the VSW/MCM UBA. Complete METRES testing.					
ADVANCED DIVER INTEGRATED SENSORS  Develop Advanced Diver Integrated Sensors equipment to enhance EOD and MDSU ability to detect, neutralize and gather intelligence on underwater targets of interest. Requirements include Diver Hull Inspection Navigation System (DHINS) and improvements to the Underwater Imaging System (UIS).	2.196	2.239	2.282	0.000	2.282
FY 2009 Accomplishments: Continued UIS improvement system integration and testing through FY09 with ECP approval planned for FY2010. DHINS LRIP planned for FY09.					
FY 2010 Plans: Complete system integration and testing of the DHINS final production configuration.					
FY 2011 Base Plans: Develop and insert mature technologies to the DHINS and UIS as part of a continuous improvement program (CIP) to enhance performance in harsh environments.					
ACQUISITION WORKFORCE FUND  FY 2009 Accomplishments: Funded DoD Acquisition Workforce Fund.	0.013	0.000	0.000	0.000	0.000

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Navy							<b>DATE:</b> February 2010				
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>			<b>R-1 ITEM NOMENCLATURE</b> PE 0603654N: <i>JT Service Explosive Ordn Dev</i>			<b>PROJECT</b> 1317: <i>EOD Diving System</i>					
<b>B. Accomplishments/Planned Program (\$ in Millions)</b>											
						<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>	
ADVANCED FIRING SYSTEM  Develops new acquisitions and product improvements to existing systems for below and above water neutralization of underwater threats to support EOD and MDSU operations.  <i>FY 2009 Accomplishments:</i> Initiated systems integration and testing of spiral 2 AFS that provides a Radio Frequency (RF) capability.  <i>FY 2010 Plans:</i> Continue system integration and testing of the spiral 2 AFS.  <i>FY 2011 Base Plans:</i> Test improvements to the AFS to enhance system effectiveness. Initiate Weapons System Explosives Safety Review.						0.260	0.450	0.450	0.000	0.450	
Accomplishments/Planned Programs Subtotals						2.723	3.520	3.611	0.000	3.611	
<b>C. Other Program Funding Summary (\$ in Millions)</b>											
<b>Line Item</b>	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>	<b>FY 2012</b>	<b>FY 2013</b>	<b>FY 2014</b>	<b>FY 2015</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
• OPN/0975: <i>Underwater EOD Program (Cost Code UQ034)</i>	2.581	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.581
• OPN/0977: <i>Underwater EOD Program (Cost Code UQ034)</i>	0.000	2.200	8.900	0.000	8.900	6.000	4.500	3.000	3.200	0.000	27.800
• 0340: <i>PANMC</i>	0.000	1.649	0.000	0.000	0.000	1.418	0.000	2.425	0.000	0.000	5.492
<b>D. Acquisition Strategy</b> Analysis of Alternatives (AOA) studies are always conducted prior to the initiation of new sub-projects. The AOA addresses and emphasizes acquisition strategies of the most cost-effective solution over the sub-projects life-cycle. The acquisition strategies observe the following hierarchy of alternatives: commercial item (including											

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Navy		<b>DATE:</b> February 2010
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0603654N: <i>JT Service Explosive Ordn Dev</i>	<b>PROJECT</b> 1317: <i>EOD Diving System</i>
modification), non-developmental item (including modification), and lastly, developmental programs. Contracting for RDT&E, if required, is always competitive and when feasible, production options are included.		
<b>E. Performance Metrics</b> Researched and Developed technologies for the design of Diver Safety Systems, and Advanced Underwater Firing Systems used to render safe, recover, exploit, and dispose of sea limpet mines and unexploded ordnance.		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy											DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)					R-1 ITEM NOMENCLATURE PE 0603654N: JT Service Explosive Ordn Dev					PROJECT 1317: EOD Diving System				
Product Development (\$ in Millions)														
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Primary Hardware Development	WR	EODTECHDIV IH, MD	37.328	0.907	Oct 2009	0.967	Oct 2010	0.000		0.967	Continuing	Continuing	Continuing	
Software Development	WR	EODTECHDIV IH MD	3.192	0.300	Oct 2009	0.300	Oct 2010	0.000		0.300	Continuing	Continuing	Continuing	
Systems Engineering	WR	EODTECHDIV IH MD	8.228	0.000		0.000		0.000		0.000	0.000	8.228	Continuing	
ILS	WR	EODTECHDIV IH MD	11.916	0.000		0.000		0.000		0.000	0.000	11.916	Continuing	
Systems Engineering	WR	NSWC Panama City	0.570	0.250	Oct 2009	0.250	Oct 2010	0.000		0.250	Continuing	Continuing	Continuing	
Systems Engineering	WR	SPAWAR San Diego	1.000	0.500	Oct 2009	0.500	Oct 2010	0.000		0.500	Continuing	Continuing	Continuing	
Subtotal			62.234	1.957		2.017		0.000		2.017				
Remarks														
Support (\$ in Millions)														
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Program Management Support1	C/CPFF	ITT Arlington VA	3.537	0.000		0.000		0.000		0.000	0.000	3.537	Continuing	

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis: PB 2011 Navy</b>											<b>DATE:</b> February 2010			
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0603654N: <i>JT Service Explosive Ordn Dev</i>				<b>PROJECT</b> 1317: <i>EOD Diving System</i>						
<b>Support (\$ in Millions)</b>														
				<b>FY 2010</b>		<b>FY 2011 Base</b>		<b>FY 2011 OCO</b>		<b>FY 2011 Total</b>				
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Total Prior Years Cost</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>	
Program Management Support2	C/CPFF	ITT Arlington VA	1.621	0.430	Oct 2009	0.430	Oct 2010	0.000		0.430	Continuing	Continuing	Continuing	
Integrated Logistics Support	C/TBD	Not Specified Not Specified	0.000	0.000		0.000		0.000		0.000	0.000	0.000	Continuing	
Configuration Management	C/TBD	Not Specified Not Specified	0.000	0.000		0.000		0.000		0.000	0.000	0.000	Continuing	
Technical Data	C/TBD	Not Specified Not Specified	0.000	0.000		0.000		0.000		0.000	0.000	0.000	Continuing	
GFE	C/TBD	Not Specified Not Specified	0.000	0.000		0.000		0.000		0.000	0.000	0.000	Continuing	
Award Fees	C/TBD	Not Specified Not Specified	0.000	0.000		0.000		0.000		0.000	0.000	0.000	Continuing	
<b>Subtotal</b>			5.158	0.430		0.430		0.000		0.430				
<b>Remarks</b>														
<b>Test and Evaluation (\$ in Millions)</b>														
				<b>FY 2010</b>		<b>FY 2011 Base</b>		<b>FY 2011 OCO</b>		<b>FY 2011 Total</b>				
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Total Prior Years Cost</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>	
Development Test & Evaluation	WR	EODTECHDIV IH MD	4.337	0.700	Oct 2009	0.750	Oct 2010	0.000		0.750	Continuing	Continuing	Continuing	

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis: PB 2011 Navy</b>											<b>DATE:</b> February 2010		
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0603654N: <i>JT Service Explosive Ordn Dev</i>				<b>PROJECT</b> 1317: <i>EOD Diving System</i>					
<b>Test and Evaluation (\$ in Millions)</b>													
				<b>FY 2010</b>		<b>FY 2011 Base</b>		<b>FY 2011 OCO</b>		<b>FY 2011 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Total Prior Years Cost</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
Operational Test & Evaluation	WR	EODTECHDIV IH MD	1.560	0.000		0.000		0.000		0.000	0.000	1.560	Continuing
<b>Subtotal</b>			5.897	0.700		0.750		0.000		0.750			
<b>Remarks</b>													
<b>Management Services (\$ in Millions)</b>													
				<b>FY 2010</b>		<b>FY 2011 Base</b>		<b>FY 2011 OCO</b>		<b>FY 2011 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Total Prior Years Cost</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
Program Management Support	WR	EODTECHDIV IH MD	8.063	0.350	Oct 2009	0.350	Oct 2010	0.000		0.350	0.000	8.763	Continuing
Miscellaneous	WR	Various Various	6.626	0.083	Oct 2009	0.064	Oct 2010	0.000		0.064	0.000	6.773	Continuing
Acquisition Workforce Fund	Various/ Various	Various Various	0.013	0.000		0.000		0.000		0.000	0.000	0.013	Continuing
<b>Subtotal</b>			14.702	0.433		0.414		0.000		0.414	0.000	15.549	
<b>Remarks</b>													

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis:</b> PB 2011 Navy							<b>DATE:</b> February 2010		
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>			<b>R-1 ITEM NOMENCLATURE</b> PE 0603654N: <i>JT Service Explosive Ordn Dev</i>			<b>PROJECT</b> 1317: <i>EOD Diving System</i>			
<b>Remarks</b>									

	Total Prior Years Cost	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
<b>Project Cost Totals</b>	87.991	3.520	3.611	0.000	3.611			

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Navy

DATE: February 2010

## APPROPRIATION/BUDGET ACTIVITY

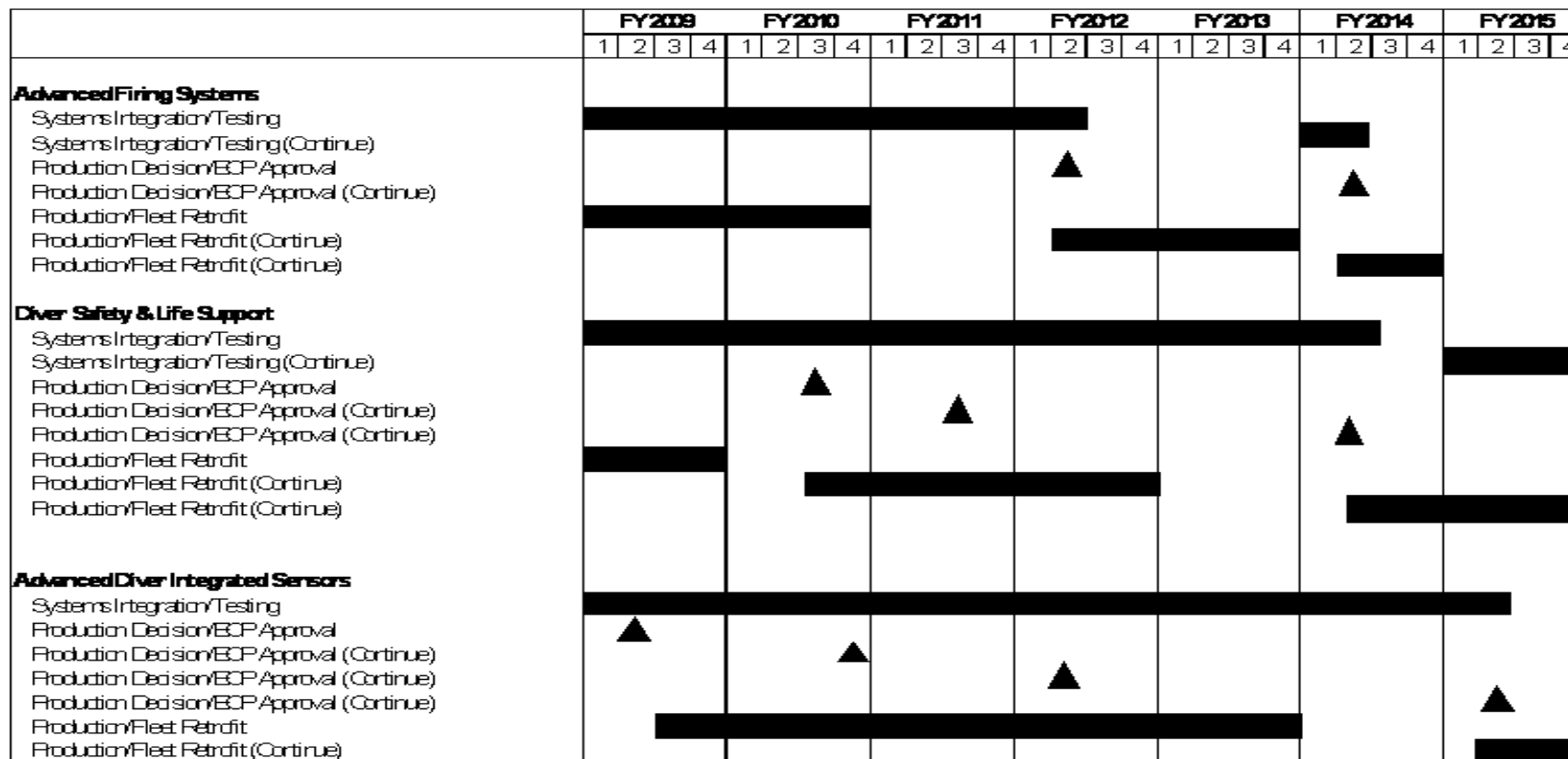
1319: Research, Development, Test & Evaluation, Navy  
BA 4: Advanced Component Development & Prototypes (ACD&P)

## R-1 ITEM NOMENCLATURE

PE 0603654N: JT Service Explosive Ordn Dev

## PROJECT

1317: EOD Diving System



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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2011 Navy			<b>DATE:</b> February 2010
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0603654N: <i>JT Service Explosive Ordn Dev</i>	<b>PROJECT</b> 1317: <i>EOD Diving System</i>	

**Schedule Details**

Event	Start		End	
	Quarter	Year	Quarter	Year
ADVANCED FIRING SYSTEMS	1	2009	1	2009
System Integration/Testing 1	1	2009	2	2012
System Integration/Testing (Continue)	1	2014	2	2014
Production Decision/ECP Approval1	2	2012	2	2012
Production Decision/ECP Approval (Continue) 1	2	2014	2	2014
Production/Fleet Retrofit 1	1	2009	4	2010
Production/Fleet Retrofit (Continue) 1	2	2012	4	2013
Production/Fleet Retrofit (Continue) 2	2	2014	4	2014
DIVER SAFETY & LIFE SUPPORT	1	2009	1	2009
System Integration/Testing 2	1	2009	2	2014
Systems Integration/Testing (Continue)	1	2015	4	2015
Production Decision/ECP Approval 2	3	2010	3	2010
Production Decision/ECP Approval (Continue) 2	3	2011	3	2011
Production Decision/ECP Approval (Continue) 3	2	2014	2	2014
Production/Fleet Retrofit 2	1	2009	4	2009
Production/Fleet Retrofit (Continue) 3	3	2010	4	2012
Production/Fleet Retrofit (Continue) 4	2	2014	4	2015
ADVANCED DIVER INTEGRATED SENSORS	1	2009	1	2009

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2011 Navy			<b>DATE:</b> February 2010
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0603654N: <i>JT Service Explosive Ordn Dev</i>	<b>PROJECT</b> 1317: <i>EOD Diving System</i>	

Event	Start		End	
	Quarter	Year	Quarter	Year
System Integration/Testing 3	1	2009	2	2015
Production Decision/ECP Approval 3	2	2009	2	2009
Production Decision/ECP Approval (Continue) 4	4	2010	4	2010
Production Decision/ECP Approval (Continue) 5	2	2012	2	2012
Production Decision/ECP Approval (Continue) 6	2	2015	2	2015
Production/Fleet Retrofit 3	3	2009	4	2013
Production/Fleet Retrocit (Continue)	2	2015	4	2015

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Navy								<b>DATE:</b> February 2010			
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0603654N: <i>JT Service Explosive Ordn Dev</i>				<b>PROJECT</b> 3177: <i>Joint Counter Radio-Controlled IED Elec Warfare</i>			
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
3177: <i>Joint Counter Radio-Controlled IED Elec Warfare</i>	93.947	0.000	0.471	0.000	0.471	0.475	0.475	0.475	0.474	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

## A. Mission Description and Budget Item Justification

Provides for the research, development, for all military services against Radio Controlled Improvised Explosive Devices (RCIED) to prevent initiation. The Navy has been designated as DOD Executive Agent and Single Manager for Military Ground-Based Counter Radio-Controlled Improvised Explosive Electronic Warfare (CREW) Technology by DOD Directive 5101.14 of 11 June 2007, requiring RDT&E to develop capabilities that meet joint requirements. Utilize Joint requirements to provide a system of systems approach for a suite of equipment for mounted, dismounted and fixed site operations. CREW development to make rapid improvements to performance, supportability and affordability.

\* JCREW Spirals 3.1 and 3.2 are interim solutions funded by the Joint IED Defeat Organization (OSD)

\*\* Beginning in FY10 the Joint Counter Radio Controlled IED Electronic Warfare program will move to PE 0604653N.

\*\*\*FY11-FY15 funding was incorrectly placed in PE 0603654N. Funds should be in PE 0604653N.

## B. Accomplishments/Planned Program (\$ in Millions)

	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
Joint Counter Radio-Controlled IED Elec Warfare	93.480	0.000	0.471	0.000	0.471
<b>FY 2009 Accomplishments:</b> Award contracts for the development of Joint CREW 3.3 system. Continue development of CREW Convoy Planning Tool upgrades.  *Beginning in FY10 the Joint Counter Radio-Controlled IED Electronic Warfare program will move to PE 0604653N.					

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Navy				<b>DATE:</b> February 2010		
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>		<b>R-1 ITEM NOMENCLATURE</b> PE 0603654N: <i>JT Service Explosive Ordn Dev</i>		<b>PROJECT</b> 3177: <i>Joint Counter Radio-Controlled IED Elec Warfare</i>		
<b>B. Accomplishments/Planned Program (\$ in Millions)</b>						
		<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
<i>FY 2011 Base Plans:</i> Provides for the development, testing, and evaluation of Joint CREW modeling and simulation efforts and upgrades to Joint CREW tactical decision aids.  *FY11-FY15 funding was incorrectly placed in PE 0603654N. Funds should be in PE 0604653N.						
<b>ACQUISITION WORKFORCE FUND</b>  <i>FY 2009 Accomplishments:</i> Funded DoD Acquisition Workforce Fund.		0.467	0.000	0.000	0.000	0.000
Accomplishments/Planned Programs Subtotals		93.947	0.000	0.471	0.000	0.471
<b>C. Other Program Funding Summary (\$ in Millions)</b>						
N/A						
<b>D. Acquisition Strategy</b>						
Analysis of Alternatives (AOA) studies are always conducted prior to the initiation of new subprojects. The AOA addresses and emphasizes acquisition strategies of the most cost effective solution over subprojects' life-cycle. The acquisition strategies observe the following hierarchy of alternatives: commercial item (including modification), non-developmental item (including modification), and lastly, developmental programs. Contracting for RDT&E, if required, is always competitive and when feasible, production options are included. Procurements across the services will be combined to gain quantity discounts.						
<b>E. Performance Metrics</b>						
Gate 6 Milestone B complete 10 Jul 2009; Contract for preliminary design review awarded 01 Oct 2009; Milestone C anticipated Q4 FY11.						

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Navy								<b>DATE:</b> February 2010			
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0603654N: <i>JT Service Explosive Ordn Dev</i>				<b>PROJECT</b> 4023: <i>VSW MCM/Force Protection UUV</i>			
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
4023: <i>VSW MCM/Force Protection UUV</i>	3.564	4.952	4.909	0.000	4.909	7.282	5.346	6.128	4.001	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		
<b>A. Mission Description and Budget Item Justification</b> Provides for development of small affordable, unmanned underwater systems to support Explosive Ordnance (EOD). Mobile Diving and Salvage Units, and Very Shallow Water (VSW) Mine Countermeasures (MCM) mission operations. The equipment must be highly portable in order to support the EOD technician to safely approach, render safe, recover, exploit and dispose of underwater explosive threats to include sea mines, limpet mines and unexploded ordnance. Provides support for the Navy's high priority missions of Maritime Homeland Defense, MCM, including clandestine reconnaissance and mine clearance in support of amphibious operations. Development of EOD UUV systems to support localization render-safe and detailed intelligence gathering of UXO including Underwater Improvised Explosive Devices. This project supports the Naval Mine Warfare Certification Plan.  *This project unit includes \$.018M for the Acquisition Workforce in FY 2009.											
<b>B. Accomplishments/Planned Program (\$ in Millions)</b>											
						<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>	
VSW MCM/Force Protection UUV						3.546	4.952	4.909	0.000	4.909	
This program supports development, testing and Fleet approval for evolving generations of small affordable Unmanned Underwater Vehicles (UUV), support equipment, and common operator interface systems to address validated requirements in support of Explosive Ordnance Disposal and VSW MCM mission areas. Mission areas include: open and confined areas, hulls, piers and pilings to search, classify, map, re-acquire, identify, and neutralize sea and limpet mines and underwater improvised explosive devices.											

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy			DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)	R-1 ITEM NOMENCLATURE PE 0603654N: JT Service Explosive Ordn Dev	PROJECT 4023: VSW MCM/Force Protection UUV			
B. Accomplishments/Planned Program (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: Continued Spiral Continuous Improvement Program (CIP) for 1st and 2nd Generation systems (including Bottom UUV Localization System (BULS)). Completed requirements definition for 3rd Generation System. Initiated User Operational Evaluation System (UOES) test and evaluation phase for UUV-N.					
FY 2010 Plans: Continue UUV-N UOES testing. Insert mature technologies and validate system retrofit upgrades to VSW MCM and BULS UUVs (continuous improvement program (CIP)) to enhance performance in harsh environments in accordance with ONR technology transition agreements (TTAs). Transition ONR Hull UUV Localization System (HULS) Rapid Technology Transition initiative. Begin UOES prototype testing and validation of HULS.					
FY 2011 Base Plans: Continue UUV-N UOES testing and re-validate UUV-N AOA requirements document. Insert mature technologies and validate systems retrofit upgrades to VSW MCM and BULS UUVs CIP to enhance performance in harsh environments in accordance with ONR technology transition agreements (TTAs). Continue UOES testing and validation of HULS to support requirements re-validation and limited production decision for a preliminary operational capability.					
ACQUISITION WORKFORCE FUND  FY 2009 Accomplishments: Funded DoD Acquisition Workforce Fund.	0.018	0.000	0.000	0.000	0.000
Accomplishments/Planned Programs Subtotals	3.564	4.952	4.909	0.000	4.909

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Navy									DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)				R-1 ITEM NOMENCLATURE PE 0603654N: JT Service Explosive Ordn Dev				PROJECT 4023: VSW MCM/Force Protection UUV			
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• OPN/0975: Underwater EOD Program (Cost Code UQ034)	2.203	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.203
• OPN/0977: Underwater EOD Program (Cost Code UQ034)	0.000	7.350	1.000	0.000	1.000	3.200	5.300	8.250	8.250	0.000	33.350
D. Acquisition Strategy											
Analysis of Alternatives (AOA) studies are always conducted prior to the initiation of new sub-projects. The AOA addresses and emphasizes acquisitions strategies of the most cost-effective solution over the sub-projects' life -cycle. The acquisition strategies observe the following hierarchy of alternatives: commercial item (including modifications), non-developmental item (including modifications), and lastly, developmental programs. Contracting for RDT&E, if required is always competitive and when feasible, production options are included.											
This ongoing program capitalizes on a User Operational Evaluation System (UOES) effort involving Fleet operators engaged in tactical experimentation with prototype UUVs. These UUV operators also participate in detailed requirements analyses and definition. Operational capabilities with UUV have been realized at designated EOD units, with a competitive acquisition strategy. The addition of enhanced capabilities through an evolutionary acquisition approach to the UUV toolbox is programmed for delivery in accordance with approved CNO requirements and ONR TTAs. Further improvements to the toolbox to add basic mine and underwater explosive threats neutralization capabilities will be pursued.											
E. Performance Metrics											
Researched and Developed technologies for the design of Unmanned Underwater Systems to provide enhanced fleet capabilities to locate, classify, and neutralized mines and unexploded ordnance.											

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis: PB 2011 Navy</b>											<b>DATE:</b> February 2010		
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0603654N: <i>JT Service Explosive Ordn Dev</i>				<b>PROJECT</b> 4023: <i>VSW MCM/Force Protection UUV</i>					
<b>Product Development (\$ in Millions)</b>													
				<b>FY 2010</b>		<b>FY 2011 Base</b>		<b>FY 2011 OCO</b>		<b>FY 2011 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Total Prior Years Cost</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
Primary Hardware Development	WR	EODTECHDIV IH, MD	13.041	1.656	Oct 2009	1.541	Oct 2010	0.000		1.541	Continuing	Continuing	Continuing
Systems Engineering	WR	EODTECHDIV IH, MD	8.986	1.140	Oct 2009	0.900	Oct 2010	0.000		0.900	Continuing	Continuing	Continuing
<b>Subtotal</b>			22.027	2.796		2.441		0.000		2.441			
<b>Remarks</b>													
<b>Support (\$ in Millions)</b>													
				<b>FY 2010</b>		<b>FY 2011 Base</b>		<b>FY 2011 OCO</b>		<b>FY 2011 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Total Prior Years Cost</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
Program Management Support	C/CPFF	ITT ARLINGTON, VA	2.441	0.600	Oct 2009	0.600	Oct 2010	0.000		0.600	Continuing	Continuing	Continuing
<b>Subtotal</b>			2.441	0.600		0.600		0.000		0.600			
<b>Remarks</b>													

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis: PB 2011 Navy</b>											<b>DATE:</b> February 2010																																																																															
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0603654N: <i>JT Service Explosive Ordn Dev</i>				<b>PROJECT</b> 4023: <i>VSW MCM/Force Protection UUV</i>																																																																																		
<p><b>Test and Evaluation (\$ in Millions)</b></p> <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">Cost Category Item</th> <th rowspan="2">Contract Method &amp; Type</th> <th rowspan="2">Performing Activity &amp; Location</th> <th rowspan="2">Total Prior Years Cost</th> <th colspan="2">FY 2010</th> <th colspan="2">FY 2011 Base</th> <th colspan="2">FY 2011 OCO</th> <th>FY 2011 Total</th> <th rowspan="2">Cost To Complete</th> <th rowspan="2">Total Cost</th> <th rowspan="2">Target Value of Contract</th> </tr> <tr> <th>Cost</th> <th>Award Date</th> <th>Cost</th> <th>Award Date</th> <th>Cost</th> <th>Award Date</th> <th>Cost</th> </tr> </thead> <tbody> <tr> <td>Developmental Test &amp; Evaluation</td> <td>WR</td> <td>EODTECHDIV IH, MD</td> <td align="right">4.476</td> <td align="right">0.920</td> <td>Oct 2009</td> <td align="right">1.250</td> <td>Oct 2010</td> <td align="right">0.000</td> <td></td> <td align="right">1.250</td> <td>Continuing</td> <td>Continuing</td> <td>Continuing</td> </tr> <tr> <td>Operational Test &amp; Evaluation</td> <td>WR</td> <td>EODTECHDIV IH, MD</td> <td align="right">0.974</td> <td align="right">0.250</td> <td>Oct 2009</td> <td align="right">0.200</td> <td>Oct 2010</td> <td align="right">0.000</td> <td></td> <td align="right">0.200</td> <td>Continuing</td> <td>Continuing</td> <td>Continuing</td> </tr> <tr> <td align="right" colspan="3"><b>Subtotal</b></td><td align="right">5.450</td><td align="right">1.170</td><td></td><td align="right">1.450</td><td></td><td align="right">0.000</td><td></td><td align="right">1.450</td><td></td><td></td><td></td> </tr> </tbody> </table> <p><b>Remarks</b></p>														Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Developmental Test & Evaluation	WR	EODTECHDIV IH, MD	4.476	0.920	Oct 2009	1.250	Oct 2010	0.000		1.250	Continuing	Continuing	Continuing	Operational Test & Evaluation	WR	EODTECHDIV IH, MD	0.974	0.250	Oct 2009	0.200	Oct 2010	0.000		0.200	Continuing	Continuing	Continuing	<b>Subtotal</b>			5.450	1.170		1.450		0.000		1.450																	
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract																																																																													
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<b>Subtotal</b>			5.450	1.170		1.450		0.000		1.450																																																																																
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Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract																																																																													
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DAWDF	C/TBD	Not Specified Not Specified	0.018	0.000		0.000		0.000		0.000	0.000	0.018	Continuing																																																																													
<b>Subtotal</b>			2.340	0.386		0.418		0.000		0.418																																																																																

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Navy							DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>			R-1 ITEM NOMENCLATURE PE 0603654N: <i>JT Service Explosive Ordn Dev</i>			PROJECT 4023: <i>VSW MCM/Force Protection UUV</i>			
	Total Prior Years Cost	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract	
Project Cost Totals	32.258	4.952	4.909	0.000	4.909				
Remarks									

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Navy

DATE: February 2010

## APPROPRIATION/BUDGET ACTIVITY

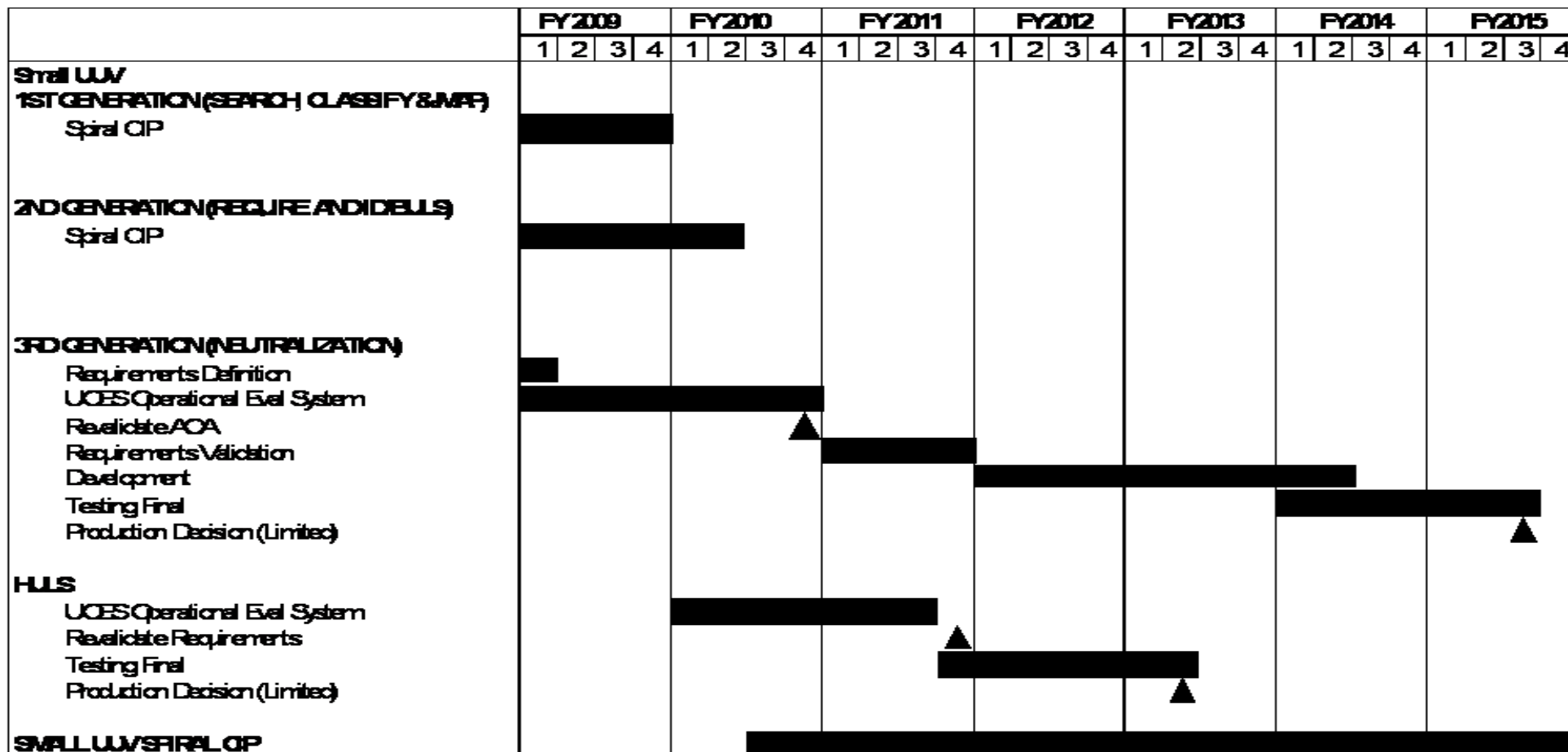
1319: Research, Development, Test & Evaluation, Navy  
BA 4: Advanced Component Development & Prototypes (ACD&P)

## R-1 ITEM NOMENCLATURE

PE 0603654N: JT Service Explosive Ordn Dev

## PROJECT

4023: VSW MCM/Force Protection UUV



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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2011 Navy			<b>DATE:</b> February 2010
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0603654N: <i>JT Service Explosive Ordn Dev</i>	<b>PROJECT</b> 4023: <i>VSW MCM/Force Protection UUV</i>	

## Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
1ST GENERATION SMALL UUV (SEARCH, CLASSIFY & MAP)	1	2009	1	2009
Spiral CIP 1	1	2009	4	2009
2ND GENERATION (REQUIRE AND ID)/BULS	1	2009	1	2009
Spiral CIP 2	1	2009	2	2010
3RD GENERATION (NEUTRALIZATION)	1	2009	1	2009
Requirements Definition	1	2009	1	2009
UOES Operational Eval System 1	1	2009	4	2010
Revalidate AOA	4	2010	4	2010
Requirements Validation	1	2011	4	2011
Development	1	2012	2	2014
Testing Final 1	1	2014	3	2015
Production Decision (Limited) 1	3	2015	3	2015
HULS	1	2009	1	2009
UOES Operational Eval System 2	1	2010	3	2011
Revalidate Requirements	4	2011	4	2011
Testing Final 2	4	2011	2	2013
Production Decision (Limited) 2	2	2013	2	2013
Spiral CIP 3	3	2010	4	2015

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