

CLASSIFICATION:**UNCLASSIFIED****EXHIBIT R-2, RDT&E BUDGET ITEM JUSTIFICATION**

DATE

May 2009

APPROPRIATION/BUDGET ACTIVITY

RD TEN/BA 4

R-1 ITEM NOMENCLATURE

0603755N/SHIP SELF DEFENSE - DEM/VAL

COST (In Millions)

FY 2008

FY 2009

FY 2010

Total PE Cost

10.617

10.966

6.960

2133 / QRCC

5.457

3.582

3.563

2184 / Force AAW Coordination Technology

5.160

7.384

3.397

A. MISSION DESCRIPTION:

This program incorporates efforts dedicated to the enhancement of ship defense against Anti-Air Warfare (AAW) and other evolving threats. Its primary focus is on the development of technologies, systems, and procedures necessary to defeat the evolving Anti-Ship Cruise Missile (ASCM) threat and then expands to allow for application of these technologies in other warfighting areas. These projects focus on ship defense improvements through the development of advanced concepts and capabilities that will enhance both defense in depth of ships in a force and self defense of individual ships in a littoral war-fighting environment.

Quick Reaction Combat Capability (QRCC) Requirements Analysis Working Group (RAWG), Project 2133, provides independent analysis for a variety of combat system AAW self-defense cost-benefits trade, ship class performance studies, and force protection strategic plan development.

Force Advanced Warfare Concept Technology (FACT), Project 2184, demonstrates concepts and capabilities that will enhance the warfighting ability of ships and aircraft and enable the coupling of the Force into a single, distributed weapon system through more effective use of tactical data, and force sensors and weapons. During FY06, the Innovation Team expanded the Offensive Counter Air (OCA) capabilities developed for the Joint Targeting Attack and Assessment Capability (JTAAC) utilizing electro-optical (EO) and infrared (IR) sensors to include other sensors.

During FY08, the Ocean Surveillance Initiative, the Innovation Team continued to leverage their expertise in resolving complex warfighter issues as well as the end to end capability realized in previous products to develop a prototype focused on creating a coherent and consistent tactical surface track picture. JTAAC brought innovative technology to offensive counter air and the Ocean Surveillance Initiative will extend those advancements to the surface track picture and engagement domains. During FY09 the OSI development will continue with emphasis on advanced prototyping and transition of technologies for planning and detection capabilities required to detect and track surface targets in support of the Over the Horizon Targeting mission; to include documenting the mission requirements as well as generate associated technical specifications and standards. In FY10, the Innovation Team will begin to build and perform proof of concept on technologies and capabilities required to provide engagement quality data quality data.

CLASSIFICATION: UNCLASSIFIED

EXHIBIT R-2, RDT&E BUDGET ITEM JUSTIFICATION (CONTINUATION)

DATE
May 2009

APPROPRIATION/BUDGET ACTIVITY
RD TEN/BA 4

R-1 ITEM NOMENCLATURE
0603755N/SHIP SELF DEFENSE - DEM/VAL

B. PROGRAM CHANGE SUMMARY:

Funding:	FY 2008	FY 2009	FY 2010				
FY09 President's Budget	10.719	11.001	10.803				
FY10 President's Budget	10.617	10.966	6.960				
Total Adjustments	-0.102	-0.035	-3.843				
(U) Summary of Adjustments							
Congressional Adjustments	0.000	-0.030	0.000				
SBIR/STTR/FTT Assessment	-0.089	0.000	0.000				
Program Adjustments	0.000	0.000	-3.738				
Rate/Misc Adjustments	-0.013	-0.005	-0.105				
Total	-0.102	-0.035	-3.843				

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EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION					DATE May 2009		
APPROPRIATION/BUDGET ACTIVITY RD TEN/BA 4		PROGRAM ELEMENT NUMBER AND NAME 0603755N/SHIP SELF DEFENSE - DEM/VAL			PROJECT NUMBER AND NAME 2133/QRCC		
COST (In Millions)	FY 2008	FY 2009	FY 2010				
Project Cost	5.457	3.582	3.563				
RDT&E Articles Qty	0	0	0				

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:
The Requirements and Analysis Working Group (RAWG) provides independent analysis for a variety of combat system trade-offs, ship class performance studies, and force protection strategic plan development.

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EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION			DATE May 2009
APPROPRIATION/BUDGET ACTIVITY RD TEN/BA 4	PROGRAM ELEMENT NUMBER AND NAME 0603755N/SHIP SELF DEFENSE - DEM/VAL	PROJECT NUMBER AND NAME 2133/QRCC	
B. ACCOMPLISHMENTS/PLANNED PROGRAM:			
	FY 2008	FY 2009	FY 2010
Accomplishments/Effort/Subtotal Cost	5.457	3.582	3.563
RDT&E Articles Quantity	0	0	0
<p>FY 08 - FY 10 The QRCC RAWG will continue to analyze Ship Self Defense as well as force level performance impacts on self-defense capabilities. QRCC will provide leadership and management of the Common ASCM Anti Ship Cruise Missile (ACSM) Threat Characterization process for PEO IWS. The RAWG will continue to analyze Ship Self Defense Probability of Raid Annihilation (PRA) capabilities and participate and attend PRA working group meetings.</p> <p>C. OTHER PROGRAM FUNDING SUMMARY: The RAWG will analyze Ship Self Defense capabilities, as well as force level performance impacts on self-defense capabilities. Analysis will include Program of Record (PoR) requirements, proposed combat system self-defense configurations, and excursions based on raid size, environment, and other operational considerations. The RAWG will participate in and attend PRA working group meetings.</p> <p>D. ACQUISITION STRATEGY: N/A</p>			

CLASSIFICATION:		UNCLASSIFIED								
EXHIBIT R-3, RDT&E PROJECT COST ANALYSIS							DATE May 2009			
APPROPRIATION/BUDGET ACTIVITY RDTEN/BA 4		PROGRAM ELEMENT NUMBER AND NAME 0603755N/SHIP SELF DEFENSE - DEM/VAL			PROJECT NUMBER AND NAME 2133/QRCC					
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY Cost (\$000)	FY 2009 Cost (\$000)	FY 2009 Award Date	FY 2010 Cost (\$000)	FY 2010 Award Date			
System Engineering	WR	NSWC DD/Dahlgren,VA	13.828	3.582	OCT-08	3.563	NOV-09			
Subtotal Product Development			13.828	3.582		3.563				
Remarks:										
Subtotal Support Costs			0.000	0.000		0.000				
Remarks:										
Subtotal Test and Evaluation			0.000	0.000		0.000				
Remarks:										
Subtotal Management Services			0.000	0.000		0.000				
Remarks:										
Total Cost			13.828	3.582		3.563				

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EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION					DATE May 2009		
APPROPRIATION/BUDGET ACTIVITY RDTEN/BA 4		PROGRAM ELEMENT NUMBER AND NAME 0603755N/SHIP SELF DEFENSE - DEM/VAL			PROJECT NUMBER AND NAME 2184/Force AAW Coordination Technology		
COST (In Millions)	FY 2008	FY 2009	FY 2010				
Project Cost	5.160	7.384	3.397				
RDT&E Articles Qty	0	0	0				
A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:							
<p>The Force Advanced Warfare Concept Technology (FACT) Program is an advanced development effort designed to demonstrate Advanced Force concepts and capabilities that will significantly improve our Force defense in depth, including both local area and self defense capabilities against current and future threats. FACT improvements are designed to enhance the warfighting ability of ships and aircraft and to enable coupling of the Force into a single, distributed weapon system and towards more effective use of tactical data and the cooperative use of all the force sensors and weapons. These capabilities will provide the ship offensive flexibility needed to meet the threat brought about by increasing numbers of highly sophisticated weapons held by potentially hostile third world countries. FACT defines requirements and develops prototype systems or modifications to existing systems to test new concepts for the coordination of Force operations. FACT is a model innovation cell which consistently delivers advanced war-fighting capability that addresses current Fleet shortfalls and needs quickly and cost effectively. Some examples of prototype systems now in production are AN/SPS-48C Detection Data Converter, AN/SPS-48E Environmental Control Feature, Shipboard Gridlock System/Automatic Correlation (SGS/AC) and Dial-a-Track Quality (Link-11 Quality Selection). Other FACT developments include the Automatic Identification System (Auto-ID) and the Multi-Frequency Link-11 capability; Dual Net Multi-Frequency Link-11 (DNMFL); Force Threat Evaluation Weapons Assignment (FTEWA); the prototype Area Air Defense Commander (AADC) and the Joint Targeting Attack and Assessment Capability (JTAAC).</p> <p>In FY08, under 2184, the Ocean Surveillance Initiative (OSI) under FACT, continued the initiative to provide a persistent wide area tactical surface track picture. In developing OSI, the FACT team is coordinating with other organizations to include a variety of Navy programs and the Department of Homeland Security (U.S. Coast Guard and Customs and Border Protection (CBP)) to leverage off of experimentation opportunities and mission area expertise to develop capabilities in response to satisfying Navy objectives. During FY09 the OSI development will continue with emphasis on advanced prototyping and transition of technologies for planning and detection capabilities required to detect and track surface targets in support of Over the Horizon Targeting mission; including documenting mission requirements as well as generate associated technical specifications and standards. Based on the knowledge gained during the OSI development, in FY10, the Innovation Team will begin building and performing proof of concept on technologies and capabilities required to provide engagement quality data.</p>							

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EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION			DATE May 2009
APPROPRIATION/BUDGET ACTIVITY RD TEN/BA 4	PROGRAM ELEMENT NUMBER AND NAME 0603755N/SHIP SELF DEFENSE - DEM/VAL	PROJECT NUMBER AND NAME 2184/Force AAW Coordination Technology	
B. ACCOMPLISHMENTS/PLANNED PROGRAM:			
	FY 2008	FY 2009	FY 2010
Accomplishments/Effort/Subtotal Cost	5.160	7.384	3.397
RDT&E Articles Quantity	0	0	0
<p>Conduct critical FACT initiative proof of concept experiments. Provide top level programmatic support, technical analysis and assist in the development processes, procedures and documentation that impact the execution of the FACT program requirements. FACT and Ocean Surveillance Initiative efforts will combine and continue under Project 2184 in FY08. On-going development of an Ocean Surveillance Initiative prototype which will leverage the end to end capability realized by JTAAC and have the objective goal of attaining a tactically significant probability of detection, continuous track, and correct classification of small and medium sized vessels at sea state 5. Conduct critical experiments in support of the Ocean Surveillance Initiative. During FY09 the OSI development will continue with emphasis on advanced prototyping and transition of technologies for planning and detection capabilities required to detect and track surface targets in support of Over the Horizon Targeting mission; including documenting mission requirements as well as generate associated technical specifications and standards. Provide top level support, technical analysis and assist in the development processes, procedures and documentation that impact the execution of the Ocean Surveillance</p>			
C. OTHER PROGRAM FUNDING SUMMARY:			
Not Applicable			
D. ACQUISITION STRATEGY:			
Not Applicable			

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EXHIBIT R-3, RDT&E PROJECT COST ANALYSIS							DATE May 2009			
APPROPRIATION/BUDGET ACTIVITY RD TEN/BA 4		PROGRAM ELEMENT NUMBER AND NAME 0603755N/SHIP SELF DEFENSE - DEM/VAL			PROJECT NUMBER AND NAME 2184/Force AAW Coordination Technology					
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY Cost (\$000)	FY 2009 Cost (\$000)	FY 2009 Award Date	FY 2010 Cost (\$000)	FY 2010 Award Date			
Primary Hardware Development	SS/CPFF	APL/Laurel, MD	13.721	6.963	NOV-08	2.976	NOV-09			
Subtotal Product Development			13.721	6.963		2.976				
Remarks:										
Support Costs	C/CPFF	DELTA/Arlington, VA	0.650	0.421	NOV-08	0.421	NOV-09			
Subtotal Support Costs			0.650	0.421		0.421				
Remarks:										
Subtotal Test and Evaluation			0.000	0.000		0.000				
Remarks:										
Subtotal Management Services			0.000	0.000		0.000				
Remarks:										
Total Cost			14.371	7.384		3.397				

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EXHIBIT R-4, SCHEDULE PROFILE										DATE		May 2009	
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT NUMBER AND NAME				PROJECT NUMBER AND NAME							
RD TEN/BA 4		0603755N/SHIP SELF DEFENSE - DEM/VAL				2184/Force AAW Coordination Technology							
Fiscal Year	2008				2009				2010				
	1	2	3	4	1	2	3	4	1	2	3	4	
Support GWOT Operations													
Support Transition of JTAAC													
Begin Ocean Surveillance Initiative	△	△	△		△								
Identify Technical Gaps									△	Begin			
Perform Data Collection										△	Begin		
Develop Technologies											△		
Exercise Ptototype Capability													
Data Analysis													

CLASSIFICATION:		UNCLASSIFIED					
EXHIBIT R-4a, SCHEDULE DETAIL						DATE May 2009	
APPROPRIATION/BUDGET ACTIVITY RD TEN/BA 4		PROGRAM ELEMENT NUMBER AND NAME 0603755N/SHIP SELF DEFENSE - DEM/VAL			PROJECT NUMBER AND NAME 2184/Force AAW Coordination Technology		
Schedule Profile		FY 2008	FY 2009	FY 2010			
Phase 2 Data Collection with Customs & Border Protection		1Q					
Exercise Prototype Capability		2Q, 3Q	1Q				
Begin Transition for Ocean Surveillance Technology			1Q				
Identify Technical Gaps				1Q			
Data Collection				2Q			
Develop Technologies				3Q			