

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy DATE: February 2012

APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603925N: <i>Directed Energy and Electric Weapon System</i>
---	--

COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
Total Program Element	7.959	-	-	-	-	-	-	-	-	0.000	7.959
9999: <i>Congressional Adds</i>	7.959	-	-	-	-	-	-	-	-	0.000	7.959

A. Mission Description and Budget Item Justification

In accordance with NAVSEA Notice 5400, Ser 09B/240, Subj: ESTABLISHMENT OF THE NAVY DIRECTED ENERGY (DE) WEAPONS PROGRAM OFFICE (PMS 405), dated 4 Jan 02 and NAVSEA 5400.101, Ser SEA 06/058, Subj: DIRECTED ENERGY AND ELECTRIC WEAPONS PROGRAM OFFICE (PMS 405) CHARTER, dated 21 Jul 04 - COMNAVSEASYS COM (PMS 405) was assigned as the single Point of Contact for matters related to Directed Energy and Electric Weapon Systems development and acquisition initiation for the Navy and for those matters being coordinated with other Federal agencies and military services. The Naval Directed Energy and Electric Weapon Systems Program Office's (PMS 405) mission is to transition technology from the laboratory to prototype/advanced development/test for operational development and use. This will change the way the Navy fights in the 21st century by providing the war fighter with additional tools to fight today's and tomorrow's wars. This requires the effective management of Technology Development (BA-4) initiatives into System Development and Demonstration. PMS 405 will manage development of Directed Energy and Electric Weapon Systems onboard future naval surface ships that incorporate: Weapons Grade High Energy Lasers, Free Electron Lasers (Megawatt class), Electromagnetic Rail Gun (EMRG) Weapon Systems, High Power Microwave Weapon/Sensor Systems, and other systems/ capabilities.

In FY 11, \$7,959K is provided under Project Unit C207 to continue to develop and test a surface ship based Directed Energy (DE) Weapon System that provides a critical Counter-Electro Optics (EO)/Infra Red (IR) sensor capability to prevent identification of U.S. Forces by enemy Intelligence, Surveillance, Reconnaissance (ISR) through jamming and/or destruction of the sensor.

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy				DATE: February 2012		
APPROPRIATION/BUDGET ACTIVITY		R-1 ITEM NOMENCLATURE				
1319: Research, Development, Test & Evaluation, Navy		PE 0603925N: Directed Energy and Electric Weapon System				
BA 4: Advanced Component Development & Prototypes (ACD&P)						
B. Program Change Summary (\$ in Millions)		FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Previous President's Budget		-	-	-	-	-
Current President's Budget		7.959	-	-	-	-
Total Adjustments		7.959	-	-	-	-
• Congressional General Reductions		-	-			
• Congressional Directed Reductions		-	-			
• Congressional Rescissions		-	-			
• Congressional Adds		-	-			
• Congressional Directed Transfers		-	-			
• Reprogrammings		-	-			
• SBIR/STTR Transfer		-	-			
• Congressional General Reductions Adjustments		-0.041	-	-	-	-
• Congressional Add Adjustments		8.000	-	-	-	-
Congressional Add Details (\$ in Millions, and Includes General Reductions)						
Project: 9999: Congressional Adds						
Congressional Add: Directed Energy Development and Test						
Congressional Add Subtotals for Project: 9999						
Congressional Add Totals for all Projects						
Change Summary Explanation						
Technical: Not applicable.						
Schedule: Not applicable.						

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy	DATE: February 2012
--	----------------------------

APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603925N: <i>Directed Energy and Electric Weapon System</i>	PROJECT 9999: <i>Congressional Adds</i>
---	--	---

COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
9999: <i>Congressional Adds</i>	7.959	-	-	-	-	-	-	-	-	0.000	7.959
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

C207 - Directed Energy Development and Test - Continue to develop and test a surface ship based Directed Energy (DE) Weapon System that provides a critical Counter-Electro Optics (EO)/Infra Red (IR) sensor capability to prevent identification of U.S. Forces by enemy Intelligence, Surveillance, Reconnaissance (ISR) through jamming and/or destruction of the sensor. This system also provides "zero time of flight" asymmetric hard-kill defensive capability against Unmanned Aerial Vehicles (UAVs)/rockets/artillery/mortars, and small boat/swarm disruption, with an "unlimited magazine". It also provides defeat/soft-kill of tactical EO/IR sensors associated with Fire Control and Periscope optics.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2011	FY 2012
Congressional Add: Directed Energy Development and Test	7.959	-
FY 2011 Accomplishments: Engineering and testing of the active stabilization of the LaWS Beam Director, Tracking Mount, and initial Predictive Avoidance Safety System (PASS) on a moving platform during the Fleet's Trident Warrior 11 Sea Trial Initiative (June 2011); system engineering of the Beam Director and Beam Combiner required for shipboard test/demonstration during the Fleet's Trident Warrior 12 Sea Trial Initiative (June 2012); and development/engineering of the LaWS prototype including continued development and integration of the PASS capability, tracking capability/algorithm development and integration, and laser/optics engineering/development/test. This effort will increase the capability developed as a result of the FY 2010 Laser Weapon System (LaWS) prototype development and test/demonstration.		
Congressional Adds Subtotals	7.959	-

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

N/A

D. Acquisition Strategy

Government Field Activities: Technology development and demonstration/test of capabilities for designated Directed Energy and Electric Weapon System Components, subsystems, and system(s). Program Office approved design, development, and demonstration/test efforts.

Non-Government Activities: Technology development and demonstration/test of capabilities for designated Directed Energy and Electric Weapon System components, subsystems, and system(s). Program Office approved design, development, and demonstration/test efforts.

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)	R-1 ITEM NOMENCLATURE PE 0603925N: Directed Energy and Electric Weapon System	PROJECT 9999: Congressional Adds

E. Performance Metrics

Quarterly Reviews, Monthly Reports.

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy										DATE: February 2012			
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)				R-1 ITEM NOMENCLATURE PE 0603925N: Directed Energy and Electric Weapon System				PROJECT 9999: Congressional Adds					
Product Development (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 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
Hardware Development	Various	NSWC DD/NAVSEA/ Penn State:Washington D.C./Freeport, PA	5.384	-		-		-		-	0.000	5.384	
Software Development	WR	NSWC DD/ Crane:Dahlgren, VA/ Crane, IN	0.470	-		-		-		-	0.000	0.470	
Subtotal			5.854	-		-		-		-	0.000	5.854	
Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 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
System Engineering	Various	NSWC Crane/PHD/ NAVSEA:Crane, IN/ Port Hueneme, CA/ Washington, D.C.	1.505	-		-		-		-	0.000	1.505	
Subtotal			1.505	-		-		-		-	0.000	1.505	
Test and Evaluation (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 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
Test & Evaluation	WR	NSWC DD:Dahlgren, VA	0.500	-		-		-		-	0.000	0.500	
Subtotal			0.500	-		-		-		-	0.000	0.500	

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy											DATE: February 2012		
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>				R-1 ITEM NOMENCLATURE PE 0603925N: <i>Directed Energy and Electric Weapon System</i>				PROJECT 9999: <i>Congressional Adds</i>					

Management Services (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 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
PMS 405	Various	NAVSEA: Washington, D.C.	0.100	-		-		-		-	0.000	0.100	
Subtotal			0.100	-		-		-		-	0.000	0.100	

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	7.959	-		-		-		-	0.000	7.959	

Remarks

UNCLASSIFIED

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

DATE: February 2012

APPROPRIATION/BUDGET ACTIVITY

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

R-1 ITEM NOMENCLATURE

PE 0603925N: *Directed Energy and Electric Weapon System*

PROJECT

9999: Congressional Adds

[illegible]

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603925N: <i>Directed Energy and Electric Weapon System</i>	PROJECT 9999: <i>Congressional Adds</i>	

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Proj 9999				
DIRECTED ENERGY AND ELECTRIC WEAPON SYSTEM: C207 - Field Evaluation	4	2011	3	2012
DIRECTED ENERGY AND ELECTRIC WEAPON SYSTEM: C207 - Prototype System Development	4	2011	4	2012