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Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Navy DATE: April 2013

APPROPRIATION/BUDGET ACTIVITY					R-1 ITEM NOMENCLATURE							
1319: Research, Development, Test & Evaluation, Navy BA 5: System Development & Demonstration (SDD)					PE 0604378N: Nav Integrated Fire Control-Counter Air Sys Eng							
COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013 [#]	FY 2014 Base	FY 2014 OCO ^{##}	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
Total Program Element	66.408	28.279	39.974	21.413	-	21.413	21.414	25.503	21.190	17.275	Continuing	Continuing
3159: Naval Integrated Fire Control-Counter Air SE&I	66.408	28.279	39.974	21.413	-	21.413	21.414	25.503	21.190	17.275	Continuing	Continuing

[#] FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

^{##} The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

3159 Naval Integrated Fire Control - Counter Air (NIFC-CA) Systems Engineering Integration and Test (SEI&T) project is a systems engineering effort to extend the Naval Theater Air and Missile Defense battlespace out to the maximum kinematic range of our weapons. This includes targets beyond the detection range of the shooter, including Engage On Remote (EoR) and Over the Horizon (OTH) targets. The NIFC-CA project exploits capabilities inherent in existing systems, optimizes current and emerging technologies in component system upgrades, integrates them together, and performs kill chain tests, forming an interoperable System of Systems (SoS) to maximize future air defense capabilities. NIFC-CA consists of three kill chains called From the Air (FTA), From the Sea (FTS), and From the Land (FTL). As directed by OPNAV, the project is focused on SEI&T efforts to integrate the From The Sea (FTS) kill chain consisting of the E-2D Advanced Hawkeye, Cooperative Engagement Capability (CEC), AEGIS, and SM-6 missile. This PE will support efforts including system definition and architecture development, performance prediction, performance assessment, system test and risk reduction efforts, system analysis, modeling and simulation, and capability demonstrations for the FTS kill chain. The project also facilitates the development of the concept of operations with the warfighter to maximize effectiveness when deployed with the Fleet. This PE also includes SEI&T activities to integrate the US Army's Joint Land Attack Cruise Missile Defense Elevated Netted Sensor (JLENS) into the FTS kill chain as an elevated sensor and conduct a joint demonstration of that capability when the Navy systems are mature.

B. Program Change Summary (\$ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	24.898	39.974	15.821	-	15.821
Current President's Budget	28.279	39.974	21.413	-	21.413
Total Adjustments	3.381	0.000	5.592	-	5.592
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	4.000	0.000			
• SBIR/STTR Transfer	-0.619	0.000			
• Program Adjustments	0.000	0.000	5.600	-	5.600
• Rate/Misc Adjustments	0.000	0.000	-0.008	-	-0.008

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<u>Change Summary Explanation</u> Programmatic increase in funding is for increased testing and evaluation at White Sands Missile Range.		

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APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 5: System Development & Demonstration (SDD)					R-1 ITEM NOMENCLATURE PE 0604378N: Nav Integrated Fire Control-Counter Air Sys Eng				PROJECT 3159: Naval Integrated Fire Control-Counter Air SE&I			
COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013 [#]	FY 2014 Base	FY 2014 OCO ^{##}	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
3159: Naval Integrated Fire Control-Counter Air SE&I	66.408	28.279	39.974	21.413	-	21.413	21.414	25.503	21.190	17.275	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0		0	0	0	0	0		

[#] FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

^{##} The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

3159 Naval Integrated Fire Control - Counter Air (NIFC-CA) Systems Engineering Integration and Test (SEI&T) project is a systems engineering effort to extend the Naval Theater Air and Missile Defense battlespace out to the maximum kinematic range of our weapons. This includes targets beyond the detection range of the shooter, including Engage On Remote (EoR) and Over the Horizon (OTH) targets. The NIFC-CA project exploits capabilities inherent in existing systems, optimizes current and emerging technologies in component system upgrades, integrates them together, and performs kill chain tests, forming an interoperable System of Systems (SoS) to maximize future air defense capabilities. NIFC-CA consists of three kill chains called From the Air (FTA), From the Sea (FTS), and From the Land (FTL). As directed by OPNAV, the project is focused on SEI&T efforts to integrate the From The Sea (FTS) kill chain consisting of the E-2D Advanced Hawkeye, Cooperative Engagement Capability (CEC), AEGIS, and SM-6 missile. This PE will support efforts including system definition and architecture development, performance prediction, performance assessment, system test and risk reduction efforts, system analysis, modeling and simulation, and capability demonstrations for the FTS kill chain. The project also facilitates the development of the concept of operations with the warfighter to maximize effectiveness when deployed with the Fleet. This PE also includes SEI&T activities to integrate the US Army's Joint Land Attack Cruise Missile Defense Elevated Netted Sensor (JLENS) into the FTS kill chain as an elevated sensor and conduct a joint demonstration of that capability when the Navy systems are mature.

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

	FY 2012	FY 2013	FY 2014
Title: Integration and Test (I&T) Integrated Product Team	21.287	30.776	16.486
Articles:	0	0	0
Description: Efforts: The Integration and Test (I&T) Integrated Product Team (IPT) develops and executes the test plan to assess the FTS operational capability, performs risk reduction testing leveraging various component system tests. Test data will be used over time to verify, validate, and accredit the FTS simulation federation.			
FY 2012 Accomplishments: Successfully completed Tracking Exercises and JLENS Demonstration live fire events at White Sands Missile Range (WSMR). Continue integration of updated Pillar program models into the NIFC-CA Federation to support pre-mission and post-mission analysis for NIFC-CA test events. Conduct verification and initial validation efforts. Provide feedback to Pillar programs on performance deltas. Continue to ensure that Measures of Effectiveness (MOEs) and Measures of Performance (MOPs) are			

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APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 5: System Development & Demonstration (SDD)		R-1 ITEM NOMENCLATURE PE 0604378N: Nav Integrated Fire Control-Counter Air Sys Eng	PROJECT 3159: Naval Integrated Fire Control-Counter Air SE&I		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2012	FY 2013	FY 2014	
validated in test plans and interface with Pillar programs to maintain and update interface and performance specifications. Update and maintain Risk Register. FY 2013 Plans: Continue integration of updated Pillar program models into the NIFC-CA Federation to support pre-mission and post-mission analysis for NIFC-CA test events. Conduct Range Integration Testing, Tracking Exercises and Live Fire Tests at Point Mugu on CG 62 USS Chancellorsville. Conduct verification and initial validation efforts. Update and maintain Risk Register. FY 2014 Plans: Continue execution of test program, support post mission analysis, provide input and analysis of tracking exercises (TrackEx) and live fire test events (LFT) at ranges and At-Sea to further define the battlespace.					
Title: ENGINEERING MANAGMENT AND SYSTEM DEFINITION Articles: Description: Efforts: Engineering management and system definition including the development of the Systems Performance Document (SPD), SoS functional allocations, requirements, traceability, SoS trades studies, SoS information exchange requirements, interface specifications, and sensor network capability analysis. Provides for complete FTS kill chain performance analysis and interface verification through development of a federation of simulations provided directly from the FTS Programs of Record. Federated SoS simulations support architecture development, scenario development, predictive analysis for testing, and define capabilities and limitations of FTS kill chain performance analysis and interface verification through development of a federation of simulations provided directly from the FTS Programs of Record. Federated SoS simulations support architecture development, scenario development, predictive analysis for testing, and define capabilities and limitations of FTS kill chain for deployment. FY 2012 Accomplishments: Continue integration of updated Pillar program models into the NIFC-CA Federation to support pre-mission and post-mission analysis for NIFC-CA test events. Conduct verification and initial validation efforts. Provide feedback to Pillar programs on performance deltas. Continue to ensure that MOEs and MOPs are validated in test plans and interface with Pillar programs to maintain and update interface and performance specifications. Update and maintain NIFC-CA Risk Register. FY 2013 Plans: Continue integration of updated Pillar program models into the NIFC-CA Federation to support pre-mission and post-mission analysis for NIFC-CA test events. Conduct verification and initial validation efforts. Provide feedback to Pillar programs on performance deltas.		5.992 0	9.198 0	4.927 0	

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)									FY 2012	FY 2013	FY 2014
Continue to ensure that MOEs and MOPs are validated in test plans and interface with Pillar programs to maintain and update interface and performance specifications. Update and maintain NIFC-CA Risk Register. FY 2014 Plans: Continue integration of updated Pillar program models into the NIFC-CA Federation to support pre-mission and post-mission analysis for NIFC-CA test events. Conduct verification and initial validation efforts. Continue to ensure that MOEs and MOPs are validated in test plans and interface with Pillar programs to maintain and update interface and performance specifications. Update NIFC-CA Architecture to reflect Increment 2 requirements. Update and maintain NIFC-CA Risk Register.											
Title: SYSTEMS ENGINEERING, INTEGRATION AND TEST WITH ARMY JLENS PROGRAM Articles: Description: Efforts: Perform Systems Engineering, Integration and Test with Army JLENS program. Supports modeling and simulation and predictive analysis with JLENS as airborne sensor in the FTS kill chain. Provides for demonstration planning, execution, and data analysis. FY 2012 Accomplishments: Continue integration of updated JLENS model into the NIFC-CA Federation to support pre-mission and post-mission analysis for NIFC-CA JLENS test events. Conduct verification and validation efforts. Provide feedback to Pillar programs on performance deltas. Execute, conduct post-mission analyses, and report on the NIFC-CA JLENS TrackEx and Firing Mission.									1.000 0	0.000	0.000
Accomplishments/Planned Programs Subtotals									28.279	39.974	21.413
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• 0603658N: CEC	3.390	2.730	2.000		2.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• 0604366N: Standard Missile SM-6	38.628	39.312	48.876		48.876	62.268	9.315	3.837	3.907	Continuing	Continuing
• 0604307N: AEGIS	10.844	8.826	0.000		0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Remarks											

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D. Acquisition Strategy Not Applicable		
E. Performance Metrics Test Program and analysis conducted using the NIFC-CA Federation will provide data to verify NIFC-CA performance with respect to NIFC-CA MOEs, MOPs, and requirements being tracked as NIFC-CA related in the Pillar Programs. NIFC-CA Federation, once validated using test event data, will be used to update the expected performance of NIFC-CA, as required, and provide feedback to Pillar programs.		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy												DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 5: System Development & Demonstration (SDD)						R-1 ITEM NOMENCLATURE PE 0604378N: Nav Integrated Fire Control-Counter Air Sys Eng						PROJECT 3159: Naval Integrated Fire Control-Counter Air SE&I			
Product Development (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Systems Engineering	WR	NSWC/DD:Dahlgren, VA	3.006	0.000		0.000		0.000		-		0.000	0.000	3.006	
Systems Engineering	C/CPFF	Various:Various	5.931	4.810	Oct 2011	4.838	Oct 2012	1.698	Oct 2013	-		1.698	0.000	17.277	
Systems Engineering	C/CPFF	JHU/APL:Laurel, MD	1.165	0.000	Oct 2011	0.000		0.000		-		0.000	0.000	1.165	
Systems Engineering	C/CPFF	NGMS:Reston, VA	1.382	0.211	Oct 2011	0.000		0.000		-		0.000	0.000	1.593	
Systems Engineering	C/CPFF	NGIS:Bethpage, NY	4.611	2.150	Oct 2011	2.129	Oct 2012	0.654	Jan 2014	-		0.654	0.000	9.544	
Systems Engineering	C/CPFF	LM MS2:Moorestown, NJ	4.415	1.962	Oct 2011	2.129	Oct 2012	0.900	Jan 2014	-		0.900	0.000	9.406	
Systems Engineering	C/CPFF	Raytheon Co.:Tucson, AZ	6.693	1.994	Oct 2011	2.150	Oct 2012	1.675	Jan 2014	-		1.675	0.000	12.512	
Systems Engineering	C/CPFF	Boeing IDS:ST. Louis, MO	1.848	0.000		0.000		0.000		-		0.000	0.000	1.848	
Systems Engineering	C/CPFF	CSCI:Springfield, VA	0.700	0.000		0.000		0.000		-		0.000	0.000	0.700	
Systems Engineering	WR	SWDG:Norfolk, VA	0.599	0.000		0.000		0.000		-		0.000	0.000	0.599	
Systems Engineering	WR	COTF:Norfolk, VA	0.774	0.005	Oct 2011	0.005	Dec 2012	0.005	Jan 2014	-		0.005	0.000	0.789	
Systems Engineering	WR	NSWC/PHD:Port Hueneme, CA	0.540	0.100	Oct 2011	0.100	Dec 2012	0.100	Jan 2014	-		0.100	0.000	0.840	
Subtotal			31.664	11.232		11.351		5.032		0.000		5.032	0.000	59.279	
Test and Evaluation (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Integration and Test	WR	NSWC/DD:Dahlgren, VA	1.982	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Integration and Test	C/CPFF	Raytheon Co.:Tucson, AZ	4.466	2.682	Oct 2011	3.316	Oct 2012	0.525	Jan 2014	-		0.525	Continuing	Continuing	Continuing
Integration and Test	C/CPFF	Lockheed Martin - Moorestown, NJ:Moorestown, NJ	5.197	6.061	Oct 2011	7.698	Oct 2012	1.325	Jan 2014	-		1.325	Continuing	Continuing	Continuing

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Test and Evaluation (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Need Item Text	MIPR	TASC:Chantilly, VA	0.000	0.050	Jan 2012	0.050	Jan 2013	0.050	Feb 2014	-		0.050	0.000	0.150	
Integration and Test	C/CPFF	NGIS:Bethpage, NY	0.866	0.200	Oct 2011	7.698	Oct 2012	0.689	Jan 2014	-		0.689	Continuing	Continuing	Continuing
Integration and Test	Various	Various:Various	6.676	5.829	Oct 2011	7.936	Oct 2012	12.917	Oct 2013	-		12.917	Continuing	Continuing	Continuing
Integration and Test	WR	NSWC/PHD:Port Hueneme, CA	2.073	1.050	Oct 2011	1.050	Oct 2012	0.000		-		0.000	Continuing	Continuing	Continuing
Subtotal			21.260	15.872		27.748		15.506		0.000		15.506			
Management Services (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Planning and Management	C/CPFF	BOEING IDS:St. Louis, MO	0.750	0.000		0.000		0.000		-		0.000	0.000	0.750	
Project Planning and Management	C/CPFF	Raytheon Co.:Tucson, AZ	1.776	0.000		0.000		0.000		-		0.000	0.000	1.776	
Project Planning and Management	C/CPFF	LM MS2:Moorestown, NJ	1.485	0.000		0.000		0.000		-		0.000	0.000	1.485	
Project Planning and Management	C/CPFF	NGIS:Bethpage, NY	1.681	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Project Planning and Management	WR	NSWC/DD:Dahlgren, VA	1.266	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Project Planning and Management	C/CPAF	MEI:Arlington, VA	2.331	0.300	Dec 2011	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Project Planning and Management	C/CPFF	Various:Various	4.195	0.875	Oct 2011	0.875	Oct 2012	0.875	Oct 2013	-		0.875	Continuing	Continuing	Continuing
Subtotal			13.484	1.175		0.875		0.875		0.000		0.875			
Project Cost Totals			66.408	28.279		39.974		21.413		0.000		21.413			

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy							DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY			R-1 ITEM NOMENCLATURE			PROJECT				
1319: Research, Development, Test & Evaluation, Navy			PE 0604378N: Nav Integrated Fire Control-			3159: Naval Integrated Fire Control-Counter				
BA 5: System Development & Demonstration (SDD)			Counter Air Sys Eng			Air SE&I				
	All Prior Years	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract	

Remarks

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PE 0604378N: *Nav Integrated Fire Control-Counter Air Sys Eng*
Navy

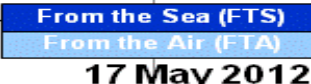
from the Sea (FTS)

R-1 ITEM NOMENCLATURE

PE 0604378N: Nav Integrated Fire Control-Counter Air Sys Eng

3159: *Naval Integrated Fire Control-Counter
Air SE&I*

RELATED PROGRAMS



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Exhibit R-4A, RDT&E Schedule Details: PB 2014 Navy

DATE: April 2013

APPROPRIATION/BUDGET ACTIVITY

1319: Research, Development, Test & Evaluation, Navy
BA 5: System Development & Demonstration (SDD)

R-1 ITEM NOMENCLATURE

PE 0604378N: Nav Integrated Fire Control-Counter Air Sys Eng

PROJECT

3159: Naval Integrated Fire Control-Counter Air SE&I

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Proj 3159				
FROM THE SEA (FTS) CAPABILITY	4	2014	4	2014
SCSC TX1	2	2012	2	2012
SCSC TX2	3	2012	3	2012
WSMR JLENS LFT1	4	2012	4	2012
WSMR LFT1	2	2013	2	2013
WSMR LFT2	2	2014	2	2014
AT SEA EVENT 1	4	2013	4	2013
AT SEA EVENT 2	3	2014	3	2014
AT SEA EVENT 3	2	2015	2	2015
AT SEA EVENT 4	1	2016	1	2016
AT SEA EVENT 5	4	2016	4	2016
AT SEA EVENT 6	3	2017	3	2017
AT SEA EVENT 7	2	2018	2	2018
E-2D AHE FRP	4	2013	4	2013
E-2D IOC	4	2014	4	2014
CEC AHE IOC	3	2012	3	2012
CEC AWS IOC	4	2014	4	2014
CEC JLENS DEMO	3	2012	3	2012
AEGIS CSSQT	3	2013	3	2013
AEGIS WEAPON SYSTEM CERT	4	2014	4	2014
JLENS DEMO WITH NIFC-CA	4	2012	4	2012