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Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Navy	DATE: April 2013
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APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0204152N: <i>E-2 Squadrons</i>
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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	174.037	11.276	8.610	1.971	-	1.971	0.000	0.000	0.000	0.000	0.000	195.894
0463: <i>E2C Improvements</i>	174.037	11.276	8.610	1.971	-	1.971	0.000	0.000	0.000	0.000	0.000	195.894

[#] 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

E-2 Improvements (0463) provides for incorporation of technologies for the evolution of E-2 Battle Management and Command and Control capabilities in support of naval warfare command and control requirements. It funds digital IP radio efforts as a surrogate to the Joint Tactical Radio System, machine-to-machine digital data communications, Advanced Digital Networking System, cooperative and non-cooperative identification, and open architecture hardware and software computing environments. These efforts have laid the foundation for growth to provide additional functional capabilities satisfying evolving operational requirements, e.g., Airborne Networking, Joint Sensor Netting and Track Management, Tactical Decision Aids, Advanced communications, and permits the evolutionary growth of a Combat Identification and Theater Air and Missile Defense Capability.

Link-16/Cooperative Engagement Capability Interoperability Program funding is to address the most severe data link related interoperability issues. This will significantly improve the quality of the tactical surveillance picture, reduce the possibility of leakers, mitigate Blue on Blue engagements, and mis-identification of tracks. Provides stable sensor fusion foundation to support sensor/weapon coordination requirements.

This program is funded under OPERATIONAL SYSTEMS DEVELOPMENT because it includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate funding in the current or subsequent fiscal year.

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B. Program Change Summary (\$ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	6.687	8.610	3.816	-	3.816
Current President's Budget	11.276	8.610	1.971	-	1.971
Total Adjustments	4.589	0.000	-1.845	-	-1.845
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	4.589	0.000			
• SBIR/STTR Transfer	-	-			
• Program Adjustments	0.000	0.000	-0.008	-	-0.008
• Rate/Misc Adjustments	0.000	0.000	-1.837	-	-1.837

Change Summary Explanation

Technical: The E-2D portion of the Link-16/Cooperative Engagement Capability (CEC) Interoperability funding for FY14 and out was realigned into RDTE(N) PE 0604234N, project 3051 E-2D Advanced Hawkeye.

Schedule: E-2D portion of the Link-16/CEC Interoperability schedule was removed for FY14 and out. Airborne Battlefield Command and Control updated to reflect changes in Exercise events and a name change from Trident Warrior (TW) in 3rd Quater of FY13 to "Sensor Netting Flex 13 (SNFX)."

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy									DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 7: Operational Systems Development					R-1 ITEM NOMENCLATURE PE 0204152N: E-2 Squadrons				PROJECT 0463: E2C Improvements			
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
0463: E2C Improvements	174.037	11.276	8.610	1.971	-	1.971	0.000	0.000	0.000	0.000	0.000	195.894
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												
E-2 Improvements (0463) provides for incorporation of technologies for the evolution of E-2 Battle Management and Command and Control capabilities in support of naval warfare command and control requirements. It funds digital IP radio efforts as a surrogate to the Joint Tactical Radio System, machine-to-machine digital data communications, Advanced Digital Networking System, cooperative and non-cooperative identification, and open architecture hardware and software computing environments. These efforts have laid the foundation for growth to provide additional functional capabilities satisfying evolving operational requirements, e.g., Airborne Networking, Joint Sensor Netting and Track Management, Tactical Decision Aids, Advanced communications, and permits the evolutionary growth of a Combat Identification and Theater Air and Missile Defense Capability.												
Link-16/Cooperative Engagement Capability Interoperability Program funding is to address the most severe data link related interoperability issues. This will significantly improve the quality of the tactical surveillance picture, reduce the possibility of leakers, mitigate Blue on Blue engagements, and mid-identification of tracks. Provides stable sensor fusion foundation to support sensor/weapon coordination requirements.												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)									FY 2012	FY 2013	FY 2014	
Title: Airborne Battlefield Command and Control									3.507	1.202	0.000	
									0	0		
Description: Funds development and demonstration of E-2 airborne Joint Sensor Netting and Track Management (including Network Centric Collaborative Targeting), Internet Protocol (IP) networking concepts (including Advanced Digital Networking Systems, and IP enabled communications systems), machine-to-machine interface, open architecture computing environment, network applications, tactical decision aids, combat identification technologies, on and off-board data fusion capabilities, and advanced mission computer and communications technologies airborne demonstrations.												
FY 2012 Accomplishments: Funded development efforts and a Limited Objective Experiment.												
FY 2013 Plans: Continues funding for the development efforts, a Sensor Netting Flex Exercise, and a Limited Objective Experiment.												
Title: Radar Improvements Program									2.827	0.000	0.000	

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy							DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>				R-1 ITEM NOMENCLATURE PE 0204152N: <i>E-2 Squadrons</i>			PROJECT 0463: <i>E2C Improvements</i>		

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)				FY 2012	FY 2013	FY 2014
Articles:				0		
Description: Funds development, integration, test, and fielding of new components within the E-2C radar to address obsolete Weapon Replaceable Assemblies (WRA) that are expected to be unsupportable in the near term. Such improvements will keep the APS-145 radar viable until 2026, the projected E-2C retirement date. This funding also supports necessary modifications within the APS-145 Radar Test Bench System.						
FY 2012 Accomplishments: Funded the continuation of ground and flight testing and software deployment.						
Articles:				4.942 0	7.408 0	1.971 0
Title: Link-16/Cooperative Engagement Capability (CEC) Interoperability Description: New start program in FY12 for design, implementation, test and analysis of Link-16/CEC related interoperability issues.						
FY 2012 Accomplishments: Funded systems engineering development efforts.						
FY 2013 Plans: Continues funding of systems engineering development efforts.						
FY 2014 Plans: Funding provides Technical Evaluation and Certification Testing into the E-2C Aircraft.						
Accomplishments/Planned Programs Subtotals				11.276	8.610	1.971

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
• APN/0544: <i>E-2 Series Includes (Technology Insertion 5-01, HFIP 002-10, Critical Avionics 012-10, AIS 002-11, Radar Improvements 005-11, CEC Upgrade 010-14, Link 16 MIDS/JTIDS for E-2C 001-17)</i>	29.131	16.322	22.091		22.091	23.359	18.641	20.573	18.774	44.695	1,551.978
Remarks											

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0204152N: <i>E-2 Squadrons</i>	PROJECT 0463: <i>E2C Improvements</i>
<u>D. Acquisition Strategy</u> Link-16/Cooperative Engagement Capability strategy will be exercised under a Joint Interoperability Decision. <u>E. Performance Metrics</u> Successfully complete Design Development for the Link-16/Cooperative Engagement Capability Interoperability program.		

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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 7: Operational Systems Development						R-1 ITEM NOMENCLATURE PE 0204152N: E-2 Squadrons				PROJECT 0463: E2C Improvements					
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
Primary Hardware Development	Various	Various:Various	19.103	0.704	Nov 2011	0.000		0.000		-		0.000	0.000	19.807	
Ancilliary Hardware Development	Various	Various:Various	0.300	0.440	Jan 2012	0.000		0.000		-		0.000	0.000	0.740	
Prior Yr Costs No longer funded in FYDP	Various	Various:Various	13.228	0.000		0.000		0.000		-		0.000	0.000	13.228	
Subtotal			32.631	1.144		0.000		0.000		0.000		0.000	0.000	33.775	
Remarks Totals may not add due to rounding.															
Support (\$ 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
Development Support	Various	Various:Various	0.934	0.346	Dec 2011	0.064	Nov 2012	0.000		-		0.000	0.000	1.344	
Software Development3	Various	Various:Pt. Mugu	0.000	1.467	Dec 2011	0.000		0.000		-		0.000	0.000	1.467	
Software Development4	WR	NAWCAD:Pax River, MD	0.000	1.527	Nov 2011	5.931	Nov 2012	1.195	Nov 2013	-		1.195	0.000	8.653	
Engineering & Technical Services (ETS)	Various	Various:Various	10.641	1.224	Dec 2011	0.477	Nov 2012	0.262	Nov 2013	-		0.262	0.000	12.604	
Government Engineering Support2	Various	Various:Various	13.980	0.555	Nov 2011	0.000		0.000		-		0.000	0.000	14.535	
Government Engineering Support3	WR	NAWCAD:Pax River, MD	12.179	0.975	Nov 2011	1.069	Nov 2012	0.000		-		0.000	0.000	14.223	
Integrated Logistics Support	Various	Various:Various	2.252	0.093	Dec 2011	0.060	Dec 2012	0.000		-		0.000	0.000	2.405	
Prior Year Costs No Longer Funded in FYDP	Various	Various:Various	55.941	0.000		0.000		0.000		-		0.000	0.000	55.941	
Subtotal			95.927	6.187		7.601		1.457		0.000		1.457	0.000	111.172	

UNCLASSIFIED

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APPROPRIATION/BUDGET ACTIVITY							R-1 ITEM NOMENCLATURE				PROJECT				
1319: Research, Development, Test & Evaluation, Navy BA 7: Operational Systems Development							PE 0204152N: E-2 Squadrons				0463: E2C Improvements				
Support (\$ 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
Remarks															
Totals may not add due to rounding.															
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
Developmental T & E 2	Various	Various:Various	6.274	0.418	Nov 2011	0.389	Nov 2012	0.000		-		0.000	0.000	7.081	
Developmental T & E3	WR	NAWCAD:Pax River, MD	10.263	2.342	Nov 2011	0.150	Nov 2012	0.200	Nov 2013	-		0.200	0.000	12.955	
Developmental T&E ETS 4	Various	Various:Various	1.353	0.313	Nov 2011	0.000		0.000		-		0.000	0.000	1.666	
Prior Year Costs No Longer Funded in FYDP	Various	Various:Various	7.377	0.000		0.000		0.000		-		0.000	0.000	7.377	
Subtotal			25.267	3.073		0.539		0.200		0.000		0.200	0.000	29.079	
Remarks															
Totals may not add due to rounding.															
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
Government Engineering Support	WR	NAWCAD:Pax River, MD	5.098	0.407	Nov 2011	0.292	Nov 2012	0.200	Nov 2013	-		0.200	0.000	5.997	
Program Management Support1	Various	Various:Various	6.258	0.292	Nov 2011	0.081	Nov 2012	0.046	Nov 2013	-		0.046	0.000	6.677	
Program Management Support-MSS2	C/CPFF	Wyle Labs:Huntsville, AL	2.017	0.060	Dec 2011	0.052	Dec 2012	0.049	Dec 2013	-		0.049	0.000	2.178	2.178
Program Management Support MSS 3	Various	Various:Various	5.662	0.058	Nov 2011	0.000		0.000		-		0.000	0.000	5.720	
Travel	Various	Various:Various	0.758	0.055	Oct 2011	0.045	Oct 2012	0.019	Oct 2013	-		0.019	0.000	0.877	

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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
Prior Year Costs No Longer Funded in FYDP	Various	Various:Various	0.419	0.000		0.000		0.000		-		0.000	0.000	0.419	
Subtotal			20.212	0.872		0.470		0.314		0.000		0.314	0.000	21.868	
Remarks Totals may not add due to rounding.															
			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
Project Cost Totals			174.037	11.276		8.610		1.971		0.000		1.971	0.000	195.894	
Remarks Totals may not add due to rounding.															

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PE 0204152N: *E-2 Squadrons*
Navy

R-1 Line #171

R-1 ITEM NOMENCLATURE

PE 0204152N: *E-2 Squadrons*

0463: E2C Improvements

E2C Improvements (1)	FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018			
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q
Airborne Battlefield Command & Control (C2)																												
Systems Development																												
Hardware Development	ABC2 Development																											
			LOE ▼				SNFX ▼	LOE ▼																				

2014PB - 0204152N - 0463

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Exhibit R-4, RDT&E Schedule Profile: PB 2014 Navy																DATE: April 2013													
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 7: Operational Systems Development												R-1 ITEM NOMENCLATURE PE 0204152N: E-2 Squadrons								PROJECT 0463: E2C Improvements									
Radar Improvements		FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018			
		1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q
Systems Development																													
Hardware Development																													
Test & Evaluation																													
Technical Evaluation		Fit Test	Deploy ▼																										
Deliveries																													

2014PB - 0204152N - 0463

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PE 0204152N: *E-2 Squadrons*
Navy

R-1 Line #171

APPROPRIATION/BUDGET ACTIVITY
 1319: *Research, Development, Test & Evaluation, Navy*
 BA 7: *Operational Systems Development*

PE 0204152N: *E-2 Squadrons*

0463: E2C Improvements

2014PB - 0204152N - 0463

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Navy			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0204152N: <i>E-2 Squadrons</i>	PROJECT 0463: <i>E2C Improvements</i>	

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>E2C Improvements (1)</i>				
Systems Development: Hardware Development: Airborne Battlefield C2 - Development	1	2012	1	2014
Systems Development: Hardware Development: Airborne Battlefield C2 - LOE FY12	4	2012	4	2012
Systems Development: Hardware Development: Airborne Battlefield C2 - SNFX FY13	3	2013	3	2013
Systems Development: Hardware Development: Airborne Battlefield C2 - LOE FY13	4	2013	4	2013
<i>Radar Improvements</i>				
Test & Evaluation: Technical Evaluation: Radar Improvement Program - Ground & Flight Test	1	2012	1	2012
Test & Evaluation: Technical Evaluation: Radar Improvement Program - Deploy	2	2012	2	2012
Deliveries: Radar Improvements Production Deliveries: FY12 APN (23 KIts)	2	2012	2	2012
Deliveries: Radar Improvements Production Deliveries: FY13 APN (10 KIts)	2	2013	2	2013
Deliveries: Radar Improvements Production Deliveries: FY14 APN (12 KIts)	2	2014	2	2014
Deliveries: Radar Improvements Production Deliveries: FY15 APN (11 KIts)	2	2015	2	2015
<i>Link 16 Cooperative Engagement Capability (CEC) Interoperability</i>				
Systems Development: Software Development: Link-16/CEC Interoperability - Systems Engineering	1	2012	4	2012
Systems Development: Software Development: Link-16/CEC Interoperability - Development	2	2012	1	2013
Test & Evaluation: Technical Evaluation: Link-16/CEC Interoperability - Functional Evaluation Test	2	2013	2	2013
Test & Evaluation: Technical Evaluation: Link-16/CEC Interoperability - Performance Evaluation/Certification Test	2	2013	1	2014