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**Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Navy** **Date:** February 2015

<b>Appropriation/Budget Activity</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy / BA 7: Operational Systems Development</i>	<b>R-1 Program Element (Number/Name)</b> PE 0204152N / <i>E-2 Squadrons</i>
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COST (\$ in Millions)	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
Total Program Element	192.943	1.903	-	-	-	-	-	-	-	-	-	194.846
0463: <i>E2C Improvements</i>	192.943	1.903	-	-	-	-	-	-	-	-	-	194.846

**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.

<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2014</b>	<b>FY 2015</b>	<b>FY 2016 Base</b>	<b>FY 2016 OCO</b>	<b>FY 2016 Total</b>
Previous President's Budget	1.971	-	-	-	-
Current President's Budget	1.903	-	-	-	-
Total Adjustments	-0.068	-	-	-	-
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.068	-			

**Change Summary Explanation**

Technical: Not Applicable

Schedule: Software Development has experienced delays due to aircraft availability.

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2016 Navy										<b>Date:</b> February 2015		
<b>Appropriation/Budget Activity</b> 1319 / 7					<b>R-1 Program Element (Number/Name)</b> PE 0204152N / E-2 Squadrons				<b>Project (Number/Name)</b> 0463 / E2C Improvements			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2014</b>	<b>FY 2015</b>	<b>FY 2016 Base</b>	<b>FY 2016 OCO</b>	<b>FY 2016 Total</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
0463: E2C Improvements	192.943	1.903	-	-	-	-	-	-	-	-	-	194.846
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

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

	<b>FY 2014</b>	<b>FY 2015</b>	<b>FY 2016 Base</b>	<b>FY 2016 OCO</b>	<b>FY 2016 Total</b>
<b>Title:</b> Link-16/Cooperative Engagement Capability (CEC) Interoperability	1.903	-	-	-	-
<b>Articles:</b>	-	-	-	-	-
<b>Description:</b> Link-16/Cooperative Engagement Capability provides design, implementation, test and analysis of Link-16/CEC related interoperability issues.					
<b>FY 2014 Accomplishments:</b> Funding provides Technical Evaluation and Certification Testing into the E-2C Aircraft.					
<b>FY 2015 Plans:</b> N/A					
<b>FY 2016 Base Plans:</b> N/A					
<b>FY 2016 OCO Plans:</b> N/A					
<b>Accomplishments/Planned Programs Subtotals</b>	1.903	-	-	-	-

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2016 Navy	<b>Date:</b> February 2015
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<b>Appropriation/Budget Activity</b> 1319 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0204152N / E-2 Squadrons	<b>Project (Number/Name)</b> 0463 / E2C Improvements
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**C. Other Program Funding Summary (\$ in Millions)**

<u>Line Item</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u> <u>Base</u>	<u>FY 2016</u> <u>OCO</u>	<u>FY 2016</u> <u>Total</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• APN/0544: E-2 Series Includes OSIP 5-01, 012-10, 005-11 and 001-17	19.957	8.432	6.094	-	6.094	10.453	8.638	6.806	6.055	25.169	1,494.054

**Remarks**

**D. Acquisition Strategy**

Link-16/Cooperative Engagement Capability strategy will be exercised under a Joint Interoperability Decision.

**E. Performance Metrics**

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 2016 Navy** **Date:** February 2015

<b>Appropriation/Budget Activity</b> 1319 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0204152N / E-2 Squadrons	<b>Project (Number/Name)</b> 0463 / E2C Improvements
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<b>Product Development (\$ in Millions)</b>				<b>FY 2014</b>		<b>FY 2015</b>		<b>FY 2016 Base</b>		<b>FY 2016 OCO</b>		<b>FY 2016 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</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>Award Date</b>	<b>Cost</b>			
Prior Yr Costs No longer funded in FYDP	Various	Various : Various	33.583	-		-		-		-		-	-	33.583	-
Primary Hardware Development	SS/CPAF	Northrop Gruman Corp (NGC) : Bethpage, NY	0.350	-		-		-		-		-	-	0.350	0.350
<b>Subtotal</b>			33.933	-		-		-		-		-	-	33.933	-

**Remarks**  
Totals may not add due to rounding.

<b>Support (\$ in Millions)</b>				<b>FY 2014</b>		<b>FY 2015</b>		<b>FY 2016 Base</b>		<b>FY 2016 OCO</b>		<b>FY 2016 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</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>Award Date</b>	<b>Cost</b>			
Development Support	Various	Various : Various	1.280	-		-		-		-		-	-	1.280	-
Software Development4	WR	NAWCAD : Pax River, MD	2.164	0.306	Nov 2013	-		-		-		-	-	2.470	-
Engineering & Technical Services (ETS)	Various	Various : Various	13.050	0.371	Nov 2013	-		-		-		-	-	13.421	-
Government Engineering Support2	Various	Various : Various	14.494	0.047	Nov 2013	-		-		-		-	-	14.541	-
Government Engineering Support3	WR	NAWCAD : Pax River, MD	14.886	0.229	Nov 2013	-		-		-		-	-	15.115	-
Integrated Logistics Support	Various	Various : Various	2.345	-		-		-		-		-	-	2.345	-
Prior Year Costs No Longer Funded in FYDP	Various	Various : Various	57.399	-		-		-		-		-	-	57.399	-
<b>Subtotal</b>			105.618	0.953		-		-		-		-	-	106.571	-

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Navy** **Date:** February 2015

<b>Appropriation/Budget Activity</b> 1319 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0204152N / E-2 Squadrons	<b>Project (Number/Name)</b> 0463 / E2C Improvements
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<b>Test and Evaluation (\$ in Millions)</b>				<b>FY 2014</b>		<b>FY 2015</b>		<b>FY 2016 Base</b>		<b>FY 2016 OCO</b>		<b>FY 2016 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</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>Award Date</b>	<b>Cost</b>			
Developmental T & E 2	Various	Various : Various	7.057	-		-		-		-		-	-	7.057	-
Developmental T & E3	WR	NAWCAD : Pax River, MD	15.963	0.481	Nov 2013	-		-		-		-	-	16.444	-
Developmental T&E ETS 4	Various	Various : Various	1.666	-		-		-		-		-	-	1.666	-
Prior Year Costs No Longer Funded in FYDP	Various	Various : Various	7.377	-		-		-		-		-	-	7.377	-
<b>Subtotal</b>			32.063	0.481		-		-		-		-	-	32.544	-

**Remarks**  
Totals may not add due to rounding.

<b>Management Services (\$ in Millions)</b>				<b>FY 2014</b>		<b>FY 2015</b>		<b>FY 2016 Base</b>		<b>FY 2016 OCO</b>		<b>FY 2016 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</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>Award Date</b>	<b>Cost</b>			
Program Management Support-MSS4	C/CPFF	Imagine One : Colonial Beach, VA	0.000	0.462	Dec 2013	-		-		-		-	-	0.462	0.044
Government Engineering Support	WR	NAWCAD : Pax River, MD	4.662	-		-		-		-		-	-	4.662	-
Program Management Support1	Various	Various : Various	6.148	-		-		-		-		-	-	6.148	-
Program Management Support-MSS2	C/CPFF	Wyle Labs : Huntsville, AL	0.938	-		-		-		-		-	-	0.938	0.938
Program Management Support MSS 3	Various	Various : Various	5.890	-		-		-		-		-	-	5.890	-
Travel	Various	Various : Various	0.407	0.007	Oct 2013	-		-		-		-	-	0.414	-
Prior Year Costs No Longer Funded in FYDP	Various	Various : Various	3.284	-		-		-		-		-	-	3.284	-
<b>Subtotal</b>			21.329	0.469		-		-		-		-	-	21.798	-

**Remarks**  
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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Navy** **Date:** February 2015

<b>Appropriation/Budget Activity</b>					<b>R-1 Program Element (Number/Name)</b>					<b>Project (Number/Name)</b>	
1319 / 7					PE 0204152N / E-2 Squadrons					0463 / E2C Improvements	
	Prior Years	FY 2014	FY 2015		FY 2016 Base	FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
<b>Project Cost Totals</b>	192.943	1.903	-		-	-		-	-	194.846	-

**Remarks**  
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**Exhibit R-4, RDT&E Schedule Profile: PB 2016 Navy** **Date:** February 2015

<b>Appropriation/Budget Activity</b> 1319 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0204152N / E-2 Squadrons	<b>Project (Number/Name)</b> 0463 / E2C Improvements
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E2C Improvements (1)	FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020							
	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				
<b>Link 16 Cooperative Engagement Capability (CEC) Interoperability</b>																																
<b>Systems Development</b>																																
Software Development	Development																															
<b>Test &amp; Evaluation</b>																																
Technical Evaluation	Perf Eval/Cert Test																															

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**Exhibit R-4A, RDT&E Schedule Details: PB 2016 Navy** **Date:** February 2015

<b>Appropriation/Budget Activity</b> 1319 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0204152N / <i>E-2 Squadrons</i>	<b>Project (Number/Name)</b> 0463 / <i>E2C Improvements</i>
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Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b><i>E2C Improvements (1)</i></b>				
Systems Development: Software Development: Link-16/CEC Interoperability - Development	1	2014	4	2014
Test & Evaluation: Technical Evaluation: Link-16/CEC Interoperability - Performance Evaluation/Certification Test	1	2014	4	2014