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Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Air Force										Date: February 2015		
Appropriation/Budget Activity 3600: Research, Development, Test & Evaluation, Air Force I BA 5: System Development & Demonstration (SDD)					R-1 Program Element (Number/Name) PE 0604429F I Airborne Electronic Attack							
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	-	4.422	30.687	8.358	-	8.358	7.779	7.139	7.274	7.404	Continuing	Continuing
655192: Network & Sys -of-Sys Dev	-	4.422	30.687	8.358	-	8.358	7.779	7.139	7.274	7.404	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project concentrates on the overall systems engineering, modeling and simulation, architecture and network requirements development, effectiveness assessment and requirements allocation to component systems of the Airborne Electronic Attack (AEA) System of Systems (SoS). It also includes establishment and use of virtual test capabilities for system of systems effectiveness testing/evaluation for AEA, studies and technology risk mitigation demonstrations for potential AEA SoS components and AEA SoS battle management, development planning, and the development and maintenance of the Air Force electronic warfare capability investment strategy. These efforts are crucial in the development of critical electronic attack capabilities in support of Air Force and joint operations to include Global Strike and Persistent Global Attack Concepts of Operations (CONOPS).

The joint AEA SoS includes the Navy EA-6B and EA-18G core components; the Air Force Miniature Air Launched Decoy (MALD) and its stand-in jammer variant, MALD-J; the EC-130H Compass Call Baseline 0 (formerly Block 35) configuration; Active Electronically Scanned Array (AESA) radar equipped aircraft; potentially an unmanned recoverable stand-in jamming platform; potentially a manned low/mid frequency, high power component capable of location and reactive jamming suppression of enemy integrated air defense system (IADS) radars outside the ranges of the associated Surface-to-Air Missiles (SAMs) and non-IADS targets. Recent events have led to an increased focus on developing advanced electronic attack capabilities for use in irregular warfare against non-IADS targets such as communication networks, remote controlled improvised explosive devices and man portable air defenses. In addition, there is an increased focus on examining non-traditional electronic attack alternatives to counter both IADS and non-IADS components such as communication networks, computers, command and control links, etc. in both major combat and irregular warfare scenarios.

This program is included in Budget Activity 5, System Development and Demonstration, because it has passed Milestone B approval and is conducting engineering and manufacturing development tasks aimed at meeting validated requirements prior to full-rate production.

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B. Program Change Summary (\$ in Millions)		FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total		
Previous President's Budget		4.575	30.687	8.413	-	8.413		
Current President's Budget		4.422	30.687	8.358	-	8.358		
Total Adjustments		-0.153	-	-0.055	-	-0.055		
• Congressional General Reductions		-	-					
• Congressional Directed Reductions		-	-					
• Congressional Rescissions		-	-					
• Congressional Adds		-	-					
• Congressional Directed Transfers		-	-					
• Reprogrammings		-	-					
• SBIR/STTR Transfer		-0.153	-					
• Other Adjustments		-	-	-0.055	-	-0.055		
C. Accomplishments/Planned Programs (\$ in Millions)				FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Title: System Engineering Studies & Technology Transition (AEA SoS)				2.172	2.750	4.698	-	4.698
Description: Apply systems engineering rigor to manage Air Force Airborne Electronic Attack (AEA) System of Systems (SoS) program requirements, designs, and operational concepts. Assess operational effectiveness of multiple Electronic Warfare systems in both offensive and defensive roles.								
FY 2014 Accomplishments: Conducted cost and operational effectiveness assessments of contributions of emerging AEA components such as non-kinetic counter electronics capabilities to both IADS and non-IADS scenarios for major and irregular warfare, refined AF electronic support system mitigation alternatives, updated AF EW Roadmap as directed by HQ AF, updated AF EW Capabilitiy Investment Strategy with studies in support of AF Core Function Master Plans.								
FY 2015 Plans: Conduct cost and operational effectiveness assessments of contributions of emerging AEA components such as non-kinetic counter electronics capabilities to both IADS and non-IADS scenarios for major and irregular warfare, define and recommend implementation strategies to mitigate AF electronic support system risks, update AF EW Roadmap as directed by HQ AF, update AF EW Capabilitiy Investment Strategy with studies in support of AF Core Function Master Plans.								
FY 2016 Base Plans:								

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C. Accomplishments/Planned Programs (\$ in Millions)		FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Conduct cost and operational effectiveness assessments of contributions of emerging AEA components such as non-kinetic counter electronics capabilities to both IADS and non-IADS scenarios for major and irregular warfare, define and recommend implementation strategies to mitigate AF electronic support system risks, update AF EW Roadmap as directed by HQ AF, update AF EW Capability Investment Strategy with studies in support of AF Core Function Master Plans. FY 2016 OCO Plans: N/A						
Title: Capability Planning (AEA SoS) Description: Provide capability planning to the Air Force electronic warfare and Airborne Electronic Attack (AEA) System of Systems (SoS) portfolio and constructive modeling and simulation and analysis management. FY 2014 Accomplishments: Conducted AEA SoS simulations to assess effectiveness of newly emerging and/or proposed upgraded systems (MALD-J, 4th Gen fighter upgrades, advanced Electronic Support Measures risk mitigation approaches, non-kinetic counter electronics capabilities, etc.) operating together in stressing IADS and Irregular Warfare/non-IADS environments. FY 2015 Plans: Conduct various analysis of alternatives related to electronic attack as well as conduct additional AEA simulations in support of a non-kinetic counter electronics analysis of alternatives and contributions of AEA components to effectiveness and survivability of 4th Generation fighters operating in both stressing IADS and Irregular Warfare/non-IADS environments. FY 2016 Base Plans: Conduct various analysis of alternatives related to electronic attack as well as conduct additional AEA simulations in support of a non-kinetic counter electronics analysis of alternatives and contributions of AEA components to effectiveness and survivability of 4th Generation fighters operating in both stressing IADS and Irregular Warfare/non-IADS environments. FY 2016 OCO Plans: N/A		2.250	27.937	3.660	-	3.660
Accomplishments/Planned Programs Subtotals		4.422	30.687	8.358	-	8.358

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D. Other Program Funding Summary (\$ in Millions) N/A		
Remarks		
E. Acquisition Strategy "Network and System of Systems Development" uses existing Air Force Life Cycle Management Center, Air Force Research Lab, and other contracts and instruments to provide engineering, architecture development, and other support for the Airborne Electronic Attack (AEA) System of Systems.		
F. Performance Metrics Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.		

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

Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 0604429F / <i>Airborne Electronic Attack</i>	Project (Number/Name) 655192 / <i>Network & Sys -of-Sys Dev</i>
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Product Development (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
AEA system of systems engineering	C/CPFF	Various : Various,	-	2.172	Dec 2013	2.750	Dec 2014	4.698	Dec 2015	-		4.698	Continuing	Continuing	-
AF EW Capability/ Development Planning	MIPR	Various : Various,	-	1.890	Dec 2013	27.087	Dec 2014	3.285	Dec 2015	-		3.285	Continuing	Continuing	-
Subtotal			-	4.062		29.837		7.983		-		7.983	-	-	-

Remarks

Includes system of systems engineering; architecture development; network requirements planning; requirements refinement and development; EW assessments, including Air Force Electronic Warfare Capability Investment Strategy (AFEWCIS) roadmap development, maintenance & assessments; technology risk mitigation, DoD scenario initiation & distribution; working group support; engineering and test planning; capability planning for AF EW portfolio; conduct of constructive/virtual modeling simulation and analysis.

Support (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-		-	-	-	-

Test and Evaluation (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-		-	-	-	-

Management Services (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Mission Support	Various	Various : Various,	-	0.360	Dec 2013	0.850	Dec 2014	0.375	Dec 2015	-		0.375	Continuing	Continuing	-
Subtotal			-	0.360		0.850		0.375		-		0.375	-	-	-

Remarks

Element includes miscellaneous support to projects. Costs include travel and unique security expenses.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Air Force											Date: February 2015			
Appropriation/Budget Activity 3600 / 5					R-1 Program Element (Number/Name) PE 0604429F / Airborne Electronic Attack					Project (Number/Name) 655192 / Network & Sys -of-Sys Dev				
	Prior Years	FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract	
Project Cost Totals	-	4.422		30.687		8.358		-		8.358	-	-	-	

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2016 Air Force	Date: February 2015
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Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 0604429F / <i>Airborne Electronic Attack</i>	Project (Number/Name) 655192 / <i>Network & Sys -of-Sys Dev</i>
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	FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
DoD Planning Scenarios Suppressor updates																												
Continuing to Support EW Assessments																												
AEA SoS Suppressor Improvements																												
AF EW Investment Strategy																												
AESA/RWR analysis/test																												
Non Kinetic Counter Electronics Analysis																												
NKCE Technology Demonstration																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2016 Air Force			Date: February 2015
Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 0604429F / <i>Airborne Electronic Attack</i>	Project (Number/Name) 655192 / <i>Network & Sys -of-Sys Dev</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
DoD Planning Scenarios Suppressor updates	4	2014	4	2020
Continuing to Support EW Assessments	4	2014	4	2020
AEA SoS Suppressor Improvements	4	2014	4	2020
AF EW Investment Strategy	4	2014	4	2020
AESA/RWR analysis/test	1	2014	4	2015
Non Kinetic Counter Electronics Analysis	1	2014	4	2016
NKCE Technology Demonstration	3	2014	2	2015