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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Air Force										Date: February 2018		
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 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	-	8.589	7.091	7.153	0.000	7.153	0.002	0.000	0.000	0.000	Continuing	Continuing
655192: Network & Sys -of-Sys Dev	-	8.589	7.091	7.153	0.000	7.153	0.002	0.000	0.000	0.000	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). Funding supports establishment and use of virtual test capabilities for system of systems effectiveness testing/evaluation for AEA, instantiating updated Defense Planning Guidance (DPG) scenarios into digital representations suitable for supporting modeling and simulation, conducting studies and technology risk mitigation demonstrations for potential AEA SoS components and AEA SoS battle management, development planning, planning for and conducting an OSD directed Joint AEA Analysis of Alternatives (AoA) (working group support and organic civilian salaries), 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 has evolved since 2004 and now includes the Navy EA-18G and its Next Generation Jammer (NGJ) subsystem and the Air Force EC-130H Compass Call Baseline 3 (significant upgrades to the former Block 35) configuration as modified escort/stand-off components, respectively. As stand-in/penetrating components, the AEA SoS includes the Air Force Miniature Air Launched Decoy (MALD) and its jammer variant, MALD-J; Active Electronically Scanned Array (AESA) radar equipped aircraft; and possible unmanned stand-in jamming/counter electronics platforms and other stand-in and distributed components capable of suppressing or degrading enemy integrated air defense system (IADS) and non-IADS targets. Current military actions continue to drive the need for increased focus on developing advanced electronic attack capabilities for use against both IADS and non-IADS targets such as radar sensors, infrared (IR) sensors, communications networks, remote controlled improvised explosive devices, computers, command and control links, man portable air defenses, etc. in both major combat and irregular warfare scenarios.

"This program element may include necessary civilian pay expenses required to manage, execute, and deliver AEA weapon system capability. The use of such program funds would be in addition to the civilian pay expenses budgeted in program elements 0605826F, 0605827F, 0605828F, 0605829F, 0605830F, 0605831F, 0605832F, and 0605898F."

This program is included in Budget Activity 5, System Development and Demonstration, because it pursues materiel solutions passing Milestone B approval and is conducting engineering and manufacturing development tasks aimed at validating requirements.

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B. Program Change Summary (\$ in Millions)		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget		9.187	7.091	7.207	0.000	7.207
Current President's Budget		8.589	7.091	7.153	0.000	7.153
Total Adjustments		-0.598	0.000	-0.054	0.000	-0.054
• Congressional General Reductions		-0.598	0.000			
• Congressional Directed Reductions		0.000	0.000			
• Congressional Rescissions		0.000	0.000			
• Congressional Adds		0.000	0.000			
• Congressional Directed Transfers		0.000	0.000			
• Reprogrammings		0.000	0.000			
• SBIR/STTR Transfer		0.000	0.000			
• Other Adjustments		0.000	0.000	-0.054	0.000	-0.054
Change Summary Explanation						
No significant program changes						
C. Accomplishments/Planned Programs (\$ in Millions)				FY 2017	FY 2018	FY 2019
Title: AEA System Engineering Studies & Technology Transition				4.409	2.985	3.034
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 2018 Plans: Finalize preparations for Joint AF/Navy AEA SoS AoA. Conduct technology demonstrations to provide potential solutions to AF Electronic Support system limitations; update/revise AF EW roadmap as directed by HQ AF; update AF EW capability investment strategy with studies in support of CAF Core Function Support Plans.						
N/A						
FY 2019 Plans: Conduct technology demonstrations to provide potential solutions to AF Electronic Support system limitations; update/revise AF EW roadmap as directed by HQ AF; update AF EW capability investment strategy with studies in support of CAF Core Function Support Plans.						
FY 2018 to FY 2019 Increase/Decrease Statement:						

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C. Accomplishments/Planned Programs (\$ in Millions)		FY 2017	FY 2018	FY 2019
Studies still ongoing. No significant change				
Title: AEA Capability Planning 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 2018 Plans: Initiate and begin execution of the Joint AEA SoS AoA. FY 2019 Plans: Complete the Joint AEA SoS AoA. Report out preferred concepts that provide advanced cost and operationally effective materiel solutions for joint AF/Navy combat operations in the 2030+ time frame. Develop acquisition plans to acquire those preferred concept capabilities for future improved AF EW capabilities. FY 2018 to FY 2019 Increase/Decrease Statement: Studies still ongoing. No Significant change		4.180	4.106	4.119
Accomplishments/Planned Programs Subtotals		8.589	7.091	7.153
D. Other Program Funding Summary (\$ in Millions) N/A Remarks E. Acquisition Strategy N/A 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 2019 Air Force												Date: February 2018			
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					
Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 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	-	4.409	Dec 2016	2.805	Dec 2017	3.000	Dec 2018	-		3.000	Continuing	Continuing	-
AF EW Capability/ Development Planning	MIPR	Various : Various	-	3.799	Dec 2016	3.836	Dec 2017	3.753	Dec 2018	-		3.753	Continuing	Continuing	-
Subtotal			-	8.208		6.641		6.753		-		6.753	Continuing	Continuing	N/A
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; conduct of Joint AoA (working group support and organic civilian salaries); engineering and test planning; capability planning for AF EW portfolio; conduct of constructive/virtual modeling simulation and analysis.															
Management Services (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 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	-	0.381	Dec 2016	0.450	Dec 2017	0.400	Dec 2018	-		0.400	Continuing	Continuing	-
Subtotal			-	0.381		0.450		0.400		-		0.400	Continuing	Continuing	N/A
Remarks Element includes miscellaneous support to projects. Costs include travel and unique security expenses.															
			Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract				
Project Cost Totals			-	8.589	7.091	7.153	-	7.153	Continuing	Continuing	N/A				
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 Air Force	Date: February 2018
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	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023			
	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
<i>Airborne Electronic Attack</i>																												
DoD Planning Scenarios Suppressor updates																												
Continuing to Support EW Assessments																												
AEA SoS Suppressor Improvements																												
AF EW Investment Strategy																												
Non Kinetic Counter Electronics Analysis																												
Conduct Joint AEA development and AoA planning																												
Conduct Joint AEA AoA																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 Air Force			Date: February 2018
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Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Airborne Electronic Attack</i>				
DoD Planning Scenarios Suppressor updates	1	2017	4	2020
Continuing to Support EW Assessments	1	2017	4	2020
AEA SoS Suppressor Improvements	1	2017	4	2020
AF EW Investment Strategy	1	2017	4	2020
Non Kinetic Counter Electronics Analysis	1	2017	4	2017
Conduct Joint AEA development and AoA planning	1	2017	2	2018
Conduct Joint AEA AoA	3	2018	2	2019