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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 7: Operational Systems Development					R-1 Program Element (Number/Name) PE 0305099F I Global Air Traffic Management (GATM)							
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	-	4.027	4.157	4.235	-	4.235	4.398	4.483	4.568	4.650	Continuing	Continuing
674689: Global Access Architecture	-	4.027	4.157	4.235	-	4.235	4.398	4.483	4.568	4.650	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This program element funds the Air Force Life Cycle Management Center (AFLCMC) Aerospace Management System Division (AMSD), the designated Air Force (AF) Communications, Navigation, Surveillance/Air Traffic Management (CNS/ATM) and Navigation Safety Center of Excellence (COE). The COE provides expertise to Headquarters Air Force, AF major commands (MAJCOM), and weapon system program offices regarding CNS/ATM system technical functions and performance standards for operation in the US National Airspace System (NAS) and international civil airspace. This centralized capability supplements the MAJCOMs and over 50 AF weapon system program offices with resident CNS/ATM technical expertise.

This funding enables the AMSD to monitor and participate in government and industry technical forums responsible for the development and assessment of international civil aviation standards for operations in worldwide airspace. Division personnel analyze civil standards as they are being developed and work to influence them to support Department of Defense (DOD) interests. CNS/ATM experts identify specific technical and engineering criteria and document them in generic performance matrices (GPMs). The COE works with MAJCOM and program office personnel to develop strategies for implementing CNS/ATM requirements on AF weapon systems. Specifically, CNS/ATM experts work with program office systems engineers to tailor the GPMs to apply civil standards to each platform's unique avionics architecture. Once CNS/ATM component integration and testing is completed, COE personnel validate platform CNS/ATM performance against the standards necessary to operate in civil airspace.

This program also funds the management of Indefinite Delivery/Indefinite Quantity (IDIQ) contracts that enable centralized procurement of CNS/ATM and navigation safety avionics equipment. These contracts are used by aircraft program offices across the DOD, among other federal agencies, and in support of foreign military sales.

This program also funds periodic audits required by civil aviation assurance standards on processes used to develop and distribute the Digital Aeronautical Flight Information File (DAFIF) to DOD users. This electronic navigation database, developed and maintained by the National Geospatial Intelligence Agency (NGA), contains critical safety of flight information used by DOD flight crews to fly instrument flight rules procedures worldwide.

This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

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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		4.027	4.157	4.263	-	4.263		
Current President's Budget		4.027	4.157	4.235	-	4.235		
Total Adjustments		-	-	-0.028	-	-0.028		
• Congressional General Reductions		-	-					
• Congressional Directed Reductions		-	-					
• Congressional Rescissions		-	-					
• Congressional Adds		-	-					
• Congressional Directed Transfers		-	-					
• Reprogrammings		-	-					
• SBIR/STTR Transfer		-	-					
• Other Adjustments		-	-	-0.028	-	-0.028		
C. Accomplishments/Planned Programs (\$ in Millions)				FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Title: Contract Support and Administration of DOD Avionics Equipment Catalog				0.741	0.710	0.728	-	0.728
Description: Multiple contract vehicles with multiple avionics vendors that enable centralized procurement of CNS/ATM avionics equipment/components. Supports numerous DOD, US federal agency, and foreign military sales program offices. Provides preferred customer pricing and extended warranties.								
FY 2014 Accomplishments:								
- Generated \$46M in sales and \$32M in savings.								
- Facilitated DOD compliance with European aircraft surveillance (Mode S) requirements.								
- Provided growth capable equipment to meet Aircraft Dependent Surveillance - Broadcast (ADS-B), area navigation (RNAV) and required navigation perform (RNP) standards, and emerging aircraft identification transponder requirements.								
- Issued request for proposal (RFP) for follow-on 5-year option contracts.								
FY 2015 Plans:								
- Continue administration of current contracts.								
- Evaluate proposals and award new 5-year option contracts.								
- Ensure availability of avionics components required for Federal Aviation Administration (FAA) mandated ADS-B requirements.								
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
Continue to administer the catalog and monitor industry for new CNS/ATM products which could be added to the catalog.						
FY 2016 OCO Plans: N/A						
Title: Digital Aeronautical Flight Information File (DAFIF) Management		1.846	1.800	1.818	-	1.818
Description: Perform periodic audits of the processes and procedures utilized by organizations involved in the development and distribution of critical safety of flight electronic databases used by aircrews to fly instrument flight rules procedures worldwide. Ensures the validity of multiple sources of information critical to implementation of international performance based navigation (PBN) standards.						
FY 2014 Accomplishments: - Assisted the NGA to address previously identified process deficiencies and maintain their FAA approvals. - COE personnel conducted several navigation data chain audits required to ensure the data/information needed for oceanic/remote and terminal area navigation requirements is accurate and acceptable for use in worldwide airspace. The successful completion of these audits enabled flight crews on many AF platforms to use this navigation data in civil airspace.						
FY 2015 Plans: - Continue assisting DOD agencies and the NGA to validate the accuracy of DAFIF data and investigate potential automation tools/capabilities to increase database accuracy. - Work with AF Flight Standards Agency terminal instrument approach procedure specialists to continue development and publication of Global Positioning System (GPS) based instrument procedures.						
FY 2016 Base Plans: - Work with DOD agencies and the FAA to develop performance based procedures required to operate without restriction in the NAS and in international civil aviation environments. - Continue to publish procedures and databases with the required degree of accuracy/performance necessary to operate manned and remotely piloted aircraft in the NAS.						
FY 2016 OCO Plans: N/A						
Title: Generic Performance Matrix (GPM) Development		1.440	1.647	1.689	-	1.689

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C. Accomplishments/Planned Programs (\$ in Millions)		FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Description: Participate in technical forums to understand and influence civil aviation standards to incorporate DOD interests. Create new and/or revise the 22 existing GPMs used by AF platform program offices to ensure aircraft comply with civil aviation requirements. Tailor GPMs for program offices to apply standards to unique aircraft avionics architectures. Assist 50+ aircraft program offices with the development of CNS/ATM related test and evaluation plans, the analysis of test/performance data, and the certification of aircraft CNS/ATM performance. FY 2014 Accomplishments: - Updated nine GPMs. - Provided standards for platform program offices to plan for equipment upgrades needed to meet the FAA's 1 Jan 2020 ADS-B Out mandate. - Authored a generic ADS-B test plan to expedite AF and DOD platform office testing and fielding of ADS-B equipment. - Developed a test plan to evaluate currently fielded GPS equipment to meet ADS-B requirements, and conducted testing on the most widely fielded GPS system currently used on AF aircraft. FY 2015 Plans: - Continue to engage at industry and civil authority technical working groups to influence aviation standards that benefit DOD users. - Continue to define the standards and assist AF and DOD program offices to plan and equip aircraft to meet CNS/ATM requirements. - Perform tests on additional fielded GPS systems to determine if they can meet ADS-B requirements. FY 2016 Base Plans: Continue development of performance matrices to ensure AF manned and remotely piloted aircraft are capable and certified to operate in accordance with emerging International Civil Aviation Organization performance based CNS/ATM requirements. FY 2016 OCO Plans: N/A						
Accomplishments/Planned Programs Subtotals		4.027	4.157	4.235	-	4.235
D. Other Program Funding Summary (\$ in Millions)						
N/A						

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D. Other Program Funding Summary (\$ in Millions)		
Remarks		
E. Acquisition Strategy This program primarily supports the acquisition of contractor advisory and assistance service (A&AS) and other technical support personnel to support the major thrusts described in Section C. This program also provides for the acquisition of contractor services in support of various program management activities within the COE. All of these services are acquired via the issuance of task/delivery orders against existing contractor support contract vehicles available to the CNS/ATM COE.		
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 / 7						R-1 Program Element (Number/Name) PE 0305099F / <i>Global Air Traffic Management (GATM)</i>						Project (Number/Name) 674689 / <i>Global Access Architecture</i>			
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
Subtotal			-	-		-		-		-		-	-	-	-
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
Technical support for CNS/ATM requirement assessments, GPM development, DAFIF navigation data chain audits/certification, and CNS/ATM ID/IQ contract management.	C/T&M	MITRE : Bedford, MA	-	2.474	Oct 2013	2.574	Oct 2014	2.612	Oct 2015	-		2.612	Continuing	Continuing	-
Technical support for operational requirement assessments, GPM development, DAFIF navigation data chain audits/certification, and CNS/ATM ID/IQ contract management.	C/CPFF	Jacobs Technology : Lincoln, MA	-	0.790	Dec 2013	0.800	Dec 2014	0.810	Dec 2015	-		0.810	Continuing	Continuing	-
Reconfigurable Cockpit Avionics Testbed Laboratory Data Link Subscription	SS/FFP	ARNIC : Annapolis, MD	-	0.023	Mar 2014	0.027	Mar 2015	0.027	Mar 2016	-		0.027	Continuing	Continuing	-
Subtotal			-	3.287		3.401		3.449		-		3.449	-	-	-
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			-	-		-		-		-		-	-	-	-

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Appropriation/Budget Activity 3600 / 7						R-1 Program Element (Number/Name) PE 0305099F / Global Air Traffic Management (GATM)				Project (Number/Name) 674689 / Global Access Architecture					
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
Program office support - PMA (Contract Services)	C/T&M	Quantech Services : Bedford, MA	-	0.423	Mar 2014	0.444	Mar 2015	0.454	Mar 2016	-		0.454	Continuing	Continuing	-
Program office support - PMA (Contract Svcs)	C/T&M	Tecolote : Bedford, MA	-	0.091	Oct 2013	0.080	Oct 2014	0.090	Oct 2015	-		0.090	Continuing	Continuing	-
Program office support - PMA (Other Govt Costs)	Various	Various : Bedford, MA	-	0.226	Oct 2013	0.232	Oct 2014	0.242	Oct 2015	-		0.242	Continuing	Continuing	-
Subtotal			-	0.740		0.756		0.786		-		0.786	-	-	-
			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			-	4.027		4.157		4.235		-		4.235	-	-	-
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2016 Air Force			Date: February 2015		
Appropriation/Budget Activity 3600 / 7		R-1 Program Element (Number/Name) PE 0305099F / <i>Global Air Traffic Management (GATM)</i>			Project (Number/Name) 674689 / <i>Global Access Architecture</i>

	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
Generic Performance Matrix Development																												
DAFIF Management																												
CNS/ATM iGATM I Contract Administration																												
CNS/ATM iGATM II Contract Proposal Evaluations																												
CNS/ATM iGATM II Contract Administration																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2016 Air Force			Date: February 2015
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0305099F / <i>Global Air Traffic Management (GATM)</i>	Project (Number/Name) 674689 / <i>Global Access Architecture</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Generic Performance Matrix Development	1	2014	4	2020
DAFIF Management	1	2014	4	2020
CNS/ATM iGATM I Contract Administration	1	2014	2	2015
CNS/ATM iGATM II Contract Proposal Evaluations	1	2014	2	2015
CNS/ATM iGATM II Contract Administration	2	2015	4	2019