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Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Air Force									DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development				R-1 ITEM NOMENCLATURE PE 0207449F: C2 Constellation							
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	30.832	30.293	24.229	0.000	24.229	21.924	22.214	21.295	21.171	Continuing	Continuing
675078: Horizontal Integration	14.669	15.468	10.863	0.000	10.863	11.024	11.333	11.506	11.676	Continuing	Continuing
675140: Joint Expeditionary Force Experiments	16.163	14.825	13.366	0.000	13.366	10.900	10.881	9.789	9.495	Continuing	Continuing
A. Mission Description and Budget Item Justification											
<p>The Command and Control Constellation (C2C) is the primary Air Force program for defining, developing, and assessing integrated effects of global, theater and tactical level Air Force air, space and cyber C2 capabilities in support of the joint warfighter. The Air Force faces a complex future where conflict will range across a broad spectrum of operations and lethality. The Air Force requires capabilities with the maximum possible flexibility to deal with the widest possible range of conflict. The black and white distinction between irregular war and conventional war is an outdated model. Near-peers will use irregular or asymmetric tactics that target traditional strengths. Irregular warfare brings non-conventional adversaries that requires non-conventional approaches for defeating them. The Air Force is working to establish a C2 Framework to be used as a unifying vision of command and control for each of the services core functions and core function master plans. C2 will support the C2 Framework by providing a venue for prototyping, experimentation and innovation to develop non-conventional solutions and enable an improved "sense-to-kill" cycle time. C2C innovations and experimentation provides strategic, operational, and tactical direction for Doctrine, Organization, Training, Materiel, Leadership and Education, Personnel and Facilities (DOTMLPF) solutions to facilitate the integration of Global Effects that support Command and Control, Intelligence, Surveillance and Reconnaissance (C2ISR) planning and execution for air, space, and cyberspace. In-depth development and analyses of C2C operational, systems, and technical architectures are geared towards identifying capability gaps, identifying required "TO BE" information services, and evaluating Command and Control, Intelligence, Surveillance and Reconnaissance (C2ISR) program planned improvements. Through prototyping and experimentation, C2C will integrate rapidly developing technologies to promote common standards, data sharing and information services across Air Force and joint warfighting applications to support a network-centric, joint enterprise solution to address these findings. C2C innovations will develop consistent with the Joint Airborne Layer Network (JALN) Initial Capabilities Document.</p>											
<p>Project 5078, Horizontal Integration (HI) conducts DOTMLPF analysis and assessments to guide cross-cutting net-centric, C2ISR sub-enterprise and cyberspace investment decisions that integrate USAF capabilities into joint and coalition operations. HI identifies, prioritizes, and develops horizontally integrated solution recommendations to ensure the latest technologies and information services are integrated into a cross cutting net centric C2 system that enables integrated Global Effects in all warfighter domains. The Fiscal Year 2010 strategy will be validated by HQ AF/A3 and AF/A5 to ensure that initiatives are harmonized with the most urgent warfighter needs described in the Air Force Capabilities Review and Risk Assessment and the Joint Forces Command Warfighter challenge program. Once</p>											

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3600: Research, Development, Test & Evaluation, Air Force		PE 0207449F: C2 Constellation			
BA 7: Operational Systems Development					
validated, HI funds are applied toward identifying the most critical warfighter capabilities and ensuring they are horizontally integrated into both Air Force and Joint C2ISR programs of record.					
Project 5140, Joint Expeditionary Force Experiments (JEFX) has transitioned from a large bi-annual warfighting experiment to more agile, smaller and frequent innovated-focused experiments leading to pre-fielding operational assessments. Constructive, Live-fly and virtual force operationally representative warfighter environment are created to focus on critical C2ISR areas of interest that support the Joint warfighter. This includes C2ISR information that supports the air, space and cyberspace domains. JEFX provides a vehicle for experimentation with emergin operational concepts and attendant new technologies that fill operational capability gaps in Air Force capabilities to meet emerging real world threats. The JEFX strategy is validated by HQ AF/A3 and A5 ensuring initiatives are harmonized with the most urgent warfighter needs described in the Air Force Capabilites Review and Risk Assesement and the Joint Forces Command Warfighter Challenge Program. JEFX themes are based on emerging CONOPS and warfighter challenges. JEFX initiatives are important enablers of innovation and transformation and are designed to support the themes and demonstrate emerging Air Force Capabilities to deploy and employ decisive air, space and cyberspace power for the Joint Force Commander.					
This program is in Budget Activity 7- Operational System Development because it provides a vehicle for developers, testers, and warfighters to experiment, analyze, and explore operational concepts and new technologies to enhance operational system developments and improve future capabilities.					
B. Program Change Summary (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Previous President's Budget	31.705	26.792	0.000	0.000	0.000
Current President's Budget	30.832	30.293	24.229	0.000	24.229
Total Adjustments	-0.873	3.501	24.229	0.000	24.229
• Congressional General Reductions		0.000			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		3.501			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Adjustments	-0.873	0.000	24.229	0.000	24.229
Congressional Add Details (\$ in Millions, and Includes General Reductions)					
Project: 675078: Horizontal Integration					
	FY 2009	FY 2010			

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<b><u>Congressional Add Details (\$ in Millions, and Includes General Reductions)</u></b> Congressional Add: <i>GAPS/AWS Horizontal Integration</i>		<b>FY 2009</b>	<b>FY 2010</b>
<div style="text-align: right;">Congressional Add Subtotals for Project: 675078</div>		0.000	3.501
<div style="text-align: right;">Congressional Add Totals for all Projects</div>		0.000	3.501
<b><u>Change Summary Explanation</u></b> In FY 2010: the change between the President's previous and current budget is due to the GAPS/AWS Horizontal Integration Congressional Increase. In FY 2011: the change between the President's previous and current budget is due to reprogramming adjustments to meet higher Air Force priorities.			

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Air Force								<b>DATE:</b> February 2010			
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<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
675078: <i>Horizontal Integration</i>	14.669	15.468	10.863	0.000	10.863	11.024	11.333	11.506	11.676	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

## A. Mission Description and Budget Item Justification

Project 5078, Horizontal Integration (HI), is established to develop a Global Effects integrated capability to support cross-cutting net-centric solutions across air, space and Cyberspace C2ISR Warfighter domain. HI activities include studies and analysis, technology development, risk reduction, prototyping, experimentation and transition. These activities are required to identify, design, develop, experiment and implement C2ISR solutions supporting warfighting integration and interoperability needs which are not the sole responsibility of a specific program of record. The nature of integrated and interoperable C2ISR warfighting capabilities span multiple platforms and domains; these capabilities are routinely overlooked by traditional programs dedicated to supporting the requirements of specific warfighting communities. The HI Project is uniquely designed to look across these platforms and domains, which enables the Air Force to respond to the needs across the seams of individual systems. These horizontal integration initiatives will be prototyped, assessed, appropriately captured in requirements documents and then transitioned to programs of record for production, fielding and sustainment.

Systems Engineering and Analysis is the 'glue' that holds C2C elements together, and closes the seams in the Command, Control, Communications Computers, Intelligence, Surveillance and Reconnaissance (C4ISR) architectures. Capability analysis identifies areas where interoperability can be improved within the Air Force, among joint services, and among coalition partners. Once capability issues are identified, they are prioritized and pilot initiatives are developed to provide solutions to the warfighter challenges that resolve the capability gaps.

The HI Project also helps to competitively prototype integrated solutions against validated program requirements. The benefits of this activity are two-fold: the operational community is able to weigh the cost, risk, and performance trade-offs between enterprise solutions versus program centric solutions; and the activity supports the DoDI 5000.02 requirement for competitive prototyping for all ACAT programs. The synchronization of HI prototyping and program milestone requirements offers an effective environment for increasing interoperability while reducing the impact of this policy on multiple pre-milestone B programs.

Modeling and Simulation (M&S) Infrastructure and Experimentation leverage existing government/industry simulation sites that allow 'virtual' assessments of the C2 Constellation. This Infrastructure environment manages a continuous distributed operational environment that supports air, space, and cyberspace C2ISR and rapid acquisition, prototyping, development, integration, and fielding. C2ISR initiatives use this infrastructure to mature their development status prior to entry into JEFX for final operational assessment.

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The HI prototype performances are assessed for operational utility; the most promising initiatives/technologies will be matured and transitioned into weapon system configuration control baselines. Requirements documents will be published and revised, and a requirements database and implementation plan identifying the most significant C2C net-centric integration issues will be updated to catalog the activities necessary to accomplish this integration.						
This program is in Budget Activity 7 - Operational System Development because it provides developers, testers and warfighters a way to experiment, analyze, and explore operational concepts and new technologies to enhance operational system developments and improve future capabilities leading to a horizontally integrated C2ISR Warfighter Sub-enterprise.						
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
MAJOR THRUST: Requirements/Capabilites Based Planning (CBP)		0.367	0.000	3.741	0.000	3.741
FY 2009 Accomplishments: In FY 2009: Extended the architecture supporting a broader context for strategic planning for the airborne network (AN). Analysis was conducted on applying Non-Traditional Intelligence, Surveillance, and Reconnaissance (NTISR) to an Offensive Counterair (OCA) or Suppression of Enemy Air Defense (SEAD) mission with the result of an architecture being defined and a cost model developed.						
FY 2010 Plans: In FY 2010: N/A						
FY 2011 Base Plans: In FY 2011: Will develop and document integrated Command and Control (C2) requirements for integrated air and missile defense. Will analyze and document emerging Air Force (AF) C2 requirements.						
FY 2011 OCO Plans: In FY 2011 OCO: Not Applicable.						
MAJOR THRUST: Architecture Development and Systems Engineering		4.577	2.583	0.436	0.000	0.436

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: In FY 2009: Updated version 3.2 to the C2 Constellation Architecture. The update included an Enterprise view that is federated to a C2 Operational Node View. This enterprise view included a mapping of capabilities to operational activities, operational activities to the Joint Common System Function List and system functions to a sample of Electronic Systems Center (ESC) C2 systems.						
FY 2010 Plans: In FY 2010: Continued to participate in and support planning for the Joint Air Ground Integration Cell (JAGIC) functional analysis. Work with the Army, AF & USMC as well as ESC/XR and Joint Expeditionary Force Experiment (JEFX) to produce a plan that identifies scope of the analysis assumptions, functions to be addressed, scenarios to be analyzed, and measures to be assessed.						
FY 2011 Base Plans: In FY 2011: Efforts will continue in support of the Joint Air Ground Integration Cell (JAGIC) functional analysis. In addition, functional analysis and technical expertise will be provided in support of the Joint Forces Air Component Commander-Forward (JFACC-Forward) and Airspace Coordination Measure Request (ACMR).						
FY 2011 OCO Plans: In FY 2011 OCO: Not Applicable.						
MAJOR THRUST: Analysis Integration and Systems Engineering		3.345	0.772	0.733	0.000	0.733
FY 2009 Accomplishments: In FY 2009: Three initiatives were funded that aid in filling gaps in the C4ISR architecture. Dynamic ISR Management Service (DIMS) will provide a potential solution for an ISR management system. Tactical Automated Informations System (TAIS) and Advanced Field Artillery Tactical Data System (AFATDS) are both US Army programs of record that will directly interface with the Air Operations Center (AOC) via Theater Battle Management Core System (TBMSC) and its successor programs						

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
including C2IS using an OSD-validated Service Oriented Architecture (SOA) approach. The goal is to make the Air Tasking Order (ATO)/Airspace Control Order (ACO) process dynamic enough to support the rapid and frequent changes resultant from support to Irregular Warfare (IW). operations.						
FY 2010 Plans: In FY 2010: Work on improved Battle Damage Assessment (iBDA), which is an effort that provides near-real time Phase 1 BDA information by culling munitions and asset data from Link-16, associating it with target and asset information in the ATO and producing a Joint Munitions Effectiveness Manual (JMEM) probability of destruction. The effort will come to completion and transition to a Program of Record (PoR). Efforts remaining are code clean up and documentation, which will be necessary in order to transition to a Program of Record.						
FY 2011 Base Plans: In FY 2011: Analysis and integration efforts will continue. Specific focus areas and efforts to be piloted will depend on real world needs and C2/ISR enterprise PoR requirements. Will continue analysis and transition of prototype capability developed in previous years.						
FY 2011 OCO Plans: In FY 2011 OCO: Not Applicable.						
MAJOR THRUST: Ops/Tech Analysis and Concept Development		1.635	2.941	1.938	0.000	1.938
FY 2009 Accomplishments: In FY 2009: Area Visualization. Developed and captured operational requirements for Cyber and Space C2 in support of HAF A3/5 directed Integrated Operating Environment (IOE). Developed, assessed and delivered operational prototype software in support of 8AF Global Strike planning, 67 Network Warfare Wing C2 integration, and 9AF ISR assessment needs.						

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2010 Plans: In FY 2010: Space/Cyber. Develop FY12 Science and Technology Program Objective Memorandum inputs based on analysis of critical Numbered Air Force's capability shortfalls. Develop and assess prototype solutions for integration of non-kinetic "strike effects" capabilities into an integrated mission package. Develop and assess cyber C2 IOE integration concepts and space situational awareness capabilities in support of theater planning and execution.						
FY 2011 Base Plans: In FY 2011: Area Air Forces Forward. Will develop and prototype a capability for in transit visibility of Global Strike assets for 8AF. Will develop an Integrated Operational Environment capability for improved mobility force integration supporting theater planning efforts. Will investigate a multi-level security solution to planning integrated ISR mobility and weather data in support of political/military operations.						
FY 2011 OCO Plans: In FY 2011 OCO: Not Applicable.						
MAJOR THRUST: M&S Infrastructure and Experimentation  FY 2009 Accomplishments: In FY 2009: Rolled in M&S infrastructure tools into experimentation venues to provide realistic environments for refining technologies, Tactics, Techniques, and Procedures aimed at improving AF contributions to the Joint Warfighters.  FY 2010 Plans: In FY 2010: Re-use M&S infrastructure tools/systems in experimentation venues for further refinement of Tactic, Techniques and Procedures for Joint Warfighters.		3.378	1.381	0.000	0.000	0.000

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 Base Plans: In FY 2011: N/A						
FY 2011 OCO Plans: In FY 2011 OCO: Not Applicable.						
MAJOR THRUST: Horizontal Integration Solutions Assessment		1.367	4.290	4.015	0.000	4.015
FY 2009 Accomplishments: In FY 2009: Simple C2 effort was initiated. Simple C2 is an agile Application Development Toolkit that lets end-users build, maintain and share customized applications to display data from disparate sources with the emphasis of enabling the Combat Coder to build specialized solutions for end users. Development was completed and the system demonstrated to various organizations. Currently working with the AOC-Weapon System program office to determine how to transfer this effort into their program.						
FY 2010 Plans: In FY 2010: In order to foster enterprise integration across C2ISR programs and support the DoDI 5000.02 requirement for competitive prototyping, initiatives were selected for execution in FY10. Three prototyping efforts have been selected for execution: continuation of the Unmanned Aircraft Systems (UAS) C2 efforts under the MAESTRO initiative; prototyping an Air Mission Information Service (AMIS) under the guidance of the AO COI that will support deliberate and immediate mission planning; and prototyping an improved ISR management/visualization tool based on SOA technology. Additional program increase of \$3.5M is intended to support development of Global Air Presentation System (GAPS) and Airborne Web Services (AWS) for C2C.						
FY 2011 Base Plans: In FY 2011: Initiatives will be selected for execution that will foster enterprise integration across C2ISR programs and support the DoDI 5000.02 requirement for competitive prototyping. A data call						

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<b>B. Accomplishments/Planned Program (\$ in Millions)</b>						
		<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
<p>will be issued in third quarter FY10 and the submission will be evaluated and selected initiatives will be funded for execution in FY11.</p> <p><i>FY 2011 OCO Plans:</i> In FY 2011 OCO: Not Applicable.</p>						
Accomplishments/Planned Programs Subtotals		14.669	11.967	10.863	0.000	10.863
		<b>FY 2009</b>	<b>FY 2010</b>			
<p>Congressional Add: GAPS/AWS Horizontal Integration</p> <p><i>FY 2009 Accomplishments:</i> In FY 2009: N/A</p> <p><i>FY 2010 Plans:</i> In FY 2010: For the Global Awareness Presentation System (GAPS), continued development of a visualization system that provided fused situation awareness and strategic information to USTRATCOM commanders. For the Airborne Web Services (AWS), continued to migrate JSTARS and AWACS towards a NetCentric Warfare capability that provided web services the capability to exchange data between the aircraft and ground user.</p>		0.000	3.501			
Congressional Adds Subtotals		0.000	3.501			

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**C. Other Program Funding Summary (\$ in Millions)**

Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• PE Not Provided (2273): <i>Activity Not Provided</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

**D. Acquisition Strategy**

This project uses full and open competition for operational requirements document creation, systems engineering & architecture development, modeling & simulation and experimentation, joint interoperability/integration, and horizontal integration approaches.

**E. 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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Product Development (\$ in Millions)														
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Requirements/Capability Based Planning (CBP)/ GAPS/AWS Horizontal Integration	FFRDC	MITRE Corp ESC, Hanscom AFB (HAFB), MA	0.367	3.501	Mar 2010	0.000		0.000		0.000	Continuing	Continuing	Continuing	
Requirements/Capability Based Planning (CBP)/ GAPS/AWS Horizontal Integration (1)	C/CPAF	Spectrum AFRL Rome NY, Langley VA	0.000	0.000		2.743	Dec 2010	0.000		2.743	Continuing	Continuing	Continuing	
Requirements/Capability Based Planning (CBP)/ GAPS/AWS Horizontal Integration (2)	C/CPAF	AFRL Rome NY	0.000	0.000		0.860	Oct 2010	0.000		0.860	Continuing	Continuing	Continuing	
Architecture Development and Systems Engineering/ GAPS/AWS Horizontal Integration	FFRDC	MITRE CORP ESC HAFB MA	1.417	0.289	Nov 2009	0.298	Nov 2010	0.000		0.298	Continuing	Continuing	Continuing	
Architecture Development and Systems Engineering/ GAPS/AWS Horizontal Integration (1)	C/CPAF	Lockheed Martin ESC HAFB MA	0.182	0.000		0.000		0.000		0.000	Continuing	Continuing	Continuing	
Architecture Development and Systems Engineering/ GAPS/AWS Horizontal Integration (2)	FFRDC	MITRE Corp GCIC, Langley AFB, VA	1.705	1.705	Oct 2009	0.000		0.000		0.000	Continuing	Continuing	Continuing	
	C/CPAF		0.950	0.394	Oct 2009	0.000		0.000		0.000	Continuing	Continuing	Continuing	

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Product Development (\$ in Millions)														
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Architecture Development and Systems Engineering/ GAPS/AWS Horizontal Integration (3)		Northrop Grumman & EDS GCIC, Langely AFB, VA												
Analysis, Integration, and SE/Capability Roadmaps	C/CPAF	Lockheed Martin ESC, HAFB, MA	0.907	0.000		0.000		0.000		0.000	Continuing	Continuing	Continuing	
Analysis, Integration, and SE/Capability Roadmaps (1)	C/CPAF	Lockheed Martin ESC, HAFB, MA	0.173	0.000		0.000		0.000		0.000	Continuing	Continuing	Continuing	
Analysis, Integration, and SE/Capability Roadmaps (2)	FFRDC	MITRE HAFB, MA	1.732	0.578	Nov 2009	0.595	Nov 2010	0.000		0.595	Continuing	Continuing	Continuing	
Analysis, Integration, and SE/Capability Roadmaps (3)	Various/ Various	EDS GCIC, 300 Exp.Way, Hampton,Va	0.210	0.000		0.000		0.000		0.000	Continuing	Continuing	Continuing	
Tech Analysis and Concept Development	Various/ Various	Teledyne Brown GCIC, 300 Exp Way, Hampton, VA: AFCYBER LAFB VA	1.312	2.747	Jan 2010	0.000		0.000		0.000	Continuing	Continuing	Continuing	
Tech Analysis and Concept Development (1)	Various/ Various	Northrup Grumman AFRL Rome NY	0.000	0.000		1.800	Nov 2010	0.000		1.800	Continuing	Continuing	Continuing	
	C/FFP	L-3 Titan	1.393	0.000		0.000		0.000		0.000	Continuing	Continuing	Continuing	

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis: PB 2011 Air Force</b>											<b>DATE:</b> February 2010		
<b>APPROPRIATION/BUDGET ACTIVITY</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0207449F: <i>C2 Constellation</i>				<b>PROJECT</b> 675078: <i>Horizontal Integration</i>					
<b>Product Development (\$ in Millions)</b>													
				<b>FY 2010</b>		<b>FY 2011 Base</b>		<b>FY 2011 OCO</b>		<b>FY 2011 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Total Prior Years Cost</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>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
M&S Infrastructure and Experimentation		AFCYBER, LAFB VA											
M&S Infrastructure and Experimentation (1)	C/FFP	AFCYBER LAFB VA	1.662	1.187	Nov 2009	0.000		0.000		0.000	Continuing	Continuing	Continuing
Horizontal Integration Solution Assessment	Various/ Various	ESC HAFB, MA	1.042	2.362	Jun 2010	2.088	Nov 2010	0.000		2.088	Continuing	Continuing	Continuing
Horizontal Integration Solution Assessment (1)	FFRDC	Mitre HAFB, MA	0.000	1.735	Jan 2010	1.787	Nov 2010	0.000		1.787	Continuing	Continuing	Continuing
<b>Subtotal</b>			13.052	14.498		10.171		0.000		10.171			
<b>Remarks</b>													
<b>Support (\$ in Millions)</b>													
				<b>FY 2010</b>		<b>FY 2011 Base</b>		<b>FY 2011 OCO</b>		<b>FY 2011 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Total Prior Years Cost</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>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
Support	C/FFP	Quantech PASS ESC, HAFB, MA	0.258	0.298	Nov 2009	0.000		0.000		0.000	Continuing	Continuing	Continuing
<b>Subtotal</b>			0.258	0.298		0.000		0.000		0.000			
<b>Remarks</b>													

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis: PB 2011 Air Force</b>											<b>DATE:</b> February 2010																																																																								
<b>APPROPRIATION/BUDGET ACTIVITY</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0207449F: <i>C2 Constellation</i>				<b>PROJECT</b> 675078: <i>Horizontal Integration</i>																																																																											
<b>Test and Evaluation (\$ in Millions)</b> <table border="1" style="width:100%; border-collapse: collapse; margin-top: 10px;"> <tr> <th colspan="4"></th> <th colspan="2">FY 2010</th> <th colspan="2">FY 2011 Base</th> <th colspan="2">FY 2011 OCO</th> <th>FY 2011 Total</th> <th colspan="3"></th> </tr> <tr> <th>Cost Category Item</th> <th>Contract Method &amp; Type</th> <th>Performing Activity &amp; Location</th> <th>Total Prior Years Cost</th> <th>Cost</th> <th>Award Date</th> <th>Cost</th> <th>Award Date</th> <th>Cost</th> <th>Award Date</th> <th>Cost</th> <th>Cost To Complete</th> <th>Total Cost</th> <th>Target Value of Contract</th> </tr> <tr> <td>Engineering Analysis and Assessment</td> <td>Various/ Various</td> <td>GCIC 300 Exp.Way, Hampton,Va</td> <td align="right">1.186</td> <td align="right">0.000</td> <td></td> <td align="right">0.000</td> <td></td> <td align="right">0.000</td> <td></td> <td align="right">0.000</td> <td>Continuing</td> <td>Continuing</td> <td>Continuing</td> </tr> <tr> <td align="right" colspan="3"><b>Subtotal</b></td> <td align="right">1.186</td> <td align="right">0.000</td> <td></td> <td align="right">0.000</td> <td></td> <td align="right">0.000</td> <td></td> <td align="right">0.000</td> <td></td> <td></td> <td></td> </tr> </table>																		FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total				Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	Engineering Analysis and Assessment	Various/ Various	GCIC 300 Exp.Way, Hampton,Va	1.186	0.000		0.000		0.000		0.000	Continuing	Continuing	Continuing	<b>Subtotal</b>			1.186	0.000		0.000		0.000		0.000																	
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total																																																																									
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Engineering Analysis and Assessment	Various/ Various	GCIC 300 Exp.Way, Hampton,Va	1.186	0.000		0.000		0.000		0.000	Continuing	Continuing	Continuing																																																																						
<b>Subtotal</b>			1.186	0.000		0.000		0.000		0.000																																																																									
<b>Remarks</b>																																																																																			
<b>Management Services (\$ in Millions)</b> <table border="1" style="width:100%; border-collapse: collapse; margin-top: 10px;"> <tr> <th colspan="4"></th> <th colspan="2">FY 2010</th> <th colspan="2">FY 2011 Base</th> <th colspan="2">FY 2011 OCO</th> <th>FY 2011 Total</th> <th colspan="3"></th> </tr> <tr> <th>Cost Category Item</th> <th>Contract Method &amp; Type</th> <th>Performing Activity &amp; Location</th> <th>Total Prior Years Cost</th> <th>Cost</th> <th>Award Date</th> <th>Cost</th> <th>Award Date</th> <th>Cost</th> <th>Award Date</th> <th>Cost</th> <th>Cost To Complete</th> <th>Total Cost</th> <th>Target Value of Contract</th> </tr> <tr> <td>Program Management Support-1</td> <td>C/FFP</td> <td>Quantech PASS ESC, HAFB, MA</td> <td align="right">0.173</td> <td align="right">0.238</td> <td>Nov 2009</td> <td align="right">0.245</td> <td>Nov 2010</td> <td align="right">0.000</td> <td></td> <td align="right">0.245</td> <td>Continuing</td> <td>Continuing</td> <td>Continuing</td> </tr> <tr> <td>Program Management Support-2</td> <td>C/FFP</td> <td>Jacobs ETASS ESC, HAFB, MA</td> <td align="right">0.000</td> <td align="right">0.434</td> <td>Dec 2009</td> <td align="right">0.447</td> <td>Dec 2010</td> <td align="right">0.000</td> <td></td> <td align="right">0.447</td> <td>Continuing</td> <td>Continuing</td> <td>Continuing</td> </tr> <tr> <td align="right" colspan="3"><b>Subtotal</b></td> <td align="right">0.173</td> <td align="right">0.672</td> <td></td> <td align="right">0.692</td> <td></td> <td align="right">0.000</td> <td></td> <td align="right">0.692</td> <td></td> <td></td> <td></td> </tr> </table>																		FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total				Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	Program Management Support-1	C/FFP	Quantech PASS ESC, HAFB, MA	0.173	0.238	Nov 2009	0.245	Nov 2010	0.000		0.245	Continuing	Continuing	Continuing	Program Management Support-2	C/FFP	Jacobs ETASS ESC, HAFB, MA	0.000	0.434	Dec 2009	0.447	Dec 2010	0.000		0.447	Continuing	Continuing	Continuing	<b>Subtotal</b>			0.173	0.672		0.692		0.000		0.692			
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total																																																																									
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract																																																																						
Program Management Support-1	C/FFP	Quantech PASS ESC, HAFB, MA	0.173	0.238	Nov 2009	0.245	Nov 2010	0.000		0.245	Continuing	Continuing	Continuing																																																																						
Program Management Support-2	C/FFP	Jacobs ETASS ESC, HAFB, MA	0.000	0.434	Dec 2009	0.447	Dec 2010	0.000		0.447	Continuing	Continuing	Continuing																																																																						
<b>Subtotal</b>			0.173	0.672		0.692		0.000		0.692																																																																									
<b>Remarks</b>																																																																																			

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis:</b> PB 2011 Air Force							<b>DATE:</b> February 2010		
<b>APPROPRIATION/BUDGET ACTIVITY</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0207449F: <i>C2 Constellation</i>			<b>PROJECT</b> 675078: <i>Horizontal Integration</i>		
<div style="display: flex; justify-content: space-between;"> <div style="width: 25%;"></div> <div style="width: 20%; text-align: center;"> <b>Total Prior Years Cost</b> </div> <div style="width: 10%; text-align: center;"> <b>FY 2010</b> </div> <div style="width: 10%; text-align: center;"> <b>FY 2011 Base</b> </div> <div style="width: 10%; text-align: center;"> <b>FY 2011 OCO</b> </div> <div style="width: 10%; text-align: center;"> <b>FY 2011 Total</b> </div> <div style="width: 10%; text-align: center;"> <b>Cost To Complete</b> </div> <div style="width: 10%; text-align: center;"> <b>Total Cost</b> </div> <div style="width: 10%; text-align: center;"> <b>Target Value of Contract</b> </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div style="width: 25%;"><b>Project Cost Totals</b></div> <div style="width: 20%; text-align: center;">14.669</div> <div style="width: 10%; text-align: center;">15.468</div> <div style="width: 10%; text-align: center;">10.863</div> <div style="width: 10%; text-align: center;">0.000</div> <div style="width: 10%; text-align: center;">10.863</div> <div style="width: 10%;"></div> <div style="width: 10%;"></div> <div style="width: 10%;"></div> </div>									
<b>Remarks</b> Total Prior Years Cost may include only FY 2009 data.									

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Air Force

DATE: February 2010

**APPROPRIATION/BUDGET ACTIVITY**

3600: Research, Development, Test & Evaluation, Air Force  
BA 7: Operational Systems Development

**R-1 ITEM NOMENCLATURE**

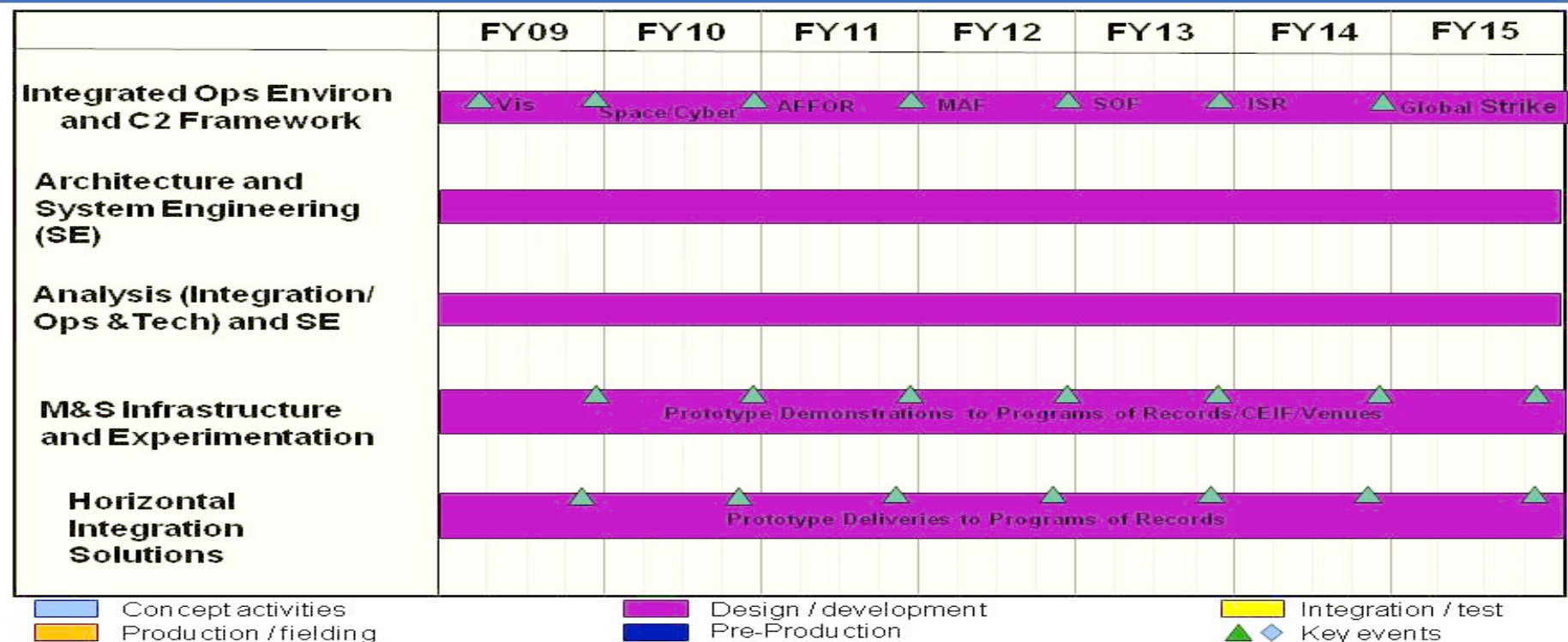
PE 0207449F: C2 Constellation

**PROJECT**

675078: Horizontal Integration



## Horizontal Integration (HI) Schedule



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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2011 Air Force			<b>DATE:</b> February 2010
<b>APPROPRIATION/BUDGET ACTIVITY</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0207449F: <i>C2 Constellation</i>	<b>PROJECT</b> 675078: <i>Horizontal Integration</i>	

Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
Integrated Ops Environment and C2 Framework	1	2009	4	2011
Architecture Development and Systems Engineering	1	2009	4	2011
Analysis (Integration/Ops/Tech) and Systems Engineering	1	2009	4	2011
M&S Infrastructure and Experimentation	1	2009	4	2011
Horizontal Integration Initiatives	1	2009	4	2011

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development				R-1 ITEM NOMENCLATURE PE 0207449F: C2 Constellation				PROJECT 675140: Joint Expeditionary Force Experiments			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
675140: Joint Expeditionary Force Experiments	16.163	14.825	13.366	0.000	13.366	10.900	10.881	9.789	9.495	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		
A. Mission Description and Budget Item Justification											
<p>The Joint Expeditionary Force Experiments (JEFX) and supporting Limited Objective Experiments (LOE) are warfighter experiments that address emerging operational challenges and are part of the Air Force (AF) concept development and experimentation enterprise. JEFX/LOE explores significant capability gaps across the range of AF Concept of Operations (CONOPS) and address critical lessons learned from recent operations, findings from the Air Force Capabilities Review and Risk Assessments and the Warfighter Challenge program. They combine constructive, live-fly forces and virtual forces and simulations into an operationally representative warfighter environments. JEFX/LOE provides a multi-dimensional, multi-national, multi-service environment for an end-to-end process of experimentation, assessment, and transition of capabilities that will provide joint and coalition warfighters with solutions to critical warfighting gaps and lessons learned in recent and current operations. They demonstrate emerging Air Force capabilities demonstrate emerging Air Force capabilities to deploy and employ decisive aerospace power for the Joint Force Commander, and are important enablers of innovation and transformation. The integration of systems and processes is the major reason JEFX is an experiment and not simply a demonstration or exercise.</p> <p>Activities also include studies and analysis to support both current program planning and execution and future program planning.</p> <p>This program is in Budget Activity 7 - Operational System Development because it provides horizontal integration, developers, testers, and warfighters to experiment, analyze, and explore operational concepts and new technologies to enhance operational system developments and improve capabilities of the air, space, and cyberspace forces.</p>											
B. Accomplishments/Planned Program (\$ in Millions)											
							FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
MAJOR THRUST: Spiral develop systems architecture, systems engineering, and integration of initiatives into a cohesive system of systems process							3.294	3.250	2.928	0.000	2.928

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development		R-1 ITEM NOMENCLATURE PE 0207449F: C2 Constellation		PROJECT 675140: Joint Expeditionary Force Experiments		
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: In FY 2009: Airborne Networking. Improved battlefield situational awareness information sharing; integrated AOC capability to exchange J-series messages with C2, airborne IP integration, combat, and NEW platforms; investigated non-traditional BDA.						
FY 2010 Plans: In FY 2010: Irregular Warfare. Involves 12 critical NAF sponsored initiatives aimed at improving C2 & ISR integration in support of Joint operations including UAV data encryption and improved B2/AWACS communications; tactical C2 and JAGIC integration with the Army; AF/Navy/Army/SOF airborne IP integration. SPIRIT ICE provides a cost effective, operationally configured environment to easily discover data link interoperability issues, improving B-2/AWACS combat readiness.						
FY 2011 Base Plans: In FY 2011: Day Without Space. Will continue experimentation efforts with focus on tactical and strategic architectures, communications, systems, and TTPs affected by loss or disruption of space signals due to atmospheric or intentional factors; evaluating effects and refining technologies, Tactics, Techniques, and Procedures aimed at improving AF contributions to the Joint Warfighters assuring mission assurance in a contested environment. Increasing focus on rapid spiral fielding in support of tactical operations; airborne communication integration.						
FY 2011 OCO Plans: In FY 2011 OCO: Not Applicable.						
MAJOR THRUST: Plan, design, coordinate, assess and report the JEFX experiments, provide expertise to support initiative selection, acquisition, program management, communications and systems plan...		3.249	4.125	3.829	0.000	3.829

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force				DATE: February 2010		
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FY 2011 Base Plans: In FY 2011: Day Without Space. Will continue experimentation efforts with focus on tactical and strategic architectures, communications, systems, and TTPs affected by loss or disruption of space signals due to atmospheric or intentional factors; evaluating effects and refining technologies, Tactics, Techniques, and Procedures aimed at improving AF contributions to the Joint Warfighters assuring mission assurance in a contested environment. Increasing focus on rapid spiral fielding in support of tactical operations; airborne communication integration.						
FY 2011 OCO Plans: In FY 2011 OCO: Not Applicable.						
MAJOR THRUST: Develop initiatives to introduce new technologies and operational capabilities into the Aerospace Expeditionary Force (AEF) Concept of Operations (CONOPS)		2.972	3.200	2.908	0.000	2.908

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development		R-1 ITEM NOMENCLATURE PE 0207449F: C2 Constellation		PROJECT 675140: Joint Expeditionary Force Experiments		
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
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FY 2011 Base Plans: In FY 2011: Day Without Space. Will continue experimentation efforts with focus on tactical and strategic architectures, communications, systems, and TTPs affected by loss or disruption of space signals due to atmospheric or intentional factors; evaluating effects and refining technologies, Tactics, Techniques, and Procedures aimed at improving AF contributions to the Joint Warfighters assuring mission assurance in a contested environment. Increasing focus on rapid spiral fielding in support of tactical operations; airborne communication integration.						
FY 2011 OCO Plans: In FY 2011 OCO: Not Applicable.						
MAJOR THRUST: Implement architectural configuration, conduct M&S, install and the test the communications infrastructure and execute the experiment		1.740	3.500	3.023	0.000	3.023

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force				DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development		R-1 ITEM NOMENCLATURE PE 0207449F: C2 Constellation		PROJECT 675140: Joint Expeditionary Force Experiments	
B. Accomplishments/Planned Program (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p><i>FY 2009 Accomplishments:</i> In FY 2009: Airborne Networking. Improved battlefield situational awareness information sharing; integrated AOC capability to exchange J-series messages with C2, airborne IP integration, combat, and NEW platforms; investigated non-traditional BDA.</p> <p><i>FY 2010 Plans:</i> In FY 2010: Irregular Warfare. Involves 12 critical NAF sponsored initiatives aimed at improving C2 &amp; ISR integration in support of Joint operations including UAV data encryption and improved B2/AWACS communications; tactical C2 and JAGIC integration with the Army; AF/Navy/Army/SOF airborne IP integration. SPIRIT ICE provides a cost effective, operationally configured environment to easily discover data link interoperability issues, improving B-2/AWACS combat readiness.</p> <p><i>FY 2011 Base Plans:</i> In FY 2011: Day Without Space. Will continue experimentation efforts with focus on tactical and strategic architectures, communications, systems, and TTPs affected by loss or disruption of space signals due to atmospheric or intentional factors; evaluating effects and refining technologies, Tactics, Techniques, and Procedures aimed at improving AF contributions to the Joint Warfighters assuring mission assurance in a contested environment. Increasing focus on rapid spiral fielding in support of tactical operations; airborne communication integration.</p> <p><i>FY 2011 OCO Plans:</i> In FY 2011 OCO: Not Applicable.</p>					
MAJOR THRUST: Transition successful JEFX assessed and CSAF approved warfighting capabilities for fielding into an integrated C2ISR baseline	4.908	0.750	0.678	0.000	0.678

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force				DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development		R-1 ITEM NOMENCLATURE PE 0207449F: C2 Constellation		PROJECT 675140: Joint Expeditionary Force Experiments	
B. Accomplishments/Planned Program (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p><i>FY 2009 Accomplishments:</i> In FY 2009: Airborne Networking. Improved battlefield situational awareness information sharing; integrated AOC capability to exchange J-series messages with C2, airborne IP integration, combat, and NEW platforms; investigated non-traditional BDA.</p> <p><i>FY 2010 Plans:</i> In FY 2010: Irregular Warfare. Involves 12 critical NAF sponsored initiatives aimed at improving C2 &amp; ISR integration in support of Joint operations including UAV data encryption and improved B2/AWACS communications; tactical C2 and JAGIC integration with the Army; AF/Navy/Army/SOF airborne IP integration. SPIRIT ICE provides a cost effective, operationally configured environment to easily discover data link interoperability issues, improving B-2/AWACS combat readiness.</p> <p><i>FY 2011 Base Plans:</i> In FY 2011: Day Without Space. Will continue experimentation efforts with focus on tactical and strategic architectures, communications, systems, and TTPs affected by loss or disruption of space signals due to atmospheric or intentional factors; evaluating effects and refining technologies, Tactics, Techniques, and Procedures aimed at improving AF contributions to the Joint Warfighters assuring mission assurance in a contested environment. Increasing focus on rapid spiral fielding in support of tactical operations; airborne communication integration.</p> <p><i>FY 2011 OCO Plans:</i> In FY 2011 OCO: Not Applicable.</p>					
Accomplishments/Planned Programs Subtotals	16.163	14.825	13.366	0.000	13.366

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Air Force								<b>DATE:</b> February 2010		
<b>APPROPRIATION/BUDGET ACTIVITY</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0207449F: <i>C2 Constellation</i>			<b>PROJECT</b> 675140: <i>Joint Expeditionary Force Experiments</i>			

**C. Other Program Funding Summary (\$ in Millions)**

Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• PE Not Provided (2884): <i>Activity Not Provided</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

**D. Acquisition Strategy**

JEFX supports evolutionary acquisition of multiple programs by providing a venue to experiment new and emerging technologies to be integrated into other systems-of-record.

**E. 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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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis: PB 2011 Air Force</b>											<b>DATE:</b> February 2010		
<b>APPROPRIATION/BUDGET ACTIVITY</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0207449F: <i>C2 Constellation</i>				<b>PROJECT</b> 675140: <i>Joint Expeditionary Force Experiments</i>					
<b>Product Development (\$ in Millions)</b>													
				<b>FY 2010</b>		<b>FY 2011 Base</b>		<b>FY 2011 OCO</b>		<b>FY 2011 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Total Prior Years Cost</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>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
Experimentation-1	FFRDC	MITRE ESC Hanscom AFB, MA	3.525	1.643	Nov 2009	1.573	Nov 2010	0.000		1.573	Continuing	Continuing	Continuing
Experimentation-2	C/CPFF	Sverdrup ESC Hanscom AFB	0.000	0.662	Jan 2010	0.662	Jan 2011	0.000		0.662	Continuing	Continuing	Continuing
Experimentation-3	C/FFP	Quantech ESC Hanscom AFB, MA	0.431	0.356	Jan 2010	0.356	Jan 2011	0.000		0.356	Continuing	Continuing	Continuing
Experimentation-4	C/CPAF	Lockheed Martin ESC Hanscom AFB, MA	0.000	0.625	Nov 2009	0.625	Nov 2010	0.000		0.625	Continuing	Continuing	Continuing
Experimentation-5	Various/ Various	ESC Hanscom AFB, MA	0.100	0.114	Oct 2009	0.114	Oct 2010	0.000		0.114	Continuing	Continuing	Continuing
Experimentation-6	C/CPFF	Spectrum AFRL Rome NY	5.802	5.577	Nov 2009	5.540	Nov 2010	0.000		5.540	Continuing	Continuing	Continuing
Experimentation-7	Various/ Various	505 CCW Hurlburt Field, FL	1.831	1.700	Nov 2009	1.700	Nov 2010	0.000		1.700	Continuing	Continuing	Continuing
Experimentation-8	MIPR	Various Various	4.474	4.148	Nov 2009	2.796	Nov 2010	0.000		2.796	Continuing	Continuing	Continuing
<b>Subtotal</b>			16.163	14.825		13.366		0.000		13.366			
<b>Remarks</b>													

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis:</b> PB 2011 Air Force							<b>DATE:</b> February 2010		
<b>APPROPRIATION/BUDGET ACTIVITY</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0207449F: <i>C2 Constellation</i>			<b>PROJECT</b> 675140: <i>Joint Expeditionary Force Experiments</i>		
<div style="display: flex; justify-content: space-between;"> <div style="width: 25%;"></div> <div style="width: 20%; text-align: center;"> <b>Total Prior Years Cost</b> </div> <div style="width: 10%; text-align: center;"> <b>FY 2010</b> </div> <div style="width: 10%; text-align: center;"> <b>FY 2011 Base</b> </div> <div style="width: 10%; text-align: center;"> <b>FY 2011 OCO</b> </div> <div style="width: 10%; text-align: center;"> <b>FY 2011 Total</b> </div> <div style="width: 10%; text-align: center;"> <b>Cost To Complete</b> </div> <div style="width: 10%; text-align: center;"> <b>Total Cost</b> </div> <div style="width: 10%; text-align: center;"> <b>Target Value of Contract</b> </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div style="width: 25%;"><b>Project Cost Totals</b></div> <div style="width: 20%; text-align: center;">16.163</div> <div style="width: 10%; text-align: center;">14.825</div> <div style="width: 10%; text-align: center;">13.366</div> <div style="width: 10%; text-align: center;">0.000</div> <div style="width: 10%; text-align: center;">13.366</div> <div style="width: 10%;"></div> <div style="width: 10%;"></div> <div style="width: 10%;"></div> </div>									
<b>Remarks</b> Total Prior Years Cost may include only FY 2009 data.									

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Air Force

DATE: February 2010

**APPROPRIATION/BUDGET ACTIVITY**

3600: Research, Development, Test & Evaluation, Air Force  
BA 7: Operational Systems Development

**R-1 ITEM NOMENCLATURE**

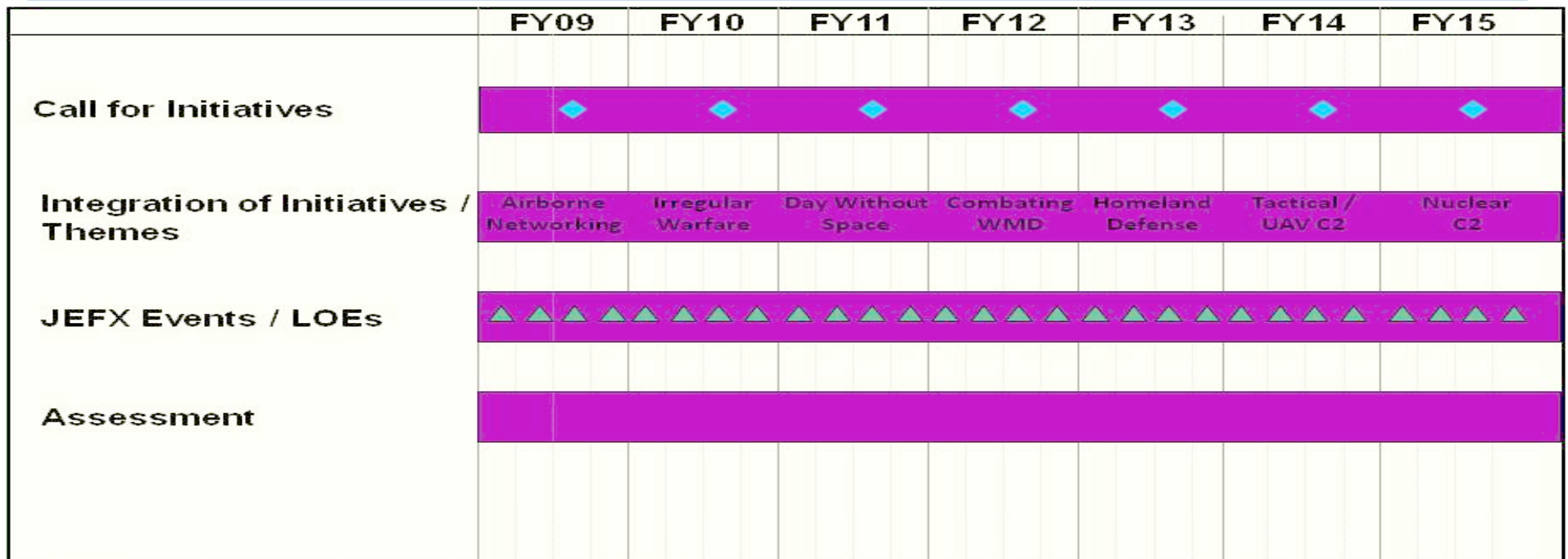
PE 0207449F: C2 Constellation

**PROJECT**

675140: Joint Expeditionary Force Experiments



# Joint Expeditionary Force Experiment (JEFX) Schedule



Concept activities  
 Production / fielding

Design / development  
 Pre-Production

Integration / test  
 Key events

**PB11**

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2011 Air Force			<b>DATE:</b> February 2010
<b>APPROPRIATION/BUDGET ACTIVITY</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0207449F: <i>C2 Constellation</i>	<b>PROJECT</b> 675140: <i>Joint Expeditionary Force Experiments</i>	

**Schedule Details**

<b>Event</b>	<b>Start</b>		<b>End</b>	
	<b>Quarter</b>	<b>Year</b>	<b>Quarter</b>	<b>Year</b>
Call for Initiatives	1	2009	4	2011
Integration of Initiatives/Themes	1	2009	4	2011
Limited Objective Experiment (LOE 1)	1	2009	1	2011
Limited Objective Experiment (LOE 2)	2	2009	2	2011
Limited Objective Experiment (LOE 3)	3	2009	3	2011
Limited Objective Experiment (LOE 4)	4	2009	4	2011
Assessment	1	2009	4	2011

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