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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 0207410F: Air and Space Operations Center - Weapon System (AOC-WS)							
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	95.908	101.587	93.102	0.000	93.102	91.488	91.998	93.404	94.891	Continuing	Continuing
674372: Space C2 Operations	23.733	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	32.611
675117: Integration Development	56.192	84.826	74.720	0.000	74.720	73.877	74.423	75.605	76.789	Continuing	Continuing
675218: Applications Development	4.130	9.337	10.980	0.000	10.980	10.100	9.968	10.076	10.263	Continuing	Continuing
675220: Unit Level	6.577	7.424	7.402	0.000	7.402	7.511	7.607	7.723	7.839	Continuing	Continuing
675242: Command and Control Air Replanning and Monitoring (C2ARM)	5.276	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	7.532
Note											
In FY 2010, Project 674372, Space C2 Operations efforts transferred to PE 0305614F, JSpOC Mission Systems (JMS).											
In FY 2010, Project 675242, Command and Control Air Replanning and Monitoring (C2ARM) efforts transferred to Project 675218, Applications Development, to better align C2 capability development projects and programs.											
A. Mission Description and Budget Item Justification											
The Air and Space Operations Center Weapon System (AOC WS) program element provides development of Command and Control (C2) capabilities across the entire spectrum of air and space operations from the strategic to the tactical level. In FY 2011, there are three funded projects within the AOC WS program element.											
Integration Development supports the Air and Space Operations Center Weapon System (AOC WS), AN/USQ-163 Falconer, the senior element of the Theater Air Control System (TACS). AOC WS is the weapon system the Commander, Air Force Forces (COMAFFOR) provides the Combined/Joint Force Air Component Commander (C/JFACC) for planning, executing and assessing theater-wide air and space operations.											
Applications Development provides worldwide operational capabilities which include core air battle planning, management, execution and personnel recovery for Air Force C2 in support of DoD, Coalition Partners, and other government agencies.											

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APPROPRIATION/BUDGET ACTIVITY		R-1 ITEM NOMENCLATURE			
3600: Research, Development, Test & Evaluation, Air Force		PE 0207410F: Air and Space Operations Center - Weapon System (AOC-WS)			
BA 7: Operational Systems Development					
Unit Level (UL) supports two primary mission areas: UL Operations software systems provide both the scheduling and mission preparation activities at the wing and squadron level and the capabilities to report and track the success of each mission and influence decisions on future Air Battle Planning to refine future missions. UL Intel capabilities ensure detailed threat, target and imagery information are made available to mission commanders and aircrews planning current flight operations.					
This program is Budget Activity 7 - Operation System Development because it provides funding for the modernization of a currently existing and operating system.					
B. Program Change Summary (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Previous President's Budget	95.908	99.405	0.000	0.000	0.000
Current President's Budget	95.908	101.587	93.102	0.000	93.102
Total Adjustments	0.000	2.182	93.102	0.000	93.102
• Congressional General Reductions		0.000			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	-1.018			
• Congressional Adds		3.200			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Adjustments	0.000	0.000	93.102	0.000	93.102
Congressional Add Details (\$ in Millions, and Includes General Reductions)					
Project: 675117: Integration Development				FY 2009	FY 2010
Congressional Add: Commercial Off The Shelf (COTS) Technology for Space C2.				0.000	3.200
Congressional Add Subtotals for Project: 675117				0.000	3.200
Congressional Add Totals for all Projects				0.000	3.200
Change Summary Explanation					
The FY 2010 Congressional Add for Commercial Off The Shelf (COTS) Technology for Space C2 will be reprogrammed to PE 0305614F, Joint Space Operations Center (JSpOC) Mission Systems (JMS) to be executed in accordance with Congressional intent.					

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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 0207410F: Air and Space Operations Center - Weapon System (AOC-WS)				PROJECT 674372: Space C2 Operations			
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
674372: Space C2 Operations	23.733	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	32.611
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		
Note In FY10, Project 674372, Space C2 Operations efforts transferred to PE 0305614F, JSpOC Mission Systems (JMS).											
A. Mission Description and Budget Item Justification Space Command and Control (C2) system provides integrated space information and C2 of space forces for the Joint Functional Component Command for Space (JFCC-SPACE). It will allow CDRJFCC-SPACE to plan, direct, coordinate, and control operations of assigned forces. Specifically, the system will provide CDRJFCC-SPACE with the following abilities: - Monitor: Status, activities and environment for assigned / attached space forces - Assess: How space forces support the battle space; provides impacts of changes to force status; impacts of enemy forces on space assets - Plan: Space operations to support theater and national ops - Execute: Issue Joint Space Tasking Order; track task performance; adapt tasking to changing situations Space C2 program will provide a net-centric, service oriented architecture along with space C2 services to meet the needs shown above. Space C2 mission applications are provided in an incremental approach. Activities also include studies and analysis to support both current program planning and execution and future program planning. The program is Budget Activity 7, Operational System Development, because it consolidates and unify Air Force air and space C2 development and integration.											
B. Accomplishments/Planned Program (\$ in Millions)											
							FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Major Thrust: Space C2 Technology development and demonstration of key elements (e.g., Space User Defined Operational Picture (UDOP) and key core services).							8.722	0.000	0.000	0.000	0.000

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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 0207410F: Air and Space Operations Center - Weapon System (AOC-WS)		PROJECT 674372: Space C2 Operations		
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: Integration of the UDOP as well as Space Situational Awareness and attack assessment services on the to-be services oriented net-centric system architecture for the development phase. Funding for preliminary design Space C2 mission applications risk reduction. Demonstration of maturity for Critical Technical Elements (CTEs).						
FY 2010 Plans: In FY 2010: N/A						
FY 2011 Base Plans: In FY 2011: N/A						
FY 2011 OCO Plans: In FY 2011 OCO: N/A						
Major Thrust: Provide an integrated theater/space C2 operational environment and service oriented, net-centric architecture.		15.011	0.000	0.000	0.000	0.000
FY 2009 Accomplishments: In FY 2009: Establishment of interoperability across the C2 enterprise, specifically the Joint Space Operations Center (JSpOC), other AOCs, JFCCs and the Global Operations Center (GOC). Funding provides for operational pilots, evaluation of 3rd party-developed space services providing foundational core-services, and insertion of C2 capabilities for other space systems providing information to the JSpOC.						
FY 2010 Plans: In FY 2010: N/A						

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force				DATE: February 2010							
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>		R-1 ITEM NOMENCLATURE PE 0207410F: <i>Air and Space Operations Center - Weapon System (AOC-WS)</i>		PROJECT 674372: <i>Space C2 Operations</i>							
B. Accomplishments/Planned Program (\$ in Millions)											
				FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total			
<i>FY 2011 Base Plans:</i> In FY 2011: N/A <i>FY 2011 OCO Plans:</i> In FY 2011 OCO: N/A											
Accomplishments/Planned Programs Subtotals				23.733	0.000	0.000	0.000	0.000			
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 (13841): <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											
Uses risk reduction technology demonstrations and operational pilots. Technology development performed by Air Force Research Laboratory.											
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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Exhibit R-3, RDT&E Project Cost Analysis: 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 0207410F: Air and Space Operations Center - Weapon System (AOC-WS)					PROJECT 674372: Space C2 Operations				
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	
Competitive Initial Mission Applications	C/CPFF	TBD TBD	3.274	0.000	Oct 2009	0.000		0.000		0.000	0.000	3.274	3.932	
AOC-WS Infrastructure	C/CPIF	Lockheed Martin Colorado Springs, Co	12.014	0.000	Nov 2009	0.000		0.000		0.000	0.000	12.014	12.014	
Space C2 Technology Risk Reduction	C/Various	Air Force Research Laboratory Albuquerque, NM	1.135	0.000		0.000		0.000		0.000	0.000	1.135	5.266	
Subtotal			16.423	0.000		0.000		0.000		0.000	0.000	16.423	21.212	
Remarks														
Support (\$ 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	
Systems Engineering	C/CPFF	MITRE Colorado Springs, CO	3.932	0.000	Nov 2009	0.000		0.000		0.000	0.000	3.932	6.139	
A&AS	C/CPFF	PASS/ETAS Colorado Springs, CO	3.378	0.000	Nov 2009	0.000		0.000		0.000	0.000	3.378	5.260	

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Air Force											DATE: February 2010		
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Support (\$ 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
Subtotal			7.310	0.000		0.000		0.000		0.000	0.000	7.310	11.399
Remarks													
			Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			23.733	0.000		0.000		0.000		0.000	0.000	23.733	32.611
Remarks 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 0207410F: Air and Space Operations Center - Weapon System (AOC-WS)		PROJECT 674372: Space C2 Operations			
Exhibit R-4. RDT&E Schedule Profile							
O-7 Operational System Development				PE NUMBER AND TITLE 0207410F Air and Space Operations Center – Weapon System (AOC-WS)		PROJECT NUMBER AND TITLE 4372 Space C2 Operations	
Activity	FY09	FY10	FY11	FY12	FY13	FY14	FY15
Space C2 Technology Risk Reduction Demonstrations and Pilots	<div>Risk Reduction</div>						
Competitive Initial Mission Applications Design	<div>MDD</div> <div>SRR</div> <div>SS</div> <div>Ctr1</div> <div>Ctr2</div>						
Infrastructure Integration Increment 1	<div>SRR</div> <div>Int.</div>						
CDR: Critical Design Review CTE: Critical Technical Element CTR: Contractor DT: Development Test IOC/FOC: Initial/Full Operational Capability IOT&E: Init Ops Test & Evaluation JSIP: Joint Functional Component Command for Space Integrated Prototype JSpOC: Joint Space Operations Center MDD: Material Development Decision PDR: Preliminary Design Review SRR: System Readiness Review SS: Source Selection <div>Risk Reduction/Source Selection</div> <div>Design / Development / Integration</div> <div>Develop/Operational Test</div>							

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Air Force			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0207410F: <i>Air and Space Operations Center - Weapon System (AOC-WS)</i>	PROJECT 674372: <i>Space C2 Operations</i>	

Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
Space C2 Technology Risk Reduction Demonstrations and Pilots	1	2009	3	2009
Materiel Development Decision (MDD)	2	2009	2	2009
Competitive Initial Mission Applications Design Increment 1	2	2009	4	2009
Infrastructure Integration Increment 1	4	2009	4	2009

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APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>				R-1 ITEM NOMENCLATURE PE 0207410F: <i>Air and Space Operations Center - Weapon System (AOC-WS)</i>				PROJECT 675117: <i>Integration Development</i>			
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
675117: <i>Integration Development</i>	56.192	84.826	74.720	0.000	74.720	73.877	74.423	75.605	76.789	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		
<p>Note</p> <p>FY 2010 estimate includes \$3.2M FY10 Congressional Add for Commercial Off The Shelf (COTS) Technology for Space C2. This funding will be reprogrammed in FY 2010 to PE 0305614F, Joint Space Operations Center (JSPOC) Mission Systems (JMS) to be executed in accordance with Congressional intent.</p> <p>A. Mission Description and Budget Item Justification</p> <p>The Air and Space Operations Center Weapon System (AOC WS), AN/USQ-163 Falconer, the senior element of the Theater Air Control System (TACS), is the weapon system the Commander, Air Force Forces (COMAFFOR) provides the Combined/Joint Force Air Component Commander (C/JFACC) for planning, executing and assessing theater-wide air and space operations. The C/JFACC provides air, space and cyber support to the Combined/Joint Forces Commander (C/JFC) by coordinating, deconflicting and assessing the progress of various weapon systems to advance the C/JFC's campaign. The AOC WS develops operations strategy and planning documents. The weapon system also disseminates tasking orders, executes day-to-day peacetime and combat air, space and cyber operations, and provides rapid reaction to immediate situations by exercising positive control of friendly forces.</p> <p>The AOC Integration Development program keeps the AOC interoperable, certified, supportable, and compliant through the integration, testing and fielding of new capabilities and sustainment upgrades to the AOC WS baseline. The program supports mission requirements at Geographic and Functional AOCs as well as Training and Support and Manpower Augmentation units. To keep the AOC current and interoperable with the COCOMs and fifth generation weapon systems/weapons, the AOC WS program plans to evolve the AOC through the integration and test of progressively improving capabilities. The AOC 10.1 baseline is supported by the AOC WS Weapon System Integrator (WSI), ensuring a system of systems engineering perspective, the completion of other weapon system standardization and modernization activities as defined in AOC WS requirements documents. The AOC 10.2 baseline will use a modernization contractor to ensure system of systems perspective and rigor. This will evolve the AOC WS to a Net-Centric Environment (NCE), to build the "to be" infrastructure, and to conduct other weapon system standardization and modernization activities as defined in AOC WS requirements documents.</p> <p>Activities also include studies and analysis to support both current program planning and execution and future program planning.</p> <p>The program is in Budget Activity 7 - Operation System Development because it provides funding for the modernization of a currently existing and operating system.</p>											

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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 0207410F: Air and Space Operations Center - Weapon System (AOC-WS)		PROJECT 675117: Integration Development		
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Major Thrust: AOC 10.1 baseline is supported by the WSI, ensuring a system of systems engineering perspective, the completion of other weapon system standardization and modernization activities. FY 2009 Accomplishments: In FY 2009: AOC integration, development and test of items included, but not limited to, visualization, Coalition and Joint interoperability, airspace management and deconfliction, strategy and assessment, information assurance/security and keeping systems current and relevant to COCOM requirements. FY 2010 Plans: In FY 2010: Continue AOC integration, development and test of items to include, but not limited to, visualization, Coalition and Joint interoperability, airspace management and deconfliction, strategy and assessment, information assurance/security and keeping systems current and relevant to COCOM requirements. FY 2011 Base Plans: In FY 2011: N/A FY 2011 OCO Plans: In FY 2011 OCO: N/A		33.051	15.589	0.000	0.000	0.000
Major Thrust: AOC 10.2 WS infrastructure modernization and mission capability integration. Development and test of a robust, open, net-centric infrastructure with a services-oriented architecture. FY 2009 Accomplishments: In FY 2009: Obtained Materiel Development Decision approval. Completed System Requirements Review. Demonstrated preliminary integration of key 10.2 infrastructure subsystem technologies and critical technology element maturity with limited mission functionality prototyping. Conducted risk reduction testing of candidate services-oriented architecture (SOA) integration approaches.		9.238	49.352	57.796	0.000	57.796

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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: Continue demonstration of preliminary integration of 10.2 infrastructure subsystems. Complete Preliminary Design Review and Milestone B Information Technology Acquisition Board. Conduct full and open competition for AOC WS modernization including infrastructure development and mission capability integration. Continue risk reduction testing of candidate SOA integration approaches. Begin development of modernized AOC WS infrastructure and plan for integration of mission capabilities.						
FY 2011 Base Plans: In FY 2011: Continue development of modernized AOC WS infrastructure and begin integration of mission capabilities. Complete Delta-SRR, Delta-PDR, and Critical Design Review (CDR). Begin planning and installation of 10.2 baseline at the Help Desk and test asset site in advance of developmental test and evaluation. Develop initial Type 1 training packages.						
FY 2011 OCO Plans: In FY 2011 OCO: N/A						
Major Thrust: AOC 10.3. Studies to refine requirements for the AOC WS Increment 10.3.		0.000	0.000	0.500	0.000	0.500
FY 2009 Accomplishments: In FY 2009: N/A						
FY 2010 Plans: In FY 2010: N/A						
FY 2011 Base Plans: In FY 2011: Begin AOC WS Increment 10.3 requirements analysis and feasibility studies to identify additional mission capabilities needed to continue to evolve the AOC WS to a net-centric environment						

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
while being compliant with DoD services-oriented architecture standards, and build upon the 10.2 architecture to establish distributed operations capabilities across the globally linked AOCs. FY 2011 OCO Plans: In FY 2011 OCO: N/A						
Major Thrust: Training FY 2009 Accomplishments: In FY 2009: Included, but not limited to: Type 1, Part Task Trainer, Distributed Mission Operations, Logistics Management Support and Conversion of Courseware to Computer Based Training). FY 2010 Plans: In FY 2010: To include, but not limited to: Type 1, Part Task Trainer, Distributed Mission Operations, Logistics Management Support and Conversion of Courseware to Computer Based Training). FY 2011 Base Plans: In FY 2011: To include, but not limited to: Type 1, Part Task Trainer, Distributed Mission Operations, Logistics Management Support and Conversion of Courseware to Computer Based Training). FY 2011 OCO Plans: In FY 2011 OCO: N/A		2.151	1.940	2.070	0.000	2.070
Major Thrust: Systems Engineering FY 2009 Accomplishments: In FY 2009: Requirements analysis, C2 integration studies, system development support and performance evaluation.		4.556	6.348	7.800	0.000	7.800

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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: Requirements analysis, C2 integration studies, system development support and performance evaluation. FY 2011 Base Plans: In FY 2011: Requirements analysis, C2 integration studies, system development support and performance evaluation. FY 2011 OCO Plans: In FY 2011 OCO: N/A					
Major Thrust: Program Management Support FY 2009 Accomplishments: In FY 2009: Supported acquisition planning, execution, and reporting for AOC WS activities FY 2010 Plans: In FY 2010: Support for Acquisition planning, execution, and reporting for AOC WS activities FY 2011 Base Plans: In FY 2011: Acquisition planning, execution, and reporting for AOC WS activities. FY 2011 OCO Plans: In FY 2011 OCO: N/A	7.196	8.397	6.554	0.000	6.554
Accomplishments/Planned Programs Subtotals	56.192	81.626	74.720	0.000	74.720
	FY 2009	FY 2010			
	0.000	3.200			

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B. Accomplishments/Planned Program (\$ in Millions)											
								FY 2009	FY 2010		
Congressional Add: Commercial Off The Shelf (COTS) Technology for Space C2. <i>FY 2009 Accomplishments:</i> In FY 2009: N/A <i>FY 2010 Plans:</i> In FY 2010: Congressional Add for Commercial Off The Shelf (COTS) Technology for Space C2 will be reprogrammed to PE 0305614F, Joint Space Operations Center (JSpOC) Mission Systems (JMS) to be executed in accordance with Congressional intent.											
Congressional Adds Subtotals								0.000	3.200		
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 0207410F: <i>Integration Development, (OPAF)</i>	34.947	53.930	58.284	0.000	58.284	48.834	54.868	55.957	57.179	0.000	0.000
• PE 0207410F (1): <i>Integration Development, (O&M)</i>	155.044	99.256	138.334	0.000	138.334	149.619	158.081	161.058	163.936	0.000	0.000
D. Acquisition Strategy											
AOC modernization contractor will be selected via a full and open competition. The modernization contractor will continue to ensure system of systems perspective and systems engineering rigor to evolve AOC to a Net-Centric environment, compliant with DoD Services Oriented Architecture (SOA) standards. The acquisition strategy builds on existing capabilities using evolutionary acquisition to standardize, modernize and sustain the AOC.											
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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Exhibit R-3, RDT&E Project Cost Analysis: 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 0207410F: Air and Space Operations Center - Weapon System (AOC-WS)				PROJECT 675117: Integration Development			

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
10.1 Integration & Version Upgrades	C/CPAF	LM WSI Colorado Springs, CO	33.051	15.589	Nov 2009	0.000		0.000		0.000	Continuing	Continuing	Continuing
10.2 Integration	C/Various	LM WSI Colorado Springs, CO	9.238	0.000		0.000		0.000		0.000	Continuing	Continuing	Continuing
10.2 Modernization	C/TBD	TBD TBD	0.000	49.352	Aug 2010	57.796	Aug 2011	0.000		57.796	0.000	107.148	0.000
10.3 Requirements Studies	C/TBD	TBD TBD	0.000	0.000		0.500	Nov 2010	0.000		0.500	Continuing	Continuing	0.000
Training	TBD/ Various	Various Various	2.151	1.940	Dec 2009	2.070	Jan 2010	0.000		2.070	Continuing	Continuing	Continuing
Cong Add - COTS Tech for Space C2	TBD/TBD	Various Various	0.000	3.200	Mar 2010	0.000		0.000		0.000	0.000	3.200	Continuing
Subtotal			44.440	70.081		60.366		0.000		60.366			

Remarks

Support (\$ 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
Systems Engineering	C/Various	Various	4.556	6.348	Oct 2009	7.800	Oct 2010	0.000		7.800	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Air Force											DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>				R-1 ITEM NOMENCLATURE PE 0207410F: <i>Air and Space Operations Center - Weapon System (AOC-WS)</i>				PROJECT 675117: <i>Integration Development</i>					
Support (\$ 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
		Hanscom AFB, MA											
Program Office Support	C/Various	AFMC/ESC Hanscom AFB, MA	7.196	8.397	Oct 2009	6.554	Oct 2010	0.000		6.554	Continuing	Continuing	Continuing
Subtotal			11.752	14.745		14.354		0.000		14.354			
Remarks													
			Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			56.192	84.826		74.720		0.000		74.720			
Remarks 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

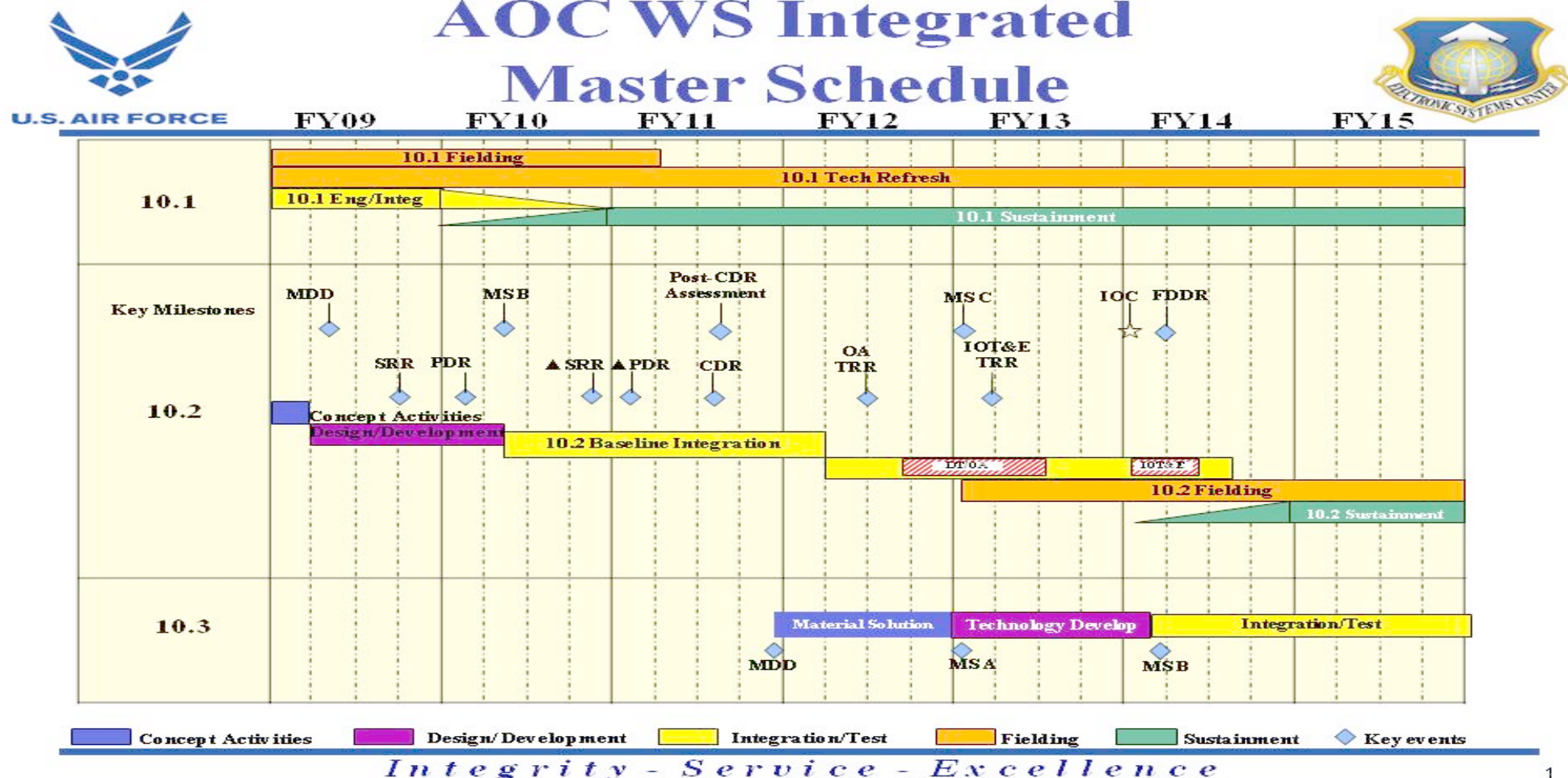
R-1 ITEM NOMENCLATURE

PE 0207410F: Air and Space Operations
Center - Weapon System (AOC-WS)

PROJECT

675117: Integration Development

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Air Force			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0207410F: <i>Air and Space Operations Center - Weapon System (AOC-WS)</i>	PROJECT 675117: <i>Integration Development</i>	

Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
Increment 10.1 Fielding	1	2009	1	2011
AOC 10.2 Concept Activities	1	2009	1	2009
AOC 10.2 Development/Design	2	2009	2	2010
AOC 10.2 Baseline/Integration	2	2010	4	2011
Increment 10.2 MDD	2	2009	2	2009
Increment 10.2 MS B	2	2010	2	2010
Increment 10.3 MDD	4	2011	4	2011

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>				R-1 ITEM NOMENCLATURE PE 0207410F: <i>Air and Space Operations Center - Weapon System (AOC-WS)</i>				PROJECT 675218: <i>Applications Development</i>			
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
675218: <i>Applications Development</i>	4.130	9.337	10.980	0.000	10.980	10.100	9.968	10.076	10.263	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		
<p>Note</p> <p>In FY10, Project 675242, Command and Control Air Replanning and Monitoring (C2ARM) efforts transferred to Project 675218, Applications Development, to better align C2 capability development projects and programs.</p> <p>A. Mission Description and Budget Item Justification</p> <p>This budget activity funds operational development necessary to acquire, modify, and sustain segments of Air Force's Command and Control (C2) capabilities and services. Applications Development provides worldwide operational capabilities for AF C2 in support of DoD, Coalition Partners, and other government agencies. These efforts focus on, but are not limited to support of the Combined/Joint Force Air Component Commander (C/JFACC), as presented to the Air and Space Operations Center (AOC) and to other C2 systems. Applications Development activities include but are not limited to the following: 1) Theater Battle Management Core System (TBMCS) Force Level (FL) program which delivers joint air battle planning, management and execution capabilities; 2) Command and Control Air Operations Suite (C2AOS) develops, matures, fields and maintains next-generation net-centric C2 services and capabilities for air battle planning, execution and management functions; 3) Personnel Recovery Command and Control (PR C2) formerly Combat Search and Rescue Command and Control (CSAR C2) which develops and delivers tools and services for planning and managing search and rescue efforts, and disseminating related information; and 4) Command and Control Information Services (C2IS) which creates web-enabled information services to expose air operations data in TBMCS applications and systems using standardized schemas, such as those developed by the Air Operations Community of Interest (AO COI). The AO COI defines and develops air operations vocabulary and data models upon which net centric information services are built.</p> <p>Core activities include but are not limited to: 1) maintaining operational viability of the current Joint System of Record (TBMCS 1.1.3); 2) developing capabilities to support planning and replanning of the Air Battle Plan; generation and dissemination of the Air Tasking Order; air and space defensive planning and execution; targeting; weaponeering; personnel recovery tasks; other applications and services supporting C2 utilized in the joint environment and 3) providing support to and participating in the AO COI to improve air operations information interoperability among all joint and coalition systems within the AO domain; 4) developing and assessing C2 technologies that will improve joint and coalition warfighter interoperability, including participation in annual NATO Coalition Warrior Interoperability Demonstration (CWID) activities, and 5) transitioning existing C2 capabilities to a net-centric environment. Applications Development efforts include evaluation and maturation of future air and space command and control concepts identified through research, risk reduction, prototyping, current operations, exercises and demonstrations.</p>											

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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 0207410F: Air and Space Operations Center - Weapon System (AOC-WS)		PROJECT 675218: Applications Development	
Activities also include studies and analysis to support both current program planning and execution and future program planning.					
The program is in Budget Activity 7 - Operation Systems Development because it provides funding for the modernization of currently existing and operating systems.					
B. Accomplishments/Planned Program (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
MAJOR THRUST: Theater Battle Management Core System (TBMCS) Force Level delivers joint air battle planning, management and execution capabilities. FY 2009 Accomplishments: In FY 2009: Development of a TBMCS module on the AOC learning management system (LMS). Contract negotiation efforts for TBMCS Maintenance Release 2 (MR2), the final large modernization effort for TBMCS which includes some development activities. FY 2010 Plans: In FY 2010: N/A FY 2011 Base Plans: In FY 2011: N/A FY 2011 OCO Plans: In FY 2011 OCO: N/A	0.649	0.000	0.000	0.000	0.000
MAJOR THRUST: NATO International Cooperation Research & Development. Efforts to develop Information Exchange Requirements and capabilities between TBMCS and NATO systems to promote interoperability. FY 2009 Accomplishments: In FY 2009: System Air Battle Plan prototype development and NATO Coalition Warfare Interoperability Demonstration (CWID) activities.	0.300	0.300	0.300	0.000	0.300

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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 0207410F: Air and Space Operations Center - Weapon System (AOC-WS)		PROJECT 675218: Applications Development		
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: Continued development of technologies that will improve joint and coalition warfighter capability.						
FY 2011 Base Plans: In FY 2011: Continued development of technologies that will improve joint and coalition warfighter capability.						
FY 2011 OCO Plans: In FY 2011 OCO: N/A						
MAJOR THRUST: Command and Control Information Services (C2IS) creates web-enabled information services to expose air operations data in TBMCS applications and systems using standardized schemas.		0.000	2.892	4.449	0.000	4.449
FY 2009 Accomplishments: In FY 2009: Efforts were funded in PE 0207410F, Project 675242, and are described in that Project documentation.						
FY 2010 Plans: In FY 2010: Risk Reduction Efforts (RREs) for Airspace Information Service (ASIS), Air Mission Information Service (AMIS), and Air Request Information Service (AQIS) which support the development and refinement of program acquisition strategy.						
FY 2011 Base Plans: In FY 2011: Engineering and Manufacturing Development (EMD) of ASIS.						
FY 2011 OCO Plans: In FY 2011 OCO: N/A						
		0.000	1.995	2.059	0.000	2.059

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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 0207410F: Air and Space Operations Center - Weapon System (AOC-WS)		PROJECT 675218: Applications Development	
B. Accomplishments/Planned Program (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
MAJOR THRUST: Personnel Recovery Command and Control (PR C2) develops and delivers tools and services for planning and managing search and rescue efforts, and disseminating related information. FY 2009 Accomplishments: In FY 2009: N/A FY 2010 Plans: In FY 2010: Go Live at National PR C2 Center with Personnel Recovery Management Software (PRMS) v2.1.5. Continue the development and test of PRMS v3.0 which will provide theater management of rescue (planning and execution) and a log of the rescue events, documentation and actions in an Incident report. FY 2011 Base Plans: In FY 2011: Complete development and test of PRMS v3.0 software and prepare to deploy to National, COOP and Theater sites. FY 2011 OCO Plans: In FY 2011 OCO: N/A					
MAJOR THRUST: Command and Control Air Operations Suite (C2AOS) develops next-generation net-centric C2 services and capabilities for air battle planning, execution and management functions. FY 2009 Accomplishments: In FY 2009: Prototyping airspace management capabilities and other Risk Reduction Effort (RRE) activities for the Airspace Management Application (ASMA). FY 2010 Plans: In FY 2010: RREs for ASMA and Air Mission Management Application (AMMA) to support the development and refinement of program acquisition strategy.	3.181	4.150	4.172	0.000	4.172

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force							DATE: February 2010				
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>			R-1 ITEM NOMENCLATURE PE 0207410F: <i>Air and Space Operations Center - Weapon System (AOC-WS)</i>			PROJECT 675218: <i>Applications Development</i>					
B. Accomplishments/Planned Program (\$ in Millions)											
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
<i>FY 2011 Base Plans:</i> In FY 2011: Engineering and Manufacturing Development (EMD) of ASMA.											
<i>FY 2011 OCO Plans:</i> In FY 2011 OCO: N/A											
Accomplishments/Planned Programs Subtotals						4.130	9.337	10.980	0.000	10.980	
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 0207410F: <i>Air and Space Operations Center Weapon System, (OPAF)</i>	11.953	16.957	18.772	0.000	18.772	25.885	10.954	11.011	11.156	0.000	0.000
• PE 0207410F (1): <i>Air and Space Operations Center Weapon System, (O&M AF)</i>	16.626	18.731	32.036	0.000	32.036	27.080	20.390	20.535	20.913	0.000	0.000
D. Acquisition Strategy											
Projects will be awarded following full and open competition and will use an evolutionary acquisition strategy based on incremental development.											
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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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Air Force											DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>				R-1 ITEM NOMENCLATURE PE 0207410F: <i>Air and Space Operations Center - Weapon System (AOC-WS)</i>				PROJECT 675218: <i>Applications Development</i>					
 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
Training development	C/CPAF	Lockheed Martin Colorado Springs, CO	0.065	0.000		0.000		0.000		0.000	0.000	0.065	0.000
PR-C2	Various/ Various	TBD TBD	0.000	0.935	Apr 2010	1.246	Apr 2011	0.000		1.246	Continuing	Continuing	Continuing
C2IS	TBD/TBD	TBD TBD	0.000	1.142	Feb 2010	3.060	Feb 2011	0.000		3.060	Continuing	Continuing	Continuing
C2AOS	TBD/TBD	TBD TBD	1.083	2.315	Feb 2010	2.171	Feb 2011	0.000		2.171	Continuing	Continuing	Continuing
NATO ICR&D Projects	Various/ Various	ESC Hanscom AFB, MA	0.300	0.300	Oct 2009	0.300	Oct 2010	0.000		0.300	Continuing	Continuing	Continuing
Subtotal			1.448	4.692		6.777		0.000		6.777			
Remarks													
 Test and Evaluation (\$ 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
Test and Evaluation	MIPR	46th Test Squadron Eglin AFB, FL	0.050	0.125	Mar 2010	0.050	Dec 2010	0.000		0.050	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Air Force											DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>				R-1 ITEM NOMENCLATURE PE 0207410F: <i>Air and Space Operations Center - Weapon System (AOC-WS)</i>				PROJECT 675218: <i>Applications Development</i>					
Test and Evaluation (\$ 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
Subtotal			0.050	0.125		0.050		0.000		0.050			
Remarks													
Management Services (\$ 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
Program Support (MITRE, A&AS, Travel)	Various/ Various	ESC Hanscom AFB, MA	2.632	4.520	Oct 2009	4.153	Oct 2010	0.000		4.153	Continuing	Continuing	Continuing
Subtotal			2.632	4.520		4.153		0.000		4.153			
Remarks													
			Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			4.130	9.337		10.980		0.000		10.980			
Remarks 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

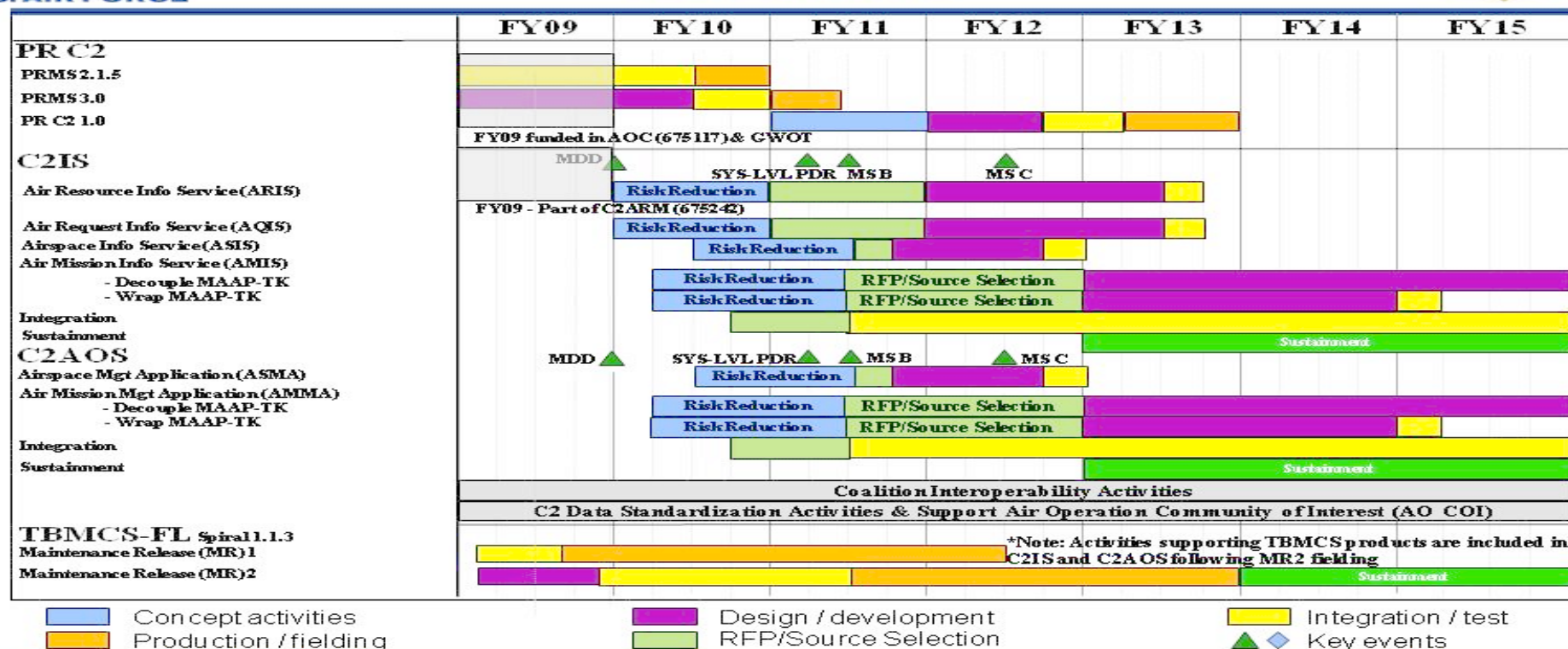
PE 0207410F: Air and Space Operations
Center - Weapon System (AOC-WS)

PROJECT

675218: Applications Development



C2 Applications Development Schedule



Integrity - Service - Excellence

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Air Force			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0207410F: <i>Air and Space Operations Center - Weapon System (AOC-WS)</i>	PROJECT 675218: <i>Applications Development</i>	

Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
PRMS 2.1.5	1	2009	4	2010
PRMS 3.0	1	2009	2	2011
PR C2 1.0	1	2011	4	2011
C2IS - Air Resource Info Service (ARIS)	1	2010	4	2011
C2IS - Air Request Info Service (AQIS)	1	2010	4	2011
C2IS - Airspace Info Service (ASIS)	3	2010	4	2011
C2IS - Air Mission Info Service (AMIS)	2	2010	4	2011
C2AOS - Airspace Mgt Application (ASMA)	3	2010	4	2011
C2AOS - Air Mission Mgt Application (AMMA)	2	2010	4	2011
TBMCS-FL (MR 1)	1	2009	4	2011
TBMCS-FL (MR 2)	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: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>				R-1 ITEM NOMENCLATURE PE 0207410F: <i>Air and Space Operations Center - Weapon System (AOC-WS)</i>				PROJECT 675220: <i>Unit Level</i>			
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
675220: <i>Unit Level</i>	6.577	7.424	7.402	0.000	7.402	7.511	7.607	7.723	7.839	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 Unit Level (UL) program, as the follow on to Theater Battle Management Core Systems-Unit Level, develops, integrates, fields, and maintains an evolving sequence of increasing software capabilities (Unit Command & Control - UC2) that support the execution of the air battle plan and the air tasking order message received from the force level systems. Unit Level Operations software systems provide both the scheduling and mission preparation activities at the wing and squadron level and the capabilities to report and track the success of each mission and influence decisions on future Air Battle Planning to refine future missions. Unit Level Intelligence capabilities ensure detailed threat, target and imagery information are made available to mission commanders and aircrews planning current flight operations. UL is fielded to the Wing Operations Center (WOC), the Maintenance Operations Center (MOC), the Squadron Operations Center (SOC), and many other work-centers.</p> <p>Activities also include studies and analysis to support both current program planning and execution and future program planning.</p> <p>The program is in Budget Activity 7 - Operation System Development because it provides funding for the modernization of a currently existing and operating system.</p>											
B. Accomplishments/Planned Program (\$ in Millions)											
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
MAJOR THRUST: Unit Level operations and intelligence capabilities development/integration.						4.785	6.505	5.299	0.000	5.299	
<i>FY 2009 Accomplishments:</i> In FY 2009: Development of the UL/UC2 Increment 2 which provides capabilities such as Situational Awareness Portlets, Enhanced Personnel Recall, SWA Mission Report, and support to multiple Wings with a single system.											

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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 0207410F: Air and Space Operations Center - Weapon System (AOC-WS)		PROJECT 675220: Unit Level		
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: Continued development and integration of Integrated Information Management System (IIMS) for the UL/UC2 Increment 2, and further development/integration of Situational Awareness Portlets. Enhancement of Incident Management capabilities that were delivered in Increment 1. Modernization of the host hardware and operating systems to facilitate hosting the UL/UC2 in a regional virtual server environment.						
FY 2011 Base Plans: In FY 2011: Development of the the new UC2 system first increment which will provide new Emergency Response and Incident management capabilities; new external interfaces to eliminate duplicate data entry; expanded Situation Awareness Portlets; and improved tasking, management, and execution monitoring.						
FY 2011 OCO Plans: In FY 2011 OCO: N/A						
MAJOR THRUST: Testing and test support activities.		0.495	0.285	0.619	0.000	0.619
FY 2009 Accomplishments: In FY 2009: Testing and test support activities for UL/UC2 Increment 1.						
FY 2010 Plans: In FY 2010: Testing and test support activities for UL/UC2 Increment 2.						
FY 2011 Base Plans: In FY 2011: Testing and test support activities for UL/UC2 Increment 2.						
FY 2011 OCO Plans: In FY 2011 OCO: N/A						

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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 0207410F: Air and Space Operations Center - Weapon System (AOC-WS)		PROJECT 675220: Unit Level		
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
MAJOR THRUST: System Engineering FY 2009 Accomplishments: In FY 2009: System engineering and technical support for UL/UC2 Increments 1 and 2 development and testing. FY 2010 Plans: In FY 2010: System engineering and technical support, including requirements analysis, for UL/UC2 system Increment 2 and the follow-on UC2. FY 2011 Base Plans: In FY 2011: System engineering and technical support, including requirements analysis, for UL/UC2 system Increment 2 and the follow-on UC2. FY 2011 OCO Plans: In FY 2011 OCO: N/A		0.639	0.339	1.017	0.000	1.017
MAJOR THRUST: Program support and travel. FY 2009 Accomplishments: In FY 2009: Program support and travel for UL/UC2 Increments 1 and 2 development and testing. FY 2010 Plans: In FY 2010: Program support and travel for UL/UC2 system Increment 2 and the follow-on UC2. FY 2011 Base Plans: In FY 2011: Program support and travel for UL/UC2 system Increment 2 and the follow-on UC2. FY 2011 OCO Plans: In FY 2011 OCO: N/A		0.658	0.295	0.467	0.000	0.467

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force							DATE: February 2010				
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>			R-1 ITEM NOMENCLATURE PE 0207410F: <i>Air and Space Operations Center - Weapon System (AOC-WS)</i>			PROJECT 675220: <i>Unit Level</i>					
B. Accomplishments/Planned Program (\$ in Millions)											
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
Accomplishments/Planned Programs Subtotals						6.577	7.424	7.402	0.000	7.402	
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 0207410F: <i>Air and Space Operations Center, (OPAF)</i>	10.495	12.641	4.753	0.000	4.753	7.285	7.358	7.338	7.314	0.000	0.000
• PE 0207410F (1): <i>Air and Space Operations Center, (O&M AF)</i>	2.016	1.739	0.848	0.000	0.848	0.950	1.503	1.484	1.503	0.000	0.000
D. Acquisition Strategy											
Projects will be awarded following full and open competition and will use an evolutionary acquisition strategy based on increment development.											
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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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Air Force											DATE: February 2010																																																										
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>				R-1 ITEM NOMENCLATURE PE 0207410F: <i>Air and Space Operations Center - Weapon System (AOC-WS)</i>				PROJECT 675220: <i>Unit Level</i>																																																													
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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Air Force											DATE: February 2010																																																			
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Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract																																																	
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Project Cost Totals		6.577	7.424		7.402		0.000	7.402																																																						

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

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

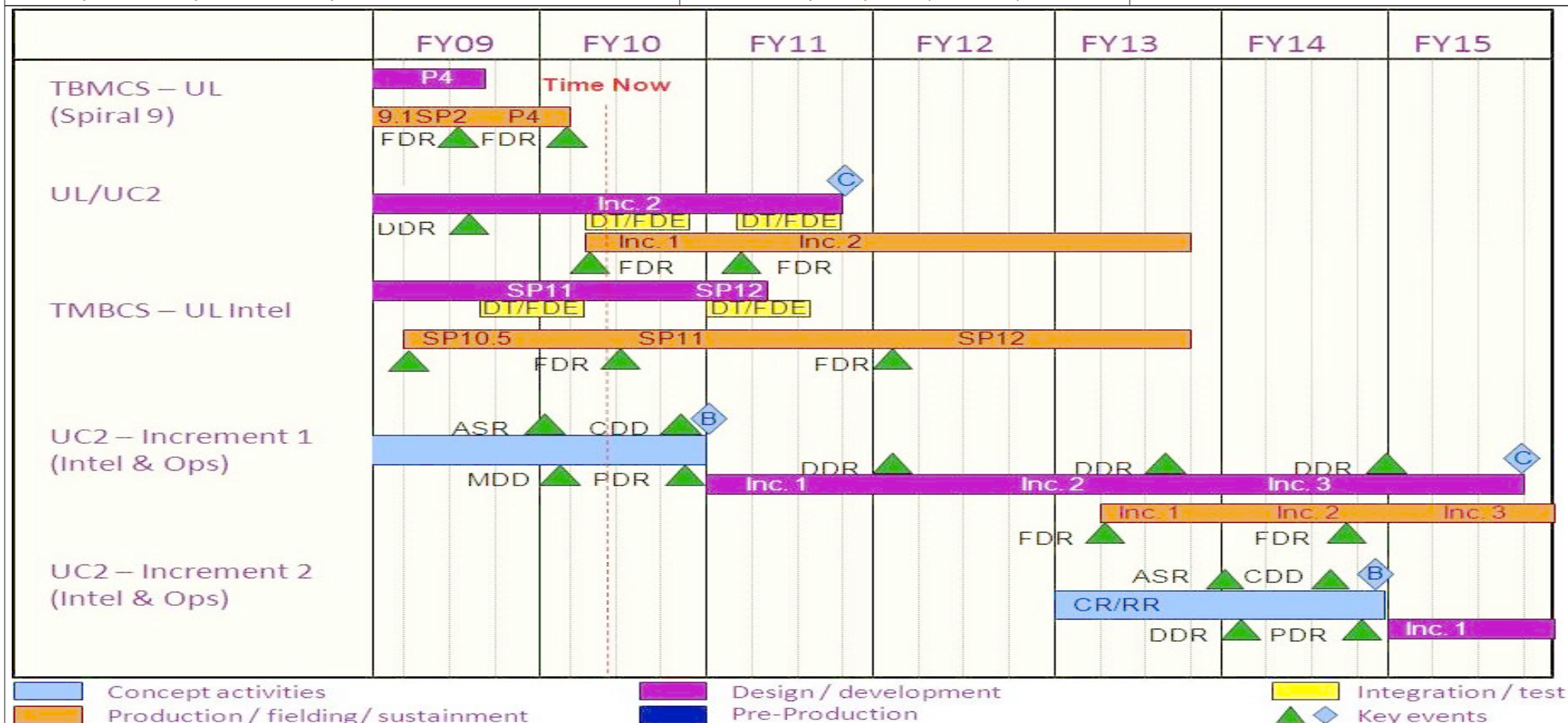
3600: Research, Development, Test & Evaluation, Air Force
BA 7: Operational Systems Development

R-1 ITEM NOMENCLATURE

PE 0207410F: Air and Space Operations
Center - Weapon System (AOC-WS)

PROJECT

675220: Unit Level



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Depicted by installation/production flow

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Air Force			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0207410F: <i>Air and Space Operations</i> Center - <i>Weapon System (AOC-WS)</i>	PROJECT 675220: <i>Unit Level</i>	

Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
TBMCS UL Ops Spiral 9.1 Patch 4 Development	1	2009	3	2009
TBMCS UL Ops Spiral 9.1 Patches 2 and 4 Fielding	1	2009	1	2010
UL/UC2 Increment 2 Development	1	2009	3	2011
UL/UC2 Inc. 2 Test Phase 1	2	2010	4	2010
UL/UC2 Inc. 2 Test Phase 2	1	2011	3	2011
UL/UC2 Inc. 1 Fielding	2	2010	1	2011
UL/UC2 Inc. 2 Fielding	2	2011	4	2011
TBMCS UL Intel Spiral 11 Development	1	2009	2	2010
TBMCS UL Intel Spiral 12 Dev.	2	2010	2	2011
TBMCS UL Intel Spiral 11 Test	3	2009	2	2010
TBMCS UL Intel Spiral 12 Test	1	2011	3	2011
TBMCS UL Intel Spiral 10.5 Fielding	2	2009	2	2010
TBMCS UL Intel Spiral 11 Fielding	3	2010	4	2011
UC2 Increment 1 Concept and Risk Reduction	1	2009	4	2010
UC2 Inc. 1 Development	1	2011	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 0207410F: Air and Space Operations Center - Weapon System (AOC-WS)				PROJECT 675242: Command and Control Air Replanning and Monitoring (C2ARM)			
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
675242: Command and Control Air Replanning and Monitoring (C2ARM)	5.276	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	7.532
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		
Note In FY10, Project 675242, Command and Control Air Replanning and Monitoring (C2ARM) efforts transferred to Project 675218, Applications Development, to better align C2 capability development projects and programs.											
A. Mission Description and Budget Item Justification C2ARM (referred to as Command and Control Information Services (C2IS) in FY10 and beyond) is part of the transition of Theater Battle Management Core Systems (TBMCS) Force Level capabilities to a net-centric environment. Specifically, C2ARM/C2IS develops web-enabled information services to expose air operations data in legacy TBMCS systems using standardized schemas, such as those developed by the Air Operations Community of Interest (AO COI). The data services created by C2ARM/C2IS provide users with a single source for authoritative air operations data, including air resources, airspace deconfliction, missions and taskings. These capabilities will be available to C2 users including the Air and Space Operations Centers (AOC) as well as any future follow on capability. Activities also include studies and analysis to support both current program planning and execution and future program planning.											
B. Accomplishments/Planned Program (\$ in Millions)											
							FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
MAJOR THRUST: Command and Control Air Replanning and Monitoring (C2ARM) (referred to as Command and Control Information Services (C2IS) in FY 2010 and beyond) efforts to develop information services.							4.711	0.000	0.000	0.000	0.000

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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 0207410F: Air and Space Operations Center - Weapon System (AOC-WS)	PROJECT 675242: Command and Control Air Replanning and Monitoring (C2ARM)			
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: Prototyping and risk reduction efforts toward exposing air operations data using standardized schemas.					
FY 2010 Plans: In FY 2010: N/A					
FY 2011 Base Plans: In FY 2011: N/A					
FY 2011 OCO Plans: In FY 2011 OCO: N/A					
MAJOR THRUST: System engineering associated with efforts to develop information services. FY 2009 Accomplishments: In FY 2009: System engineering efforts toward exposing air operations data using standardized schemas.	0.215	0.000	0.000	0.000	0.000
FY 2010 Plans: In FY 2010: N/A					
FY 2011 Base Plans: In FY 2011: N/A					
FY 2011 OCO Plans: In FY 2011 OCO: N/A					
MAJOR THRUST: Program support associated with efforts to develop information services.	0.350	0.000	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force							DATE: February 2010				
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B. Accomplishments/Planned Program (\$ in Millions)											
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
<i>FY 2009 Accomplishments:</i> In FY 2009: Program support and travel for efforts toward exposing air operations data using standardized schemas.											
<i>FY 2010 Plans:</i> In FY 2010: N/A											
<i>FY 2011 Base Plans:</i> In FY 2011: N/A											
<i>FY 2011 OCO Plans:</i> In FY 2011 OCO: N/A											
Accomplishments/Planned Programs Subtotals						5.276	0.000	0.000	0.000	0.000	
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 (15413): <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											
C2IS efforts will be accomplished through CPIF and T&M delivery orders on exisitng ID/IQ contracts with approximately one data services task delivery each year.											
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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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Air Force											DATE: February 2010																																																										
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				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																																																								
Product Development	C/Various	Solers Arlington, VA	4.711	0.000		0.000		0.000		0.000	Continuing	Continuing	Continuing																																																								
Subtotal			4.711	0.000		0.000		0.000		0.000																																																											
Remarks																																																																					
Support (\$ in Millions) <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 & Type</th> <th>Performing Activity & 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 Office Support</td> <td>Various/ Various</td> <td>ESC Hanscom AFB, MA</td> <td align="right">0.350</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">Subtotal</td> <td align="right">0.350</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	Program Office Support	Various/ Various	ESC Hanscom AFB, MA	0.350	0.000		0.000		0.000		0.000	Continuing	Continuing	Continuing	Subtotal			0.350	0.000		0.000		0.000		0.000			
				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 Office Support	Various/ Various	ESC Hanscom AFB, MA	0.350	0.000		0.000		0.000		0.000	Continuing	Continuing	Continuing																																																								
Subtotal			0.350	0.000		0.000		0.000		0.000																																																											
Remarks																																																																					

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Air Force											DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>				R-1 ITEM NOMENCLATURE PE 0207410F: <i>Air and Space Operations Center - Weapon System (AOC-WS)</i>				PROJECT 675242: <i>Command and Control Air Replanning and Monitoring (C2ARM)</i>					
Management Services (\$ 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
Systems Engineering	C/CPFF	ESC Hanscom AFB, MA	0.215	0.000		0.000		0.000		0.000	Continuing	Continuing	Continuing
Subtotal			0.215	0.000		0.000		0.000		0.000			
Remarks													
			Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			5.276	0.000		0.000		0.000		0.000			
Remarks 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

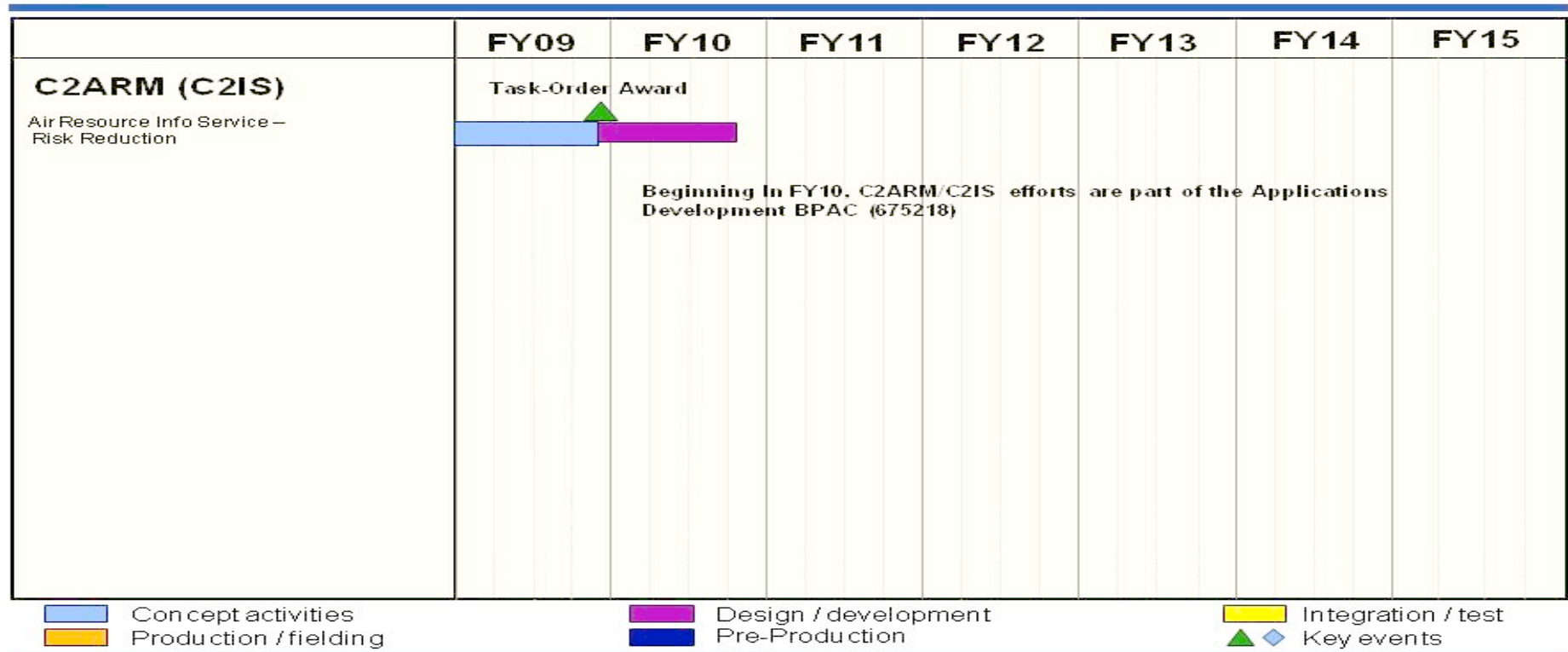
PE 0207410F: Air and Space Operations
Center - Weapon System (AOC-WS)

PROJECT

675242: Command and Control Air Replanning
and Monitoring (C2ARM)



C2ARM Program Schedule



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R-1 Line Item #147

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Air Force			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0207410F: <i>Air and Space Operations Center - Weapon System (AOC-WS)</i>	PROJECT 675242: <i>Command and Control Air Replanning and Monitoring (C2ARM)</i>	

Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
C2ARM (C2IS) Air Resource Info Service-Risk Reduction Development Contract Award	4	2009	4	2009

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