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Exhibit R-2, RDT&E Budget Item 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 0208006F: <i>Mission Planning Systems</i>
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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	94.589	81.577	79.111	4.443	83.554	74.172	76.036	82.732	96.123	Continuing	Continuing
673858: <i>Mission Planning Systems (MPS)</i>	92.638	79.903	37.273	0.000	37.273	33.451	34.341	36.311	38.984	Continuing	Continuing
675302: <i>Mobility Air Forces (MAF) Planning Systems</i>	1.951	1.674	1.667	4.443	6.110	2.563	4.571	9.331	14.138	Continuing	Continuing
675380: <i>Combat Air Forces (CAF) Planning Systems</i>	0.000	0.000	40.171	0.000	40.171	38.158	37.124	37.090	43.001	Continuing	Continuing

Note
 In FY 2011, Project 673858, Mission Planning Systems, efforts were transferred to PE 0208006F, Mission Planning Systems, Project 675302, Mobility Air Forces Planning Systems (previously titled Precision Aerial Delivery System) and Project 675380, Combat Air Forces Planning Systems, in order to more accurately group and reflect the products being developed within the program.

FY 2011 funding totals include \$4.443 for Overseas Contingency Operations (OCO)

A. Mission Description and Budget Item Justification

Mission planning involves the creation of a flight plan based on threats, targets, terrain, weather, aircraft performance capability, and configuration. It is an essential task that must be completed prior to any fixed or rotary wing aircraft sortie. The planner must have the ability to plan weapon, cargo, passenger, and/or fuel delivery, calculate fuel requirements, and assess the route based on known enemy threat location and type. Mission planners must be able to optimize and de-conflict flight routes with other aircraft; review, print, and brief the mission plan; and download pertinent flight information to on-board aircraft avionics.

The Mission Planning Systems (MPS) program is a collaborative program with the Army and Navy to leverage technical solutions and business practices for all Department of Defense (DoD) platforms. It provides automated mission-planning tools and support for fixed and rotary wing aircraft and guided munitions. It will replace two closed architecture legacy mission planning systems (Unix-based MPS (Unix-MPS) and the PC-based Portable Flight Planning Software (PFPS)), with a single multi-service open architecture system more commonly referred to as the Joint Mission Planning System (JMPS). MPS will compress the mission planning cycle by providing an improved integrated planning environment, reducing the time required to respond to changing situations and urgent needs such as striking time sensitive/critical targets and conducting combat search and rescue. The MPS development program will migrate a variety of Air Force aircraft, weapons, and airdrop payload systems from legacy mission planners to MPS. These systems include the A-10, B-1B, C-5, C-17, C-130, E-3, E-8, F-15, F-16, F-22A, KC-10, KC-135,

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<p>RC-135, HH-60, and their associated weapons (e.g. Small Diameter Bomb (SDB), Joint Direct Attack Munitions (JDAM), Joint Air-to-Surface Standoff Munitions (JASSM), etc...) and airdrop payloads. In addition, basic MPS products have the potential to support all DoD fixed-wing and rotary-wing aircraft and will be shared with other AF programs as well as the Army and Navy. MPS will deliver significant benefits to command and control performance by enhancing information superiority for the warfighter and by providing unique capabilities in support of both precision engagement and dominant maneuver.</p> <p>Additionally, elements of Mission Planning Systems will be utilized to continue the development of a Joint Precision Airdrop System (JPADS) in conjunction with the Army. The JPADS System of Systems (SoS) capability provides a planning and execution capability for DoD airdrop requirements. It is the primary airdrop mission planning and execution system when the mission profile or surface-to-air threat assessment warrants a high-altitude and/or standoff precision delivery. JPADS enables high-altitude, precise airdrop delivery to forward ground forces, mitigating surface-to-air threats, reducing risk of Improvised Explosive Device (IED) & insurgent attack on ground convoys. JPADS allows the warfighter to consider weather, terrain, aircraft capabilities, threat, etc...to accurately deliver payload.</p> <p>REASON OCO FUNDS ARE REQUIRED: Joint Precision Airdrop System (JPADS) prototype hardware and software was rapidly fielded for Operation Enduring Freedom (OEF). The prototype software for the weather component now needs to be re-factored to integrate into the AF C-130 and C-17 mission planning environment and provide extensibility and maintainability to meet increased ground force demands for airdrop missions in OEF. Airdrop requirements in OEF doubled in 2008 and are expected to continue at this pace (for the foreseeable future). Weather data modeling and calculations in JPADS software are at the very essence of the AF capability to expand airdrop and provide improved delivery accuracy in support of increased numbers of ground forces in OEF. OEF uniquely requires the AF to provide greater airdrop delivery accuracy because of the rough, varied high-altitude terrain and associated small drop zones. The key to improving airdrop accuracy is better weather data collection and processing in the computed air release point calculation in JPADS software.</p> <p>The Mission Planning Systems program is in Budget Activity 7 because it provides for development of technologies and capabilities to support and ultimately replace the currently fielded PFPS and Unix-MPS systems.</p>		

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Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Air Force	DATE: February 2010
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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 0208006F: <i>Mission Planning Systems</i>
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B. Program Change Summary (\$ in Millions)

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	97.296	91.995	0.000	0.000	0.000
Current President's Budget	94.589	81.577	79.111	4.443	83.554
Total Adjustments	-2.707	-10.418	79.111	4.443	83.554
• Congressional General Reductions		-10.000			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Adjustments	-2.707	-0.418	79.111	4.443	83.554

Change Summary Explanation

FY 2010 congressional reduction for MPS Increment IV delays on Tanker, Airlift, and Special Mission (TASM) development

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force									DATE: February 2010		
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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
673858: <i>Mission Planning Systems (MPS)</i>	92.638	79.903	37.273	0.000	37.273	33.451	34.341	36.311	38.984	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

Mission planning involves the creation of a flight plan based on threats, targets, terrain, weather, aircraft performance capability and configuration. It is an essential task that must be completed prior to any fixed or rotary wing aircraft sortie. The planner must have the ability to plan weapon, cargo, passenger, and/or fuel delivery, calculate fuel requirement and assess the route based on known enemy threat location and type. Mission planners must be able to optimize and de-conflict flight routes with other aircraft; review, print and brief the plan; and download pertinent flight information to on-board aircraft avionics.

This project provides for the continuous improvement of mission planning software capabilities that cut across all platforms and systems. It includes all FY10 and prior development activities for migrating selected CAF and MAF platforms to MPS. It also allows for the investigation of new technologies and products that have the potential for improving mission planning systems. This includes the continuous upgrading of the MPS framework. The framework is the underlying baseline for all mission planning systems. It will require continuous upgrades to: 1) reduce timelines for route planning; 2) transmit near real-time intelligence data to the platforms; 3) increase the accuracy of the mapping products; 4) provide a Windows-based, COTS-based, user friendly product; and 5) retain compatibility with platform changes to avionics and operational flight programs. Development and modernization activities within this project are as follows:

- a. MPS Increment III - completes all FY10 and prior year development activities to migrate selected CAF and MAF platforms to the MPS Increment III planning systems capability. This includes the initial migration of all designated Increment III platforms.
- b. MPS Increment IV - continues all FY10 and prior year development activities to migrate selected CAF and MAF platforms to the MPS Increment IV planning systems capability. This includes the initial migration of all designated Increment IV platforms. FY2011 and outyear development activities for Increment IV will be completed as part of respective projects for CAF and MAF planning systems.
- c. Modernization - continues the modernization of overarching technologies (including the framework) to support development of MPEs for various CAF and MAF platforms.
- d. Integration, Test and Certification - continues all MPS-related integration, test, and certification activities for all CAF and MAF platforms.

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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 0208006F: <i>Mission Planning Systems</i>	PROJECT 673858: <i>Mission Planning Systems (MPS)</i>				
<p>e. Management Operations - continues all program office management operations and support activities to ensure the timely delivery of mission planning systems to the warfighter.</p> <p>B. Accomplishments/Planned Program (\$ in Millions)</p>						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p>MAJOR THRUST: Continue contractor-executed software development and test activities to migrate selected platforms to new MPS Increment III mission planning capability.</p> <p><i>FY 2009 Accomplishments:</i> In FY 2009: Continue development, integration and test of MPS software to support the initial transition of the B-1B and F-16 aircraft from legacy mission planners to MPS. Additionally, funds were used to develop the initial mission planner for the F-22A aircraft</p> <p><i>FY 2010 Plans:</i> In FY 2010: Conduct formal government testing of the F-22A MPS software</p> <p><i>FY 2011 Base Plans:</i> In FY2011: N/A</p> <p><i>FY 2011 OCO Plans:</i> In FY 2011 OCO: N/A</p>		9.152	1.440	0.000	0.000	0.000
<p>MAJOR THRUST: Continue contractor-executed software development and test activities required to migrated selected CAF and MAF platforms to the new MPS Increment IV mission planning capability.</p> <p><i>FY 2009 Accomplishments:</i> In FY 2009: Continue development and integration of MPS software to support the initial transition of the Tanker, Airlift, and Special Mission (TASM) aircraft platforms from the legacy Portable Flight Planning Software (PFPS) to MPS and to develop the next version of MPS framework software, Framework (FW) 1.4.</p>		56.279	34.553	7.322	0.000	7.322

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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 2011 OCO Plans:</i> In FY 2011 OCO: N/A						
<p>MAJOR THRUST: Continues Test, Training, and Certification (TT&C) activities to evaluate and ensure the operational performance of all newly developed and modernized MPS software and hardware.</p> <p><i>FY 2009 Accomplishments:</i> In FY 2009: Conduct and support formal Government testing for MPS Increment III, MPS Increment IV, and MPS modernization efforts.</p> <p><i>FY 2010 Plans:</i> In FY 2010: Continue formal Government testing of software and other development efforts for MPS Increment III, MPS Increment IV, and MPS modernization.</p> <p><i>FY 2011 Base Plans:</i> In FY 2011: Continue formal Government testing of software and other development efforts for MPS Increment IV and MPS modernization.</p> <p><i>FY 2011 OCO Plans:</i> In FY 2011 OCO: N/A</p>		7.682	8.777	9.412	0.000	9.412
<p>MAJOR THRUST: Continues all program management office technical and administrative activities and operations necessary to support development and fielding of all MPS capabilities.</p> <p><i>FY 2009 Accomplishments:</i> In FY 2009: Provide program management support for MPS Increment III, MPS Increment IV and , MPS modernization efforts.</p>		13.647	13.693	10.404	0.000	10.404

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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	
<p><i>FY 2010 Plans:</i> In FY 2010: Provide program management support for MPS Increment III, MPS Increment IV and , MPS modernization efforts.</p> <p><i>FY 2011 Base Plans:</i> In FY 2011: Provide program management support for MPS Increment IV and MPS modernization efforts.</p> <p><i>FY 2011 OCO Plans:</i> In FY 2011 OCO: N/A</p>											
Accomplishments/Planned Programs Subtotals						92.638	79.903	37.273	0.000	37.273	
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 (5694): <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											
Mission Planning Systems utilizes an evolutionary acquisition approach to develop and deliver an interoperable, network-centric, mission planning system tailored for numerous Air Force platforms using competition and multiple contract vehicles.											
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 0208006F: <i>Mission Planning Systems</i>	PROJECT 673858: <i>Mission Planning Systems (MPS)</i>
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Product Development (\$ in Millions)

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
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Mission Planning Enterprise Contract	C/Various	Various Various	48.589	18.961	Nov 2009	1.826	Nov 2010	0.000		1.826	0.000	69.376	Continuing
Mission Planning Enterprise Contract II	C/Various	Various Various	0.427	16.290	Apr 2010	1.332	Nov 2010	0.000		1.332	Continuing	Continuing	0.000
Systems Engineering and Integration	C/Various	Various Various	13.618	14.051	Nov 2009	14.300	Nov 2010	0.000		14.300	Continuing	Continuing	Continuing
MPS Modernization	C/Various	Various Various	8.675	8.131	Nov 2009	0.000		0.000		0.000	Continuing	Continuing	Continuing
Subtotal			71.309	57.433		17.458		0.000		17.458			

Remarks

Support (\$ in Millions)

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
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Software Engineering Institute (SEI)	TM	SEI Pittsburgh, PA	0.300	0.300	Nov 2009	0.300	Nov 2010	0.000		0.300	Continuing	Continuing	Continuing
Tecolote	TM	Tecolote Inc Bedford, MA	0.742	0.560	Nov 2009	0.577	Nov 2010	0.000		0.577	Continuing	Continuing	Continuing
Subtotal			1.042	0.860		0.877		0.000		0.877			

Remarks

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Air Force **DATE:** February 2010

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Test and Evaluation (\$ in Millions)

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
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
46TW	PO	46TW Eglin AFB, FL	6.463	7.543	Nov 2009	8.140	Nov 2010	0.000		8.140	Continuing	Continuing	Continuing
JITC	TBD/TBD	JITC Indian Head, MO	0.080	0.061	Jan 2010	0.064	Jan 2011	0.000		0.064	Continuing	Continuing	Continuing
Type I Training	TBD/TBD	Ogden Air Logistics Center Hill AFB, UT	1.139	1.173	Nov 2009	1.208	Nov 2010	0.000		1.208	Continuing	Continuing	Continuing
Subtotal			7.682	8.777		9.412		0.000		9.412			

Remarks

Management Services (\$ in Millions)

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
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
FFRDC Support	FFRDC	Mitre Corp Bedford, MA	5.147	4.924	Nov 2009	4.870	Nov 2010	0.000		4.870	Continuing	Continuing	Continuing
Program Office Support	Various/ Various	Various Various	7.458	7.909	Nov 2009	4.656	Nov 2010	0.000		4.656	Continuing	Continuing	Continuing
Subtotal			12.605	12.833		9.526		0.000		9.526			

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 0208006F: <i>Mission Planning Systems</i>	PROJECT 673858: <i>Mission Planning Systems (MPS)</i>
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	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	92.638	79.903	37.273	0.000	37.273			

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 0208006F: Mission Planning Systems

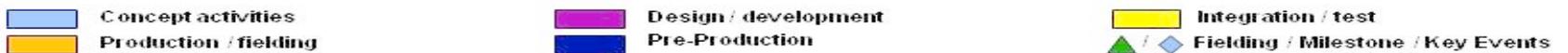
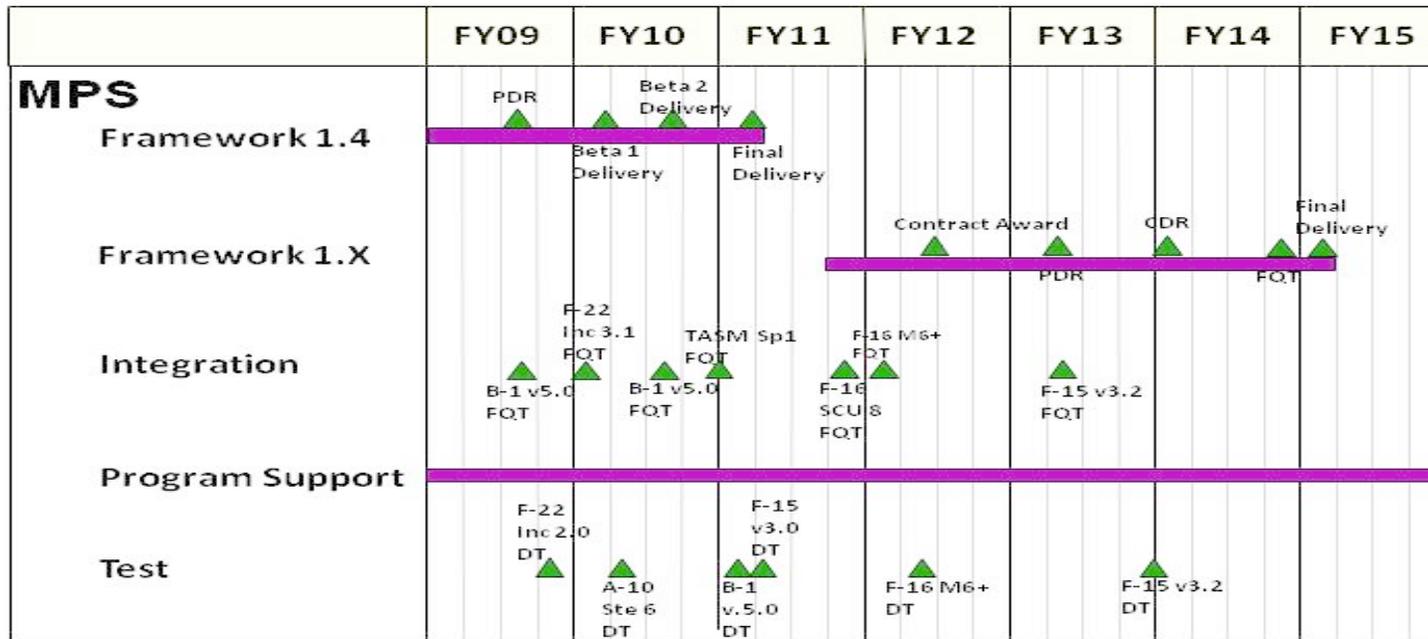
PROJECT

673858: Mission Planning Systems (MPS)

As of: 28 Dec 2009 1400



Mission Planning Systems Schedule



Integrity - Service - Excellence

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Air Force		DATE: February 2010
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Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
Framework 1.4 Preliminary Design Review (PDR)	3	2009	3	2009
Framework 1.4 Beta 1 Software Release	1	2010	1	2010
Framework 1.4 Beta 2 Software Release	3	2010	3	2010
Framework 1.4 Final Software Delivery	1	2011	1	2011
Intergration/F-22 Inc 3.1 Final Qualification Test	1	2010	1	2010
Intergration/B-1 Rel 5.0 Final Qualification Test	3	2010	3	2010
Intergration/TASM Spl 1 Final Qualification Test	4	2010	4	2010
Intergration/F-16 SCU 8 Final Qualification Test	4	2011	4	2011
Intergration/F-22 Inc 2.0 Development Test & Evaluation	4	2009	4	2009
Test/A-10 Suite 6 Developmental Test & Evaluation	2	2010	2	2010
Test/B-1 5.0 Developmental Test & Evaluation	1	2011	1	2011
Test/F-15 v 3.0 Developmental Test & Evaluation	2	2011	2	2011

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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
675302: <i>Mobility Air Forces (MAF) Planning Systems</i>	1.951	1.674	1.667	4.443	6.110	2.563	4.571	9.331	14.138	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

FY11 funding totals include \$4.443M for Overseas Contingency Operations.

A. Mission Description and Budget Item Justification

Mission planning involves the creation of a flight plan based on threats, targets, terrain, weather, aircraft performance capability and configuration. It is an essential task that must be completed prior to any fixed or rotary wing aircraft sortie. The planner must have the ability to plan weapon, cargo, passenger, and/or fuel delivery, calculate fuel requirement and assess the route based on known enemy threat location and type. Mission planners must be able to optimize and de-conflict flight routes with other aircraft; review, print and brief the plan; and download pertinent flight information to on-board aircraft avionics.

This project develops mission planning systems and related components for Mobility Air Forces (MAF) platforms. It completes (and then stops) development of a Mission Planning Environment (MPE) for a limited number of platforms that comprise the Tanker, Airlift and Special Mission (TASM) suite of aircraft (more commonly known as TASM Spiral 1). It will also modernize the mission planning software required for MAF mission planning, including versions required to keep pace with software and hardware upgrades to Spiral 1 aircraft (e.g. E-3, E-8) and common components such as Communication, Navigation, Surveillance/Air Traffic Management (CNS/ATM) and Air Refueling. The initial development and modernization efforts are as follows:

Additionally, this project continues the development of a Joint Precision Airdrop System (JPADS) in conjunction with the Army. The JPADS System of Systems (SoS) capability provides a planning and execution capability for DoD airdrop requirements. It is the primary airdrop mission planning and execution system when the mission profile or surface-to-air threat assessment warrants a high-altitude and/or standoff precision delivery. JPADS enables high-altitude, precise airdrop delivery to forward ground forces, mitigating surface-to-air threats, reducing risk of Improvised Explosive Device (IED), and insurgent attack on ground convoys. JPADS allows the warfighter to consider weather, terrain, aircraft capabilities, threat, etc... to accurately deliver payload. The initial development and modernization efforts are as follows:

a. MPS Increment IV - completes development of an MPE for the migration of a limited number of TASM aircraft [e.g. E-3, E-8, RC-135, HC-130]. It also upgrades several Common Components capabilities (e.g. weather) that support more than one platform.

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b. MAF MPE Modernization - modifies MAF Mission Planning Environments (MPEs) developed and deployed during previous mission planning increments. The modernization activities will provide new and improved mission planning capabilities for individual MPEs as required to meet evolving Operational Flight Program (OFP) requirements, such as avionics upgrades, communication systems, etc... for various MAF platforms. The modernization effort will also complete a variety of studies and analyses to evaluate emerging Information Technology (IT) infrastructure technologies in support of future system upgrades.

c. Joint Precision Airdrop System (JPADS) - continues development of software required to provide a precision airdrop capability for AF and other services (i.e. the Army).

RATIONAL FOR OVERSEAS CONTINGENCY OPERATIONS (OCO) FUNDING: In FY11 OCO funds are required to refactor prototype software for the Joint Precision Airdrop System (JPADS) weather component. JPADS prototype hardware and software was rapidly fielded to provide an immediate capability for OEF. The prototype weather software now needs to be re-factored to integrate into the AF C-130 and C-17 mission planning environment and provide extensibility and maintainability to meet increased ground force demands for airdrop missions in OEF. Airdrop requirements in OEF doubled in 2008 and are expected to nearly double again in 2009 and weather data modeling and weather calculations in JPADS software are at the very essence of the AF capability to expand airdrop and provide improved delivery accuracy in support of increased numbers of ground forces in OEF. OEF uniquely requires the AF to provide greater airdrop delivery accuracy because of the rough, varied high-altitude terrain and associated small drop zones and the key to improving accuracy is better weather data collection and processing in the computed air release point calculation in JPADS software.

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p>MAJOR THRUST: Continue development of a Joint Precision Airdrop System (JPADS) capability for precise, high altitude delivery of material to forward ground forces.</p> <p><i>FY 2009 Accomplishments:</i> In FY 2009: Continued development, integration and testing of JPADS phase 1 software. Also conducted preliminary requirements analysis to support development of JPADS Phase 2 (Portable Flight Planning Software Consolidated Airdrop Tool) and JPADS Phase 3 (Weather Refactoring) software.</p>	1.951	1.674	1.667	4.443	6.110

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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 0208006F: <i>Mission Planning Systems</i>	PROJECT 675302: <i>Mobility Air Forces (MAF) Planning Systems</i>
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B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p><i>FY 2010 Plans:</i> In FY 2010: Complete development, integration and testing of JPADS Phase 2 software. Completed requirements analysis of JPADS Phase 3 software and initiate preliminary studies and analyses for JPADS Phase 4 (MPS Consolidated Airdrop Tool).</p> <p><i>FY 2011 Base Plans:</i> In FY 2011: Continue development of JPADS Phase 3 and Phase 4 software</p> <p><i>FY 2011 OCO Plans:</i> In FY 2011 (OCO): Complete re-factoring of JPADS prototype weather software.</p>					
Accomplishments/Planned Programs Subtotals	1.951	1.674	1.667	4.443	6.110

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 0208006F: <i>Mission Planning Systems, (OPAF)</i>	16.533	16.589	11.680	0.000	11.680	9.889	8.503	8.542	9.694	0.000	0.000

D. Acquisition Strategy

MPS MAF Planning Systems utilizes an evolutionary acquisition approach to develop and deliver common, interoperable, net-centric systems for preflight mission planning and precision and non-precision airdrops using a variety of contract vehicles.

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 0208006F: <i>Mission Planning Systems</i>				PROJECT 675302: <i>Mobility Air Forces (MAF) Planning Systems</i>					

Product Development (\$ in Millions)

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
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Mission Planning Enterprise Contract	C/Various	Various Various	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	Continuing
Mission Planning Enterprise Contract II	C/Various	Various Various	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	0.000
JPADS Software Development Contract	TM	Tyrbin Ft Walton Beach, FL	1.951	1.674	Nov 2009	1.667	Nov 2010	4.443	Nov 2010	6.110	Continuing	Continuing	0.000
Subtotal			1.951	1.674		1.667		4.443		6.110			

Remarks

Project Cost Totals	Total Prior Years Cost	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
		1.951	1.674	1.667	4.443	6.110		

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 0208006F: *Mission Planning Systems*

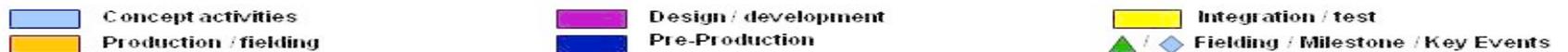
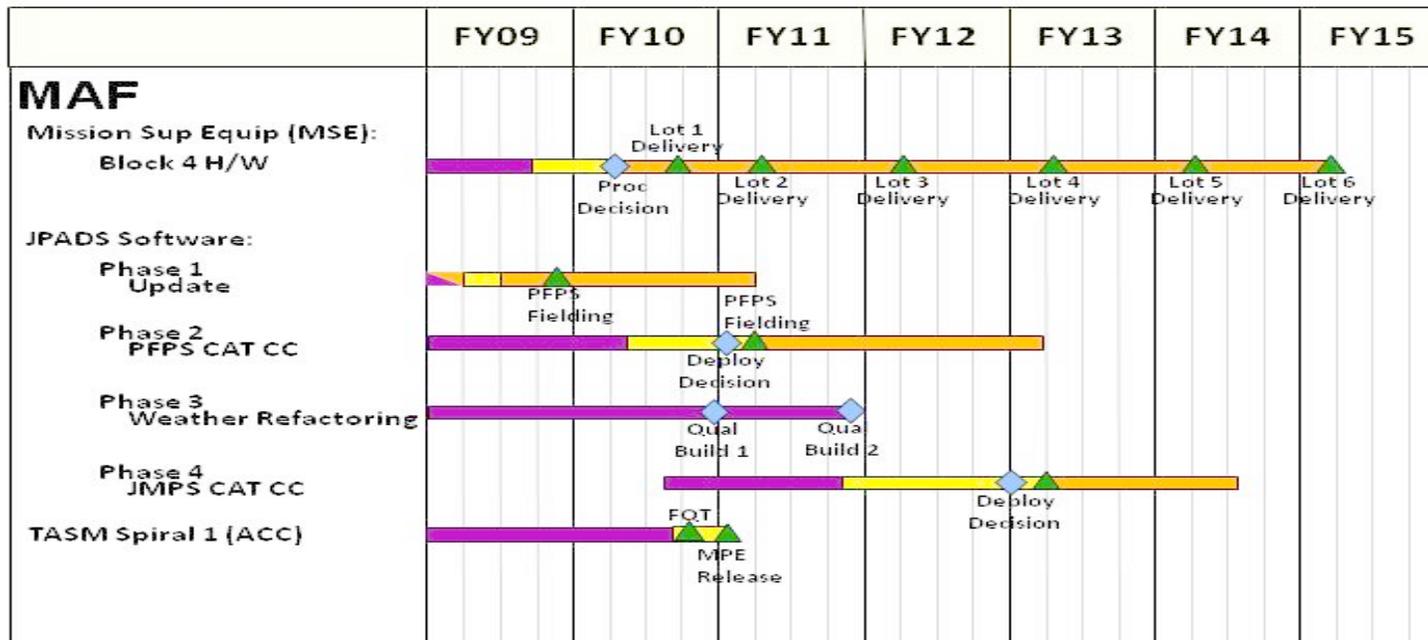
PROJECT

675302: *Mobility Air Forces (MAF) Planning Systems*

As of: 28 Dec 2009 1400



Mobility Air Forces (MAF) Planning Systems



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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 0208006F: <i>Mission Planning Systems</i>	PROJECT 675302: <i>Mobility Air Forces (MAF) Planning Systems</i>

Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
JPADS Mission Support Equipment (MSE) Blk 4 Design & Development	1	2009	3	2009
JPADS Mission Support Equipment (MSE) Blk 4 Testing	3	2009	1	2010
MPS Phase 1/Initial Interface with PFPS Fielding	4	2009	4	2009
JPADS Mission Support Equipment (MSE) Blk 4 Procurement Decision	2	2010	2	2010
MPS Phase 2 Consolidated Air Drop Tool for PFPS Fielding	4	2010	4	2010
MPS Phase 3 Weather Capability Refactoring Qual Build I	4	2010	4	2010
MPS Phase 3 Weather Capability Refactoring Qual Build II	4	2011	4	2011
TASM Spiral 1 FQT	4	2010	4	2010

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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 0208006F: <i>Mission Planning Systems</i>				PROJECT 675380: <i>Combat Air Forces (CAF) Planning Systems</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
675380: <i>Combat Air Forces (CAF) Planning Systems</i>	0.000	0.000	40.171	0.000	40.171	38.158	37.124	37.090	43.001	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

Mission planning involves the creation of a flight plan based on threats, targets, terrain, weather, aircraft performance capability and configuration. It is an essential task that must be completed prior to any fixed or rotary wing aircraft sortie. The planner must have the ability to plan weapon, cargo, passenger, and/or fuel delivery, calculate fuel requirement and assess the route based on known enemy threat location and type. Mission planners must be able to optimize and de-conflict flight routes with other aircraft; review, print and brief the plan; and download pertinent flight information to on-board aircraft avionics.

This project focuses on developing mission planning systems for the Combat Air Forces (CAF), including the initial transition of the HH-60 aircraft from the legacy PFPS to MPS. It will also modernize the Mission Planning Systems (MPS) software required for CAF mission planning, including versions required to keep pace with upgrades to the A-10, B-1B, F-15, F-16, F-22A and HH-60 aircraft as well as common components such as the Precision Guided Munitions Planning System (PGMPS) and the Joint Air-to-Surface Standoff Missile (JASSM). Mission Planning CAF increments and modernization efforts are as follows:

- a. MPS Increment III - continues the initial migration of additional aircraft platforms (A-10, B-1B, F-16, F-22 and RC-135) and weapons (e.g. JASSM) to MPS. It also upgrades the framework and develops new common components (e.g. Weather, Electronic Warfare, Airdrop, and Precision Guided Munitions) and unique platform capabilities for selected aircraft and weapons.
- b. MPS Increment IV - continues the MPS migration effort by migrating the HH-60. It also upgrades several Common Components. In addition, Increment IV updates platforms that previously transitioned to MPS (e.g. F-15, F-16, A-10, B-1B, and F-22A) to provide capabilities IAW the Increment IV Capability Development Document (CDD).
- c. CAF MPE Modernization - Will modernize CAF Mission Planning Environments (MPEs) that were developed and deployed in Increments II-IV. The modernization activities will provide new and improved mission planning capabilities for individual MPEs as required to meet evolving Operational Flight Program (OFP) requirements (such as new weapons, avionics upgrades, communication systems, etc...) for the various affected platforms. The modernization effort will also complete a variety of studies and analyses to evaluate emerging Information Technology (IT) infrastructure technologies in support of future system upgrades.

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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 0208006F: <i>Mission Planning Systems</i>	PROJECT 675380: <i>Combat Air Forces (CAF) Planning Systems</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
MAJOR THRUST: Continues development of MPS Increment IV Mission Planning Environments (MPE) for CAF platforms (e.g. F-15, F-16, F-22, B-1B) <i>FY 2009 Accomplishments:</i> In FY 2009: N/A [prior year development efforts are in project 673858] <i>FY 2010 Plans:</i> In FY 2010: N/A [prior year development efforts are in project 673858] <i>FY 2011 Base Plans:</i> In FY 2011: Continues development, integration and test of a Mission Planning Environment to support the initial transition of the HH-60 aircraft from the legacy mission planning capability to MPS. Additionally, will initiate development of MPE upgrades for the A-10 and F-22A aircraft <i>FY 2011 OCO Plans:</i> In FY 2011 (OCO): N/A		0.000	0.000	8.802	0.000	8.802
MAJOR THRUST: Continues the modernization of CAF MPEs to plan the use of capabilities being developed in the Operational Flight Programs (OFPs) of multiple CAF platforms. <i>FY 2009 Accomplishments:</i> In FY 2009: N/A [prior year development efforts are in project 673858] <i>FY 2010 Plans:</i> In FY2010: N/A [prior year development efforts are in project 673858] <i>FY 2011 Base Plans:</i> In FY 2011: Continues the modernization of previously fielded mission planning software environments for the B-1B, F-15, F-16, and F-22A.		0.000	0.000	31.369	0.000	31.369

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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 0208006F: <i>Mission Planning Systems</i>			PROJECT 675380: <i>Combat Air Forces (CAF) Planning Systems</i>					
B. Accomplishments/Planned Program (\$ in Millions)											
							FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2011 OCO Plans: In FY 2011 (OCO): N/A</i>											
Accomplishments/Planned Programs Subtotals							0.000	0.000	40.171	0.000	40.171
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 0208006F: <i>Mission Planning Systems, (OPAF)</i>	14.405	11.424	9.426	0.000	9.426	9.145	8.858	9.075	10.305	0.000	0.000
D. Acquisition Strategy											
MPS Combat Air Forces (CAF) Planning Systems utilizes an evolutionary acquisition approach to develop and deliver an interoperable, network-centric, mission planning system tailored for numerous Air Force platforms using competition and multiple contract vehicles.											
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 0208006F: <i>Mission Planning Systems</i>				PROJECT 675380: <i>Combat Air Forces (CAF) Planning Systems</i>					

Product Development (\$ in Millions)

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
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Mission Planning Enterprise Contract II	C/Various	Various Various	0.000	0.000		30.785	Nov 2010	0.000		30.785	Continuing	Continuing	Continuing
MPS Modernization	C/Various	Various Various	0.000	0.000		9.386	Nov 2010	0.000		9.386	Continuing	Continuing	Continuing
Subtotal			0.000	0.000		40.171		0.000		40.171			

Remarks

Project Cost Totals	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	0.000	0.000		40.171		0.000		40.171			

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 0208006F: Mission Planning Systems

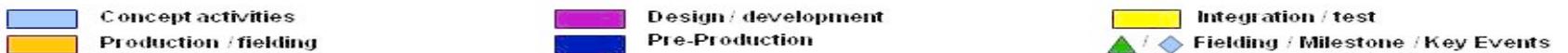
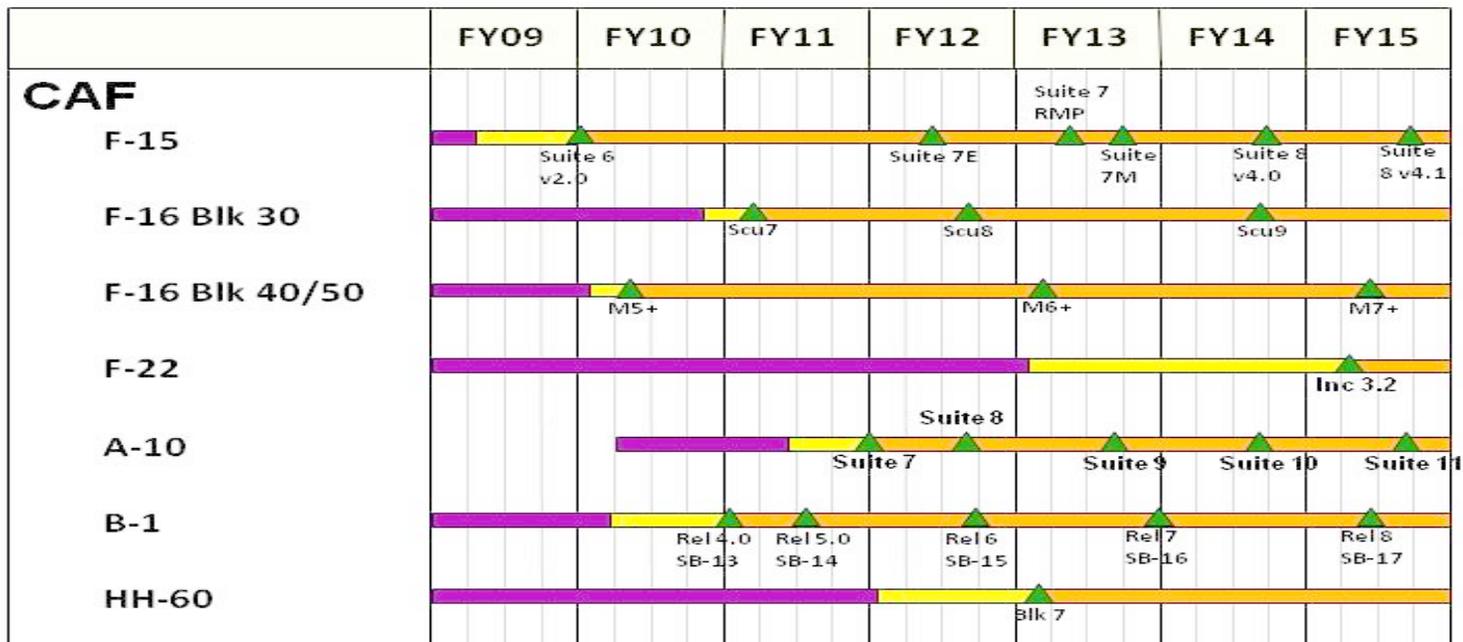
PROJECT

675380: Combat Air Forces (CAF) Planning Systems

As of: 28 Dec 2009 1400



Combat Air Forces (CAF) Planning Systems



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Exhibit R-4A, RDT&E Schedule Details: 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 0208006F: *Mission Planning Systems*

PROJECT

675380: *Combat Air Forces (CAF) Planning Systems*

Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
F-15 Suite 6 Fielding	4	2009	4	2009
F-16 Blk 40/45 Fielding	2	2010	2	2010
F-16 Blk 30 Fielding	1	2011	1	2011
B-1 SB-13 & SB-14 Fielding	1	2011	3	2011
A-10 Suite 7 Fielding	4	2011	4	2011

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