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Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Air Force	DATE: February 2012
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APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE							
3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>				PE 0208006F: <i>Mission Planning Systems</i>							
COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
Total Program Element	80.492	63.009	69.377	-	69.377	70.332	82.164	84.284	84.542	Continuing	Continuing
673858: <i>Mission Planning Systems (MPS) Development</i>	43.663	28.004	6.405	-	6.405	0.833	5.484	2.665	-	Continuing	Continuing
675302: <i>Precision Aerial Delivery Systems (PADS)</i>	4.238	4.142	5.546	-	5.546	2.815	4.322	3.894	0.945	Continuing	Continuing
675380: <i>Mission Planning Systems (MPS) Modernization</i>	32.591	30.863	57.426	-	57.426	66.684	72.358	77.725	83.597	Continuing	Continuing

Note

FY11 funding totals include \$4.443M appropriated 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 weapons, 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, but are not limited to the: A-10, B-1B, C-5, C-17, C-130, E-3, E-8, F-15, F-16, F-22A, 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. 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 for all ballistic airdrop mission as well as precision guided airdrops that are required when the mission profile or surface-to-air threat assessment

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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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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 payloads to keep the warfighter supplied and in the fight.

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

B. Program Change Summary (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Previous President's Budget	83.555	69.918	72.037	-	72.037
Current President's Budget	80.492	63.009	69.377	-	69.377
Total Adjustments	-3.063	-6.909	-2.660	-	-2.660
• Congressional General Reductions	-	-0.409			
• Congressional Directed Reductions	-	-6.500			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-2.388	-			
• Other Adjustments	-0.675	-	-2.660	-	-2.660

Change Summary Explanation

FY2012 request reduced by 6.5M due to MPS Increment IV critical change delays.

FY2013 reduced by 2.66M due to higher Air Force priorities.

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Air Force									DATE: February 2012		
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) Development			
COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
673858: Mission Planning Systems (MPS) Development	43.663	28.004	6.405	-	6.405	0.833	5.484	2.665	-	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

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

Project 675838 was renamed Mission Planning Systems Development from Mission Planning Systems in FY13.

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 Combat Air Forces (CAF) and Mobility Air Forces (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, commercial off the shelf-based, user friendly product; and 5) retain compatibility with platform changes to avionics and operational flight programs.

This project also continues the development of a Joint Precision Airdrop System-Mission Planner (JPADS-MP) 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. Activities also include studies and analysis to support both current program planning and execution and future program planning. Development and modernization activities within this project are as follows:

a. 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.

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Air Force		DATE: February 2012
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) Development
<p>b. MPS Modernization - continues the modernization of overarching technologies (including the framework) to support development of Mission Planning Environments (MPEs) for various CAF and MAF platforms.</p> <p>c. CAF MPE Modernization: Beginning in FY13, these efforts will modernize CAF MPEs that were developed and delivered under MPS Increments II – IV. The modernization effort will provide new and improved mission planning capability for individual Operational Flight Program (OFP) requirements, such as new weapons, avionics upgrades, communications systems, etc. The OFPs requiring MPE updates under the CAF Modernization effort in Fiscal Years 2011 through 2017 include but are not limited to those for A-10 (Suites 8, 9, 10, 11, 12), B-1B (Sustainment Blocks (SB) 15, 16, 16a, 17 and 18), and F-15 (Suites 7, 8, 9, and 10). CAF modernization also includes updates to mission planning capabilities supporting associated weapons, including Small Diameter Bomb (SDB), Joint Direct Attack Munitions (JDAM) and the Joint Air-to-Surface Standoff Missile (JASSM). Finally, CAF modernization will address required improvements to CAF related MPE Common Components (CCs), including Precision-Guided Munitions Planning System (PGMPS), Electronic Warfare CC (EWCC), etc.</p> <p>d. MAF MPE Modernization: This effort modifies the common MAF MPE developed and deployed during previous mission planning increments. The modernization activities will provide new and improved mission planning capabilities for the MAF fleet as required to meet evolving OFP, fuel efficiency and Global Planning netcentric requirements such as avionics upgrades, communication systems, interfaces with command and control systems, new chutes, etc. for various MAF platforms. The MPE updates under the MAF Modernization effort in Fiscal Years 2011 through 2017 include but are not limited to those for C-5, C-17, C-27, C-130s (multiple variants), E-3, E-8, E-4, HH-60, KC-10, KC-46, KC-135, and RC-135. MAF modernization will address required improvements to MAF related MPE CCs, including the Communications, Navigation Surveillance/Air Traffic Management (CNS/ATM) CC, Consolidated Airdrop Tool (CAT), Aeronautical Advisory and Notices to Airmen Tool (AANT), and Air Refueling Tool (ART) CC.</p> <p>e. Joint Precision Airdrop System –Mission Planner (JPADS-MP) - continues development of software and hardware required to provide a precision airdrop capability for AF and other services (e.g the Army, etc).</p> <p>f. Test, Training and Certification - continues all MPS-related integration, test, and certification activities for all CAF and MAF platforms.</p> <p>g. Operational and Technical Support - continues all program office management operations and support activities to ensure the timely delivery of mission planning systems to the warfighter.</p> <p>This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.</p>		
B. Accomplishments/Planned Programs (\$ in Millions)		
Title: Increment IV Development		
Description: Continue contractor-executed software development and test activities required to migrate selected CAF and MAF platforms to the new MPS Increment IV mission planning capability.		
	FY 2011	FY 2012
	9.270	6.390
		FY 2013
		6.405

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Air Force		DATE: February 2012		
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) Development		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2011	FY 2012	FY 2013
FY 2011 Accomplishments: Continued the development, testing, and fielding of FW 1.4 software. Completed development and fielding activities for B-1B, F-22A, and A-10 Mission Planning Environments. FY 2012 Plans: Continue development of the unique planning component portion of the MPEs for F-22 and A-10. FY 2013 Plans: Complete development of the unique planning component portion of the MPE for F-22.				
Title: MPS Modernization Description: Continues modernization of MPEs for previously migrated platforms to enable use of new capabilities being developed in the OFPs. FY 2011 Accomplishments: Conducted system engineering and integration activities to support the continued modernization of previously migrated CAF and MAF platforms and requirements analysis for updates to the MPS Framework (FW 1.5). FY 2012 Plans: Conduct system engineering and integration activities to support the continued modernization of previously migrated CAF and MAF platforms and continue software development of Framework 1.5. FY 2013 Plans: N/A		10.135	6.811	-
Title: Test, Training and Certification Description: 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. FY 2011 Accomplishments: Continued formal Government testing of software and other development efforts for MPS Increment IV and MPS modernization. FY 2012 Plans: Continue formal Government testing for MPS Increment IV, and MPS modernization efforts. FY 2013 Plans:		9.412	7.346	-

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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) Development						
B. Accomplishments/Planned Programs (\$ in Millions)							FY 2011	FY 2012	FY 2013			
Beginning in FY13 all Test, Training, and Certification requirements will be allocated to their respective programs in 675302, Precision Aerial Delivery Systems (PADS), and 675380, MPS Modernization.												
Title: Operations/Technical Support Description: Continues all program management office technical and administrative activities and operations necessary to support development and fielding of all MPS capabilities. FY 2011 Accomplishments: Provided technical support for MPS Increment IV and MPS modernization efforts. FY 2012 Plans: Provide technical support for MPS Increment IV and MPS modernization activities. FY 2013 Plans: Beginning in FY13 all Operations/Technical Support requirements will be allocated to their respective programs in 675302, PADS, and 675380, MPS Modernization.							10.403	7.457	-			
Title: JPADS Development Description: Continue development of a JPADS capability for precise, high-altitude delivery of material to forward ground forces. FY 2011 Accomplishments: Completed JPADS-MP/Consolidated Airdrop Tool (CAT) v1 (Win XP) software. Continued development, integration and testing of CAT v2 (VISTA) software. Completed requirements analysis of CAT v3 (wx refactor) software. FY 2012 Plans: N/A FY 2013 Plans: N/A							4.443	-	-			
Accomplishments/Planned Programs Subtotals							43.663	28.004	6.405			
C. Other Program Funding Summary (\$ in Millions)												
	Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
•	N/A: N/A	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

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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) Development</i>
D. Acquisition Strategy MPS development 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-4, RDT&E Schedule Profile: PB 2013 Air Force		DATE: February 2012
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) Development

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Air Force			DATE: February 2012
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) Development</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
F-22 Inc 3.2A v12.0 Fielding	2	2014	2	2014
A-10 Suite 7B Fielding	4	2012	4	2012
Framework 1.4 Final Delivery	1	2012	1	2012
Framework 1.5 Contract Award	3	2011	3	2011

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Air Force									DATE: February 2012		
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: Precision Aerial Delivery Systems (PADS)			
COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
675302: Precision Aerial Delivery Systems (PADS)	4.238	4.142	5.546	-	5.546	2.815	4.322	3.894	0.945	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

Project 675302 was renamed Precision Aerial Delivery Systems (PADS) from Mobility Air Forces (MAF) Planning Systems in FY13.

A. Mission Description and Budget Item Justification

Mission planning involves the creation of a flight plan based on multiple inputs including 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; download pertinent flight information to on-board aircraft avionics; and, conduct dynamic/in-flight replanning as applicable. This project continues the development of a Joint Precision Airdrop System-Mission Planner (JPADS-MP) 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 for all ballistic airdrop mission as well as precision guided airdrops that are required 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 payloads to keep the warfighter supplied and in the fight.

Some key requirements on the horizon for the Consolidated Airdrop Tool (CAT) include refactoring WindPADS (Weather component of CAT), Combination Airdrop, Local Analysis and Prediction System (LAPS) replacement, Ensemble Weather prediction, and Obstruction Data. CAT will also be integrating multiple S&T efforts developed and prototyped by Natick Soldier Center including Airdrop Damage Estimate and updates to Precision Aerial Guidance Units. The JPADS-MP will also transition various AFRL Flagship Capability Concept (FCC) efforts to include improvements to Airdrop Performance Modeling, Light Detection and Ranging (LIDAR) and updates to Human Effectiveness of the software.

Activities also include studies and analysis to support both current program planning and execution and future program planning. Development and modernization efforts are as follows:

a. MAF MPE Modernization - modifies the common MAF Mission Planning Environment (MPE) developed and deployed during previous mission planning increments. The modernization activities will provide new and improved mission planning capabilities for the MAF fleet as required to meet evolving Operational Flight Program (OFP), fuel efficiency and Global Planning netcentric requirements such as avionics upgrades, communication systems, interfaces with command and control systems, new chutes, etc. for various MAF platforms. The MPE updates under the MAF Modernization effort in Fiscal Years 2011 through 2017 include but are not limited to those for C-5, C-17, C-27, C-130s (multiple variants), E-3, E-8, E-4, HH-60, KC-10, KC-46, KC-135 and RC-135. MAF modernization will address required

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Air Force		DATE: February 2012	
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: Precision Aerial Delivery Systems (PADS)	
<p>improvements to MAF related MPE Common Components (CCs), including the Communications, Navigation Surveillance/Air Traffic Management (CNS/ATM) CC, Consolidated Airdrop Tool (CAT), Aeronautical Advisory, and Notices to Airmen (NOTAMS) Tool (AANT), and Air Refueling Tool (ART) CC. This effort also provides the capability to use the new Digital Aeronautical Information File (DAFIF) web services-based data structure (GNS-A) being produced by NGA in this timeframe.</p> <p>b. Joint Precision Airdrop System – Mission Planner (JPADS-MP) - continues development of software and hardware required to provide a precision airdrop capability for AF and other services (e.g the Army, etc).</p> <p>c. Test, Training and Certification - continues all MPS-related integration, test, and certification activities for all CAF and MAF platforms.</p> <p>d. Operational and Technical Support - continues all program office management operations and support activities to ensure the timely delivery of mission planning systems to the warfighter.</p> <p>This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.</p>			
B. Accomplishments/Planned Programs (\$ in Millions)	FY 2011	FY 2012	FY 2013
<p>Title: JPADS Development</p> <p>Description: Continue development of a JPADS capability for precise, high altitude delivery of material to forward ground forces.</p> <p>FY 2011 Accomplishments:</p> <p>Completed JPADS-MP/Consolidated Airdrop Tool (CAT)v1 (Win XP) software. Continued development, integration and testing of CAT v 2 (VISTA) software. Completed requirements analysis of CAT v 3 (wx refactor) software. Additional funding in project 673858.</p> <p>FY 2012 Plans:</p> <p>Continued development of CAT v 3 software which predominantly re-architects the WindPads component of CAT software.</p> <p>FY 2013 Plans:</p> <p>CAT v3.x effort will integrate new solution to replace antiquated and "black box" module Local Analysis and Prediction System (LAPS) for improved localized weather modeling. Efforts also include inclusion of updated/new chute systems and related airdrop performance data.</p>	2.426	2.710	5.546
<p>Title: MAF Modernization</p> <p>Description: Continues the modernization of MPEs for MAF platforms</p> <p>FY 2011 Accomplishments:</p>	1.812	1.432	-

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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2011	FY 2012	FY 2013
Continued the modernization of previously fielded mission planning software environments for the E-3 and the E-8.			
<i>FY 2012 Plans:</i> Continue the modernization of previously fielded mission planning software environments for the E-3, E-8, and RC-135.			
<i>FY 2013 Plans:</i> Beginning in FY13 all MAF Modernization requirements will be allocated to 675380, MPS Modernization.			
Accomplishments/Planned Programs Subtotals	4.238	4.142	5.546

C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u> <u>Base</u>	<u>FY 2013</u> <u>OCO</u>	<u>FY 2013</u> <u>Total</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• OPAF, PE 0208006F, Mission Plann....: -	15.918	9.709	8.487	0.000	8.487	8.525	9.334	9.585	9.683	Continuing	Continuing

D. Acquisition Strategy PADS 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.
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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-4, RDT&E Schedule Profile: PB 2013 Air Force		DATE: February 2012
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>Precision Aerial Delivery Systems (PADS)</i>

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Air Force			DATE: February 2012
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>Precision Aerial Delivery Systems (PADS)</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
JPADS-MP CAT v2.0.2 Fielding	2	2012	2	2012
JPADS-MP CAT v2.1 Fielding	3	2012	3	2012
JPADS-MP CAT v3.0 Fielding	4	2013	4	2013
JPADS-MP CAT v3.1 Fielding	3	2014	3	2014
JPADS-MP CAT v3.2 Fielding	4	2014	4	2014
JPADS-MP CAT v4.0 Fielding	4	2015	4	2015
JPADS-MP CAT v5.0 Fielding	4	2016	4	2016
JPADS-MP CAT v6.0 Fielding	4	2017	4	2017

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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: Mission Planning Systems (MPS) Modernization			
COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
675380: Mission Planning Systems (MPS) Modernization	32.591	30.863	57.426	-	57.426	66.684	72.358	77.725	83.597	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

Project 675380 was renamed Mission Planning Systems (MPS) Modernization from Combat Air Forces (CAF) Planning Systems in FY13.

FY11 funding is in Project 675838, MPS Development.

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 weapons, 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 modernizing MPS to support CAF and Mobility Air Forces (MAF), including the development, test and sustainment of Mission Planning Environments (MPEs) to support the A-10, B-1B, C-5, C-17, C- 27, C-130, E-3, E-8, F-15, F-16, F-22A, KC-10, KC-46, KC-135, RC-135, and other platforms. Activities also include studies and analysis to support both current program planning and execution and future program planning. MPS Modernization efforts are as follows:

a. MPS Increment IV Development: This effort continues update/development activities for platforms that previously transitioned to MPS (e.g. F-15, F-16, A-10, B-1B, and F-22A Increment 3.2A) to provide capabilities IAW the Increment IV Capability Development Document (CDD). In addition, it also upgrades several Common Components (CCs) that are utilized on a variety of CAF platforms. Starting in FY13, all MPS Increment IV Development efforts will reside in Project 673858, Mission Planning Systems (MPS) Development.

b. CAF MPE Modernization: These efforts modernize CAF MPEs that were developed and delivered under MPS Increments II – IV. The modernization effort will provide new and improved mission planning capability for individual Operational Flight Program (OFP) requirements, such as new weapons, avionics upgrades, communications systems, etc. The OFPs requiring MPE updates under the CAF Modernization effort in Fiscal Years 2011 through 2017 include but are not limited to those for A-10 (Suites 8, 9, 10, 11, 12), B-1B (Sustainment Blocks 15, 16, 16a, 17 and 18), F-15 (Suites 7, 8, 9, and 10), F-16 Block 30 (System Capability Upgrade [SCU] 8, 9 and 10), F-16 Block 40/50 (M6.1, M6.5, M7.1, and M8.0) and F-22 (Increments 3.2B, 3.2C, and 4.0). CAF modernization also includes updates to mission planning capabilities supporting associated weapons, including Small Diameter Bomb (SDB-II), Joint Direct Attack Munitions (JDAM) and the Joint Air-to-Surface Standoff Missile (JASSM). Finally, CAF modernization will address required improvements to CAF related MPE CCs, including Precision-Guided Munitions Planning System (PGMPS), Electronic Warfare CC (EWCC), etc.

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Air Force		DATE: February 2012		
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: Mission Planning Systems (MPS) Modernization		
<p>c. MAF MPE Modernization: This effort modifies the common MAF MPE developed and deployed during previous mission planning increments. The modernization activities will provide new and improved mission planning capabilities for the MAF fleet as required to meet evolving OFP, fuel efficiency and Global Planning netcentric requirements such as avionics upgrades, communication systems, interfaces with command and control systems, new chutes, etc. for various MAF platforms. The MPE updates under the MAF Modernization effort in Fiscal Years 2011 through 2017 include but are not limited to those for C-5, C-17, C-27, C-130s (multiple variants), E-3, E-8, E-4, HH-60, KC-10, KC-46, KC-135, and RC-135. MAF modernization will address required improvements to MAF related MPE CCs, including the Communications, Navigation Surveillance/Air Traffic Management (CNS/ATM) CC, Consolidated Airdrop Tool (CAT), Aeronautical Advisory and Notices to Airmen Tool (AANT), and Air Refueling Tool (ART) CC. This effort also provides the capability to use the new Digital Aeronautical Information File (DAFIF) web services-based data structure (GNS-A) being produced by NGA in this timeframe.</p> <p>To meet the unique needs of Air Mobility Command (AMC), the Mobility Air Force Automated Flight Planning Service (MAFPS) component of MPS will provide a centralized/net-centric Global Mobility mission flight planning capability. This service will provide significant fuel savings through automated flight route optimization utilizing aircraft performance, air traffic management, weather, and other data.”</p> <p>d. Test, Training and Certification: Continues all MPS-related integration, test, and certification activities for all CAF and MAF platforms.</p> <p>e. Operational and Technical Support: Continues all program office management operations and support activities to ensure the timely delivery of mission planning systems to the warfighter.</p> <p>This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.</p>				
B. Accomplishments/Planned Programs (\$ in Millions)				
		FY 2011	FY 2012	FY 2013
Title: Increment IV Development		3.460	10.971	-
Description: Continues development of MPS Increment IV MPEs for CAF platforms (e.g. A-10, F-15, F-16, F-22, B-1B).				
FY 2011 Accomplishments: Continued development of the unique planning component portion of MPE for the E-3 and E-8 platforms.				
FY 2012 Plans: Complete development of the unique planning component portion of MPEs for the A-10 and F-22A platforms.				
FY 2013 Plans: In FY13 all MPS Increment IV requirements will be executed in Project 673858, MPS Development.				
Title: CAF Modernization		29.131	19.892	42.647

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Air Force		DATE: February 2012	
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>Mission Planning Systems (MPS) Modernization</i>	
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2011	FY 2012
<p>Description: Continues the modernization of previously fielded Mission MPEs to enable efficient use of new and improved capabilities being developed in the OFPs of CAF platforms.</p> <p>FY 2011 Accomplishments: Continued modernization of previously fielded mission planning software environments for B-1B, F-15, F-16, and F-22A. Included design, code integration, and documentation of software components. Also supported training for units that received the additional functional capabilities developed and incorporated in platform OFPs.</p> <p>FY 2012 Plans: Continues the modernization of previously fielded mission planning software environments for the A-10, B-1B, F-15, F-16 and F-22A. Future funding will incorporate changes to the requirements by the Operation Flight Programs as the warfighter transitions to the Joint Mission Planning System. Air Combat Command (ACC) and AMC supplies functional and performance requirements that must be implemented relative to each particular platform mission planning requirements. This will include the implementation of specific UPC improvements based upon fielded problems, developer evaluations, and Developmental and Operational testing as agreed to by HQ ACC and AMC. As part of the modernization effort MPE software shall interoperate with the baseline JMPS Framework, PGMPS, Weapons Data link, and key handling software for the newly identified SDB-II (Network Enabled Weapons) capability.</p> <p>FY 2013 Plans: Specific CAF efforts include but are not limited to: ongoing development of the A-10 Suite 8 (at this time specific mission planning requirements in support of Suite 8 OFP have not been addressed/evaluated); ongoing development of the F-15 v3.2 which includes incorporation of Network Enabled Weapons (NEW); continued development on F-15 v4.0 which includes SDB-II updates; design and development of the F-15 v4.1; design, development of the F-16 Block 30 System Capability Upgrade (SCU) 9 OFP; design and development of the M6.5 and M7.1 MPEs in support of the associated F-16 Block 40/50 OFPs, including mission planning support for the Air Launch Aerial-Intercept Guided Missile-9X (AIM-9X) Block II integration; further development of the F-22 v12.0 for 3.2A OFP and F-22 v13.0 MPE, providing mission planning support to the Increment 3.2B OFP for AIM 120D and AIM-9X integration, Electronic Protection, Embedded Training, and SDB management. Additional effort may be driven by ACC requirements, to include, but not limited to, specific MPE improvements based upon problems discovered in fielded versions, developer evaluations and formal Government testing.</p>			
<p>Title: MAF Modernization</p> <p>Description: Continue the modernization of previously fielded mission planning software environments for the E-3, E-8, E-4, EC-130, and RC-135. Begin activities for modernization of the MAF MPE to include C-5, C-17, C-130s, C-27, KC-10, KC-135, and KC-46 platforms.</p>		-	14.779

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Air Force							DATE: February 2012				
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>Mission Planning Systems (MPS) Modernization</i>				
B. Accomplishments/Planned Programs (\$ in Millions)							FY 2011	FY 2012	FY 2013		
<i>FY 2011 Accomplishments:</i> N/A											
<i>FY 2012 Plans:</i> N/A											
<i>FY 2013 Plans:</i> Will continue the modernization of previously fielded mission planning software environments for Special Mission Air Combat Command platforms (SM-ACC), the E-3, E-8, E-4, EC-130, and RC-135. Begin activities for modernization of the MAF MPE to include C-5, C-17, C-130s, C-27, KC-10, KC-135, and KC-46 platforms.											
Accomplishments/Planned Programs Subtotals							32.591	30.863	57.426		
C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u> <u>Base</u>	<u>FY 2013</u> <u>OCO</u>	<u>FY 2013</u> <u>Total</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• OPAF, PE 0208006F, Mission Plann...: -	9.426	8.819	6.808	0.000	6.808	5.678	8.011	8.761	9.127	Continuing	Continuing
D. Acquisition Strategy Mission Planning Systems (MPS) Modernization 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-4, RDT&E Schedule Profile: PB 2013 Air Force		DATE: February 2012
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>Mission Planning Systems (MPS)</i> <i>Modernization</i>

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Air Force		DATE: February 2012
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: Mission Planning Systems (MPS) Modernization

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Air Force			DATE: February 2012
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>Mission Planning Systems (MPS) Modernization</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
F-15 v3.0 Fielding	2	2012	2	2012
F-15 v3.1 Fielding	4	2012	4	2012
F-15 v3.2 Fielding	4	2014	4	2014
F-15 v4.0 Fielding	4	2015	4	2015
F-16 Blk 30 SCU 8 Fielding	2	2013	2	2013
F-16 Blk 30 SCU 9 Fielding	2	2015	2	2015
F-16 Blk 40/50 M6.1 Fielding	4	2012	4	2012
F-16 Blk 40/50 M6.5 Fielding	1	2015	1	2015
F-16 Blk 40/50 M7.1 Fielding	1	2016	1	2016
F-22 v13.0 Fielding	4	2016	4	2016
A-10 Suite 8 Fielding	4	2014	4	2014
B-1 Release 6 Fielding	2	2012	2	2012
B-1 Release 7 Fielding	4	2013	4	2013
B-1 Release 8 Fielding	4	2014	4	2014
B-1 Release 9 Fielding	4	2015	4	2015
B-1 Release 10 Fielding	4	2016	4	2016
AMC Modernization C-5 AMP Release 1 Fielding	1	2016	1	2016
AMC Modernization Tankers Release 1 Fielding	2	2016	2	2016
AMC Modernization Airdrop Release 1 Fielding	3	2016	3	2016
SM-ACC E-3 / E-8 Release 2 Fielding	2	2013	2	2013
SM-ACC EC-130H Release 1 Fielding	4	2013	4	2013
SM-ACC E-3 / E-8 Release 3 Fielding	1	2015	1	2015

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Air Force			DATE: February 2012	
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>Mission Planning Systems (MPS) Modernization</i>
		Start		End
Events		Quarter	Year	Quarter
				Year
SM-ACC RC-135 Release 3 Fielding		1	2015	1 2015
SM-ACC EC-130H Release 2 Fielding		3	2015	3 2015
SM-ACC E-3 / E-8 Release 4 Fielding		4	2015	4 2015
SM-ACC EC-130H Release 3 Fielding		4	2016	4 2016