Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force

R-1 ITEM NOMENCLATURE

3600: Research, Development, Test & Evaluation, Air Force

PE 0208006F: Mission Planning Systems

DATE: February 2011

BA 7: Operational Systems Development

APPROPRIATION/BUDGET ACTIVITY

COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	76.650	83.555	69.918	-	69.918	72.037	78.534	90.995	92.164	Continuing	Continuing
673858: Mission Planning Systems (MPS)	74.776	37.273	29.991	-	29.991	30.092	33.651	35.381	37.398	Continuing	Continuing
675302: Mobility Air Forces (MAF) Planning Systems	1.874	6.110	4.256	-	4.256	4.340	8.557	15.309	17.458	Continuing	Continuing
675380: Combat Air Forces (CAF) Planning Systems	-	40.172	35.671	-	35.671	37.605	36.326	40.305	37.308	Continuing	Continuing

#### Note

In FY 2011, some 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.

CY funding totals include \$4.443 for Overseas Contingency Operations (OCO).

The program funding includes reductions for overhead efficiencies that are not intended to impact program content. The efficiencies reductions total \$2.664M in FY12.

### 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-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

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**Exhibit R-2**, **RDT&E Budget Item Justification**: PB 2012 Air Force

#### APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

3600: Research, Development, Test & Evaluation, Air Force

PE 0208006F: Mission Planning Systems

BA 7: Operational Systems Development

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 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.

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 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	81.577	79.112	74.172	-	74.172
Current President's Budget	76.650	83.555	69.918	-	69.918
Total Adjustments	-4.927	4.443	-4.254	-	-4.254
<ul> <li>Congressional General Reductions</li> </ul>		-			
<ul> <li>Congressional Directed Reductions</li> </ul>		-			
<ul> <li>Congressional Rescissions</li> </ul>	-	-			
Congressional Adds		_			
<ul> <li>Congressional Directed Transfers</li> </ul>		-			
<ul> <li>Reprogrammings</li> </ul>	-2.100	-			
SBIR/STTR Transfer	-2.485	-			
Other Adjustments	-0.342	4.443	-4.254	-	-4.254

### **Change Summary Explanation**

FY11 increase of \$4.443M for Overseas Contingency Operations (OCO).

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**DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development				<b>R-1 ITEM N</b> PE 0208000	_	TURE Planning Sys	stems	PROJECT 673858: Mission Planning Systems (MPS)				
COST (\$ in Millions)	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost			
673858: Mission Planning Systems (MPS)	74.776	37.273	29.991	-	29.991	30.092	33.651	35.381	37.398	Continuing	Continuing	
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0			

#### A. Mission Description and Budget Item Justification

Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force

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, Commercial Off The Shelf-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. 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.
- d. Test, Training and Certification continues all MPS-related integration, test, and certification activities for all CAF and MAF platforms.
- 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.

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force			D	ATE: Febru	ary 2011				
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development This program is in Budget Activity 7, Operational System Development fielded or have received approval for full rate production and anticipate		development efforts to upgrade systems that have been							
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total			
Title: MPS Increment III Development		3.039	-	-	-	-			
<b>Description:</b> Continue contractor-executed software development and platforms to new MPS Increment III mission planning capability.	test activities to migrate selected								
FY 2010 Accomplishments:  Completed development of F-22 Increment 3.1 v11 unique planning cor of common components to deliver the F-22 MPE to support the Operation Evaluation.									
FY 2011 Plans: None - Initial development activities for Increment will be complete.									
FY 2012 Base Plans: None - development activities for this activity are complete.									
FY 2012 OCO Plans:									
Title: MPS Increment IV Development		19.325	7.322	-	-	-			
<b>Description:</b> Continue contractor-executed software development and selected CAF and MAF platforms to the new MPS Increment IV mission									
FY 2010 Accomplishments:  Continued the development, integration and migration of selected AF pl MPS as well as continuing the development of framework 1.4 software.									
FY 2011 Plans:									
Continue the development, testing, and fielding of FW 1.4 software.									
FY 2012 Base Plans: None - development activities for this activity are complete.									
FY 2012 OCO Plans:									
Title: MPS Modernization		30.564	10.135	12.188	-	12.188			

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force			D	ATE: Febru	ary 2011			
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development	R-1 ITEM NOMENCLATURE PE 0208006F: Mission Planning System		ROJECT 73858: Missi	ECT 8: Mission Planning Systems (MPS)				
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total		
<b>Description:</b> Continues development (i.e. modernization) of MPEs use of new capabilities being developed in the Operational Flight P								
FY 2010 Accomplishments:  Modernized previously-fielded mission planning software for selected aircraft)	ed platforms (e.g. B-1, F-15, and F-16							
FY 2011 Plans: Conduct system engineering and integration activities to support th migrated Combat Air Forces (CAF) and Mobility Air Forces (MAF) pupdates to the MPS Framework (FW 1.5).								
FY 2012 Base Plans: Conduct system engineering and integration activities to support th migrated Combat Air Forces (CAF) and Mobility Air Forces (MAF) pof Framework 1.5.								
FY 2012 OCO Plans:								
Title: Test, Training and Certification		9.526	9.412	8.846	-	8.846		
<b>Description:</b> Continues Test, Training, and Certification (TT&C) ac performance of all newly developed and modernized MPS software								
FY 2010 Accomplishments: Conducted and supported formal Government testing of software a Increment III, MPS Increment IV, and MPS modernization efforts.	and other development efforts for MPS							
FY 2011 Plans: Continue formal Government testing of software and other develop modernization.	ment efforts for MPS Increment IV and MPS							
FY 2012 Base Plans: Continue formal Government testing for MPS Increment IV, and MF	PS modernization efforts.							
FY 2012 OCO Plans:								
Title: Operations/Technical Support		12.322	10.404	8.957	-	8.957		

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
3600: Research Development Test & Evaluation Air Force	PE 0208006F: Mission Planning Systems	673858: Mission Planning Systems (MPS)

BA 7: Operational Systems Development

E 0208006F: Mission Planning Systems 673858: Mission Planning Systems (MPS

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
<b>Description:</b> Continues all program management office technical and administrative activities and operations necessary to support development and fielding of all MPS capabilities.					
FY 2010 Accomplishments: Provided technical support for MPS Increment III, MPS Increment IV and, MPS modernization activities.					
FY 2011 Plans: Provide technical support for MPS Increment IV and MPS modernization efforts.					
FY 2012 Base Plans: Provide technical support for MPS Increment IV and MPS modernization activities.					
FY 2012 OCO Plans:					
Accomplishments/Planned Programs Subtotals	74.776	37.273	29.991	-	29.991

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

		-	FY 2012	FY 2012	FY 2012					<b>Cost To</b>	
<u>Line Item</u>	FY 2010	FY 2011	<u>Base</u>	OCO	<u>Total</u>	FY 2013	FY 2014	FY 2015	FY 2016	<b>Complete</b>	<b>Total Cost</b>
• N/A:	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

### 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 2012 Air Force

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force

BA 7: Operational Systems Development

R-1 ITEM NOMENCLATURE

PE 0208006F: Mission Planning Systems

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PROJECT

673858: Mission Planning Systems (MPS)

**DATE:** February 2011

Product Development (	t Development (\$ in Millions)			FY 2	2011		2012 ise		2012 CO	FY 2012 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
Mission Planning Enterprise Contract	C/Various	Various:Various,	64.439	1.826	Nov 2010	-		-		-	0.000	66.265	TBD
Mission Planning Enterprise Contract II	C/Various	Various:Various,	15.290	1.332	Nov 2010	3.572	Nov 2011	-		3.572	Continuing	Continuing	TBD
Systems Engineering and Integration	C/Various	Various:Various,	26.915	14.300	Nov 2010	2.728	Nov 2011	-		2.728	Continuing	Continuing	TBD
MPS Modernization	C/Various	Various:Various,	8.131	-		12.188	Nov 2011	-		12.188	Continuing	Continuing	TBD
		Subtotal	114.775	17.458		18.488		-		18.488			

Support (\$ in Millions)				FY 2	2011	FY 2 Ba	2012 se		2012 CO	FY 2012 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
Software Engineering Institute ( SEI)	C/TBD	SEI:Pittsburgh, PA	0.300	0.300	Nov 2010	0.292	Nov 2011	-		0.292	Continuing	Continuing	TBD
Tecolote	C/TBD	Tecolote Inc:Bedford, MA	0.560	0.577	Nov 2010	0.678		-		0.678	Continuing	Continuing	TBD
		Subtotal	0.860	0.877		0.970		-		0.970			

Test and Evaluation (\$ i	est and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO				
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
Responsible Test Organization (RTO)	PO	46TW:Eglin AFB, FL	7.543	8.140	Nov 2010	2.270	Nov 2011	-		2.270	Continuing	Continuing	TBD
Certification and Accreditation	MIPR	JITC:Indian Head, MO	0.071	0.064	Jan 2011	0.063	Jan 2012	-		0.063	Continuing	Continuing	TBD
Type I Training	РО	Ogden Air Logistics Center:Hill AFB, UT	2.178	1.208	Nov 2010	1.200	Nov 2011	-		1.200	Continuing	Continuing	TBD
	Subtotal 9.792					3.533		-		3.533			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force

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)

**DATE:** February 2011

Management Services	Management Services (\$ in Millions)			FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 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
FFRDC Support	RO	Mitre Corp:Bedford, MA	4.673	4.870	Nov 2010	3.500	Nov 2011	-		3.500	Continuing	Continuing	TBD
Program Office Support	Various	Various:Various,	7.649	4.656	Nov 2010	3.500	Oct 2011	-		3.500	Continuing	Continuing	TBD
		Subtotal	12.322	9.526		7.000		-		7.000			
Total Pr Years Cost				FY	2011	FY 2 Ba	2012 se	FY 2	2012 CO	FY 2012 Total	Cost To	Total Cost	Target Value of Contract
		Project Cost Totals	137.749	37.273		29.991		-		29.991			

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force								
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)						

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force

APPROPRIATION/BUDGET ACTIVITY

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

BA 7: Operational Systems Development

DATE: February 2011

R-1 ITEM NOMENCLATURE
PE 0208006F: Mission Planning Systems
673858: Mission Planning Systems (MPS)

### Schedule Details

	St	art	E	ind
Events	Quarter	Year	Quarter	Year
Framework 1.4 Development & Test	1	2011	1	2012
Framework 1.4 Software Delivery	1	2012	1	2012
Framework 1.5 Preliminary Design Review	3	2012	3	2012
Integration / F-16 M6+	1	2012	1	2012
Integration / F-16 (SCU 8)	2	2012	2	2012
Integration / F-15 v3.2	2	2013	2	2013
Test / F-15 v3.0	2	2011	2	2011
Test / F-16 M6+	2	2012	2	2012

DATE: February 2011

EXHIBIT K-ZA, KDT&E PTOJECT JUST	ilication. P	2012 All F	Jice						DAIE. Febi	uary 2011	
APPROPRIATION/BUDGET ACTIV 3600: Research, Development, Test BA 7: Operational Systems Develop			OMENCLA 6F: Mission I	<b>TURE</b> Planning Sys	bility Air Forces (MAF) Planning						
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
675302: Mobility Air Forces (MAF) Planning Systems	1.874	6.110	4.256	-	4.256	4.340	8.557	15.309	17.458	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

#### Note

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

#### A. Mission Description and Budget Item Justification

Exhibit P-24 PDT&E Project Justification: DR 2012 Air Force

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 Sprial 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. 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). b. 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. c. MAF 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. RATIONAL FOR OVERSEAS CONTINGENCY OPERATIONS (OCO) FUNDING: In FY11 OCO funds are required to refractor 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 Operation ENDURING FREEDOM (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

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT	
3600: Research, Development, Test & Evaluation, Air Force	PE 0208006F: Mission Planning Systems	675302: Mo	obility Air Forces (MAF) Planning
BA 7: Operational Systems Development		Systems	
accuracy in cumpart of increased numbers of ground forces in OFF O		dran daliyar	v accuracy bacques of the rough

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.

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. Accomplishments/Planned Programs (\$ in Millions)			FY 2012	FY 2012	FY 2012
	FY 2010	FY 2011	Base	OCO	Total
Title: JPADS Development	1.874	6.110	2.824	-	2.824
<b>Description:</b> Continue development of a Joint Precision Airdrop System (JPADS) capability for precise, high altitude delivery of material to forward ground forces.					
FY 2010 Accomplishments: Continued 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).					
FY 2011 Plans: Continue development of JPADS Phase 3 software and re-architect the WindPads component of the Consolidated Airdrop Tool (CAT). Will also utilize requested FY11 OCO funds to re-factor JPADS prototype weather software.					
FY 2012 Base Plans: Complete development of JPADS Phase 3 software and continue development of Phase 4 software.					
FY 2012 OCO Plans: Complete re-factoring of JPADS prototype weather software.					
Title: MAF Increment IV Development	-	-	-	-	-
<b>Description:</b> Continues development (and initial migration) of MPS Increment IV Mission Planning Environments (MPE) for MAF platforms (e.g. HH-60)					
FY 2010 Accomplishments: FY10 development efforts completed in Project 673858					
FY 2011 Plans:					

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<u> </u>							
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development	R-1 ITEM NOMENCLATURE PE 0208006F: Mission Planning System	ns 67	PROJECT 675302: Mobility Air Forces (MAF) Planning Systems				
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	
No development efforts scheduled for this activity due to termination Mission Planning Environment.	of Tanker Airlift Special Mission (TASM)						
FY 2012 Base Plans: Begin software design and development to transition HH-60 off legace	cy mission planning system and on to MPS.						
FY 2012 OCO Plans:							
Title: MAF Modernization		-	-	1.432	-	1.432	
<b>Description:</b> Continues the modernization of Mission Planning Envir	onments (MPE) for MAF platforms						
FY 2010 Accomplishments:  No development activities planned for this activity.							
FY 2011 Plans:							

# FY 2012 Base Plans:

Mission Planning Environment.

Continue the modernization of previously fielded mission planning software environments for the E-3, E-8, and RC-135.

No development efforts scheduled for this activity due to termination of Tanker Airlift Special Mission (TASM)

### FY 2012 OCO Plans:

Accomplishments/Planned Programs Subtotals	1.874	6.110	4.256	- 4.2	256

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

Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force

			FY 2012	FY 2012	FY 2012					Cost To	
<u>Line Item</u>	FY 2010	FY 2011	<b>Base</b>	OCO	<u>Total</u>	FY 2013	FY 2014	FY 2015	FY 2016	<b>Complete</b>	<b>Total Cost</b>
• OPAF: PE 0208006F, Mission	16.589	11.680	9.516	0.000	9.516	8.389	8.542	9.694	9.868	Continuing	Continuing
Planning Systems											

### D. Acquisition Strategy

MPS MAF 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.

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**DATE:** February 2011

Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force	DATE: February 2011		
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: Mo Systems	obility Air Forces (MAF) Planning
E. Performance Metrics  Plagas refer to the Performance Page Rudget Overview Rock for	r information on how Air Force recourses are applied	and how those	recourses are contributing to Air

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 2012 Air Force

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force

BA 7: Operational Systems Development

R-1 ITEM NOMENCLATURE

PE 0208006F: Mission Planning Systems

-CT

**DATE:** February 2011

PROJECT

675302: Mobility Air Forces (MAF) Planning

Systems

Product Development (\$ in Millions)				FY 2	2011	FY 2 Ba			2012 CO	FY 2012 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
Mission Planning Enterprise Contract	C/Various	Various:Various,	-	-		-		-		-	Continuing	Continuing	TBD
Mission Planning Enterprise Contract II	C/Various	Various:Various,	-	-		1.432	Nov 2011	-		1.432	Continuing	Continuing	TBD
JPADS Software Development Contract	C/CPFF	Tybrin:Ft Walton Beach, FL	1.874	6.110	Nov 2010	2.824	Nov 2011	-		2.824	Continuing	Continuing	TBD
		Subtotal	1.874	6.110		4.256		-		4.256			

Support (\$ in Millions)				FY 2	2011	_	2012 ise		2012 CO	FY 2012 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	-	-		-		-		-	0.000	0.000	0.000

#### Remarks

Technical support cost are programmed in project 673858

Test and Evaluation (\$	in Millions	)		FY	2011		2012 se		2012 CO	FY 2012 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	-	-		-		-		-	0.000	0.000	0.000

#### Remarks

Government test and certification support cost are programmed in project 673858.

Management Services (\$ in Millions)					2011	FY 2 Ba		FY 2		FY 2012 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	-	-		-		-		-	0.000	0.000	0.000

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Exhibit R-3, RDT&E Pr	oject Cost	Analysis: PB 2012	Air Force							DAT	E: Februar	y 2011	
APPROPRIATION/BUD 3600: Research, Develo BA 7: Operational Syste	orce		R-1 ITEM NOMENCLATURE PE 0208006F: Mission Planning Systems 675302: I Systems					2: Mobility	T Mobility Air Forces (MAF) Planning				
Management Services (\$ in Millions)					FY 2011		2012 ase	FY 2012 OCO		FY 2012 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
Remarks Managment and other prog	ram support co	sts are programmed in pr	oject 673858										
			Total Prior Years			FY	2012	FY 20	12	FY 2012	Cost To		Target Value of

Base

4.256

осо

Total

4.256

Complete | Total Cost

Contract

FY 2011

6.110

Remarks

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Cost

1.874

**Project Cost Totals** 

Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force	DATE: February 2011				
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			

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force

APPROPRIATION/BUDGET ACTIVITY

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

BA 7: Operational Systems Development

DATE: February 2011

R-1 ITEM NOMENCLATURE
PE 0208006F: Mission Planning Systems

675302: Mobility Air Forces (MAF) Planning
Systems

### Schedule Details

	St	art	E	nd
Events	Quarter	Year	Quarter	Year
E-3 v1.0 Fielding	3	2011	3	2011
E-3 v2.0 Fielding	3	2012	3	2012
E-3 v3.0 Fielding	4	2013	4	2013
E-8 v1.0 Fielding	2	2012	2	2012
E-8 v2.0 Fielding	3	2012	3	2012
RC-135 Spiral 2.2 Fielding	2	2011	2	2011
RC-135 Spiral 2.3 Fielding	2	2012	2	2012
CAT v3.0 Fielding	4	2012	4	2012
E-8 v1.0 Fielding (1)	2	2012	3	2012

Exhibit R-2A, RDT&E Project Just	ification: PE	3 2012 Air Fo	orce						DATE: February 2011			
APPROPRIATION/BUDGET ACTIV 3600: Research, Development, Test BA 7: Operational Systems Develop		OMENCLA 6F: Mission I	<b>TURE</b> Planning Sys		PROJECT 675380: Co Systems	mbat Air For	ces (CAF) F					
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost	
675380: Combat Air Forces (CAF) Planning Systems	-	40.172	35.671	-	35.671	37.605	36.326	40.305	37.308	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). 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, and F-22A 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 IV Development This efforts continues update-development activities for 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). In addition, it also upgrades several Common Components that are utilized on a variety of CAF platforms.
- b. 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.

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. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: Increment IV CAF Development	-	8.802	13.375	-	13.375
<b>Description:</b> Continues development of MPS Increment IV Mission Planning Environments (MPE) for CAF platforms (e.g. F-15, F-16, F-22, B-1B)					

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force			D	ATE: Febru	ary 2011					
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development	R-1 ITEM NOMENCLATURE PE 0208006F: Mission Planning System	s 67	ROJECT 5380: Comi stems	bat Air Forc	es (CAF) P					
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO					
FY 2010 Accomplishments:										
FY 2011 Plans: Complete development and fielding activities for B-1B, F-22A, and A-1	0 Mission Planning Environment.									
FY 2012 Base Plans: Complete development of the unique planning component portion of the for the A-10 and F-22A platforms.	ne Mission Planning Environment (MPE)									
FY 2012 OCO Plans:										
Title: CAF Modernization		-	31.370	22.296	-	22.296				
<b>Description:</b> Continues the modernization of previously fielded Missis enable efficient use of new and improved capabilities being developed (OFPs) of CAF platforms.										
FY 2010 Accomplishments:										
FY 2011 Plans: Continues modernization of previously fielded mission planning software F-22A. Includes design, code integration, and documentation of software for units that will receive the additional functional capabilities being de Operational Flight Programs (OFPs).	rare components. Will also support training									
FY 2012 Base Plans: Continues the modernization of previously fielded mission planning so F-15, F-16, and F-22A. Future funding will incorporate changes to the Programs as the warfighter transitions to the Joint Mission Planning S and Air Mobility Command (AMC) supplies functional and performance relative to each particular platform mission planning requirements. The specific UPC improvements based upon fielded problems, developer of Operational testing as agreed to by HQ ACC and AMC. As part of the interoperate with the baseline JMPS Framework, PGMPS, Weapons I newly identified SDB-II capability.	requirements by the Operational Flight ystem. Air Combat Command (ACC) requirements that must be implemented is will include the implementation of evaluations, and Developmental and modernization effort MPE software shall									
FY 2012 OCO Plans:										

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force			<b>DATE:</b> February 2011
ADDRODDIATION/DUDGET ACTIVITY	D 4 ITEM NOMENCI ATLIDE	DDO IECT	

APPROPRIATION/BUDGET ACTIVITY R-1 ITEM NOMENCLATURE PROJECT

3600: Research, Development, Test & Evaluation, Air Force PE 0208006F: Mission Planning Systems 675380: Combat Air Forces (CAF) Planning

BA 7: Operational Systems Development **Systems** 

	B. Accomplishments/Planned Programs (\$ in Millions)			FY 2012	FY 2012	FY 2012
		FY 2010	FY 2011	Base	oco	Total
Ī	Accomplishments/Planned Programs Subtotals	-	40.172	35.671	-	35.671

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

			FY 2012	FY 2012	FY 2012					Cost To	
<u>Line Item</u>	FY 2010	FY 2011	<b>Base</b>	OCO	<u>Total</u>	FY 2013	FY 2014	FY 2015	FY 2016	Complete	<b>Total Cost</b>
• OPAF: <i>PE 0208006F, Mission</i>	11.424	9.426	9.013	0.000	9.013	8.718	8.878	10.030	10.158	Continuing	Continuing
Planning Systems											

#### 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 2012 Air Force

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

**DATE:** February 2011

Systems

Product Development (	Product Development (\$ in Millions)						2012 se	FY 2	2012 CO	FY 2012 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
Mission Planning Enterprise Contract II	C/Various	Various:Various,	-	30.786	Nov 2010	22.296	Nov 2011	-		22.296	Continuing	Continuing	TBD
MPS Modernization	C/Various	Various:Various,	-	9.386	Nov 2010	13.375	Nov 2011	-		13.375	Continuing	Continuing	TBD
	Subtotal -					35.671		-		35.671			

Support (\$ in Millions)				FY	2011		2012 ise		2012 CO	FY 2012 Total			
	Contract Method	Performing	Total Prior Years		Award		Award		Award		Cost To		Target Value of
Cost Category Item	& Type	Activity & Location	Cost	Cost	Date	Cost	Date	Cost	Date	Cost	Complete	Total Cost	Contract
		Subtotal	-	-		-		-		-	0.000	0.000	0.000

#### Remarks

Technical support cost are programmed in project 673858

Test and Evaluation (\$ i	in Millions	)		FY	2011		2012 ise		2012 CO	FY 2012 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	-	-		-		-		-	0.000	0.000	0.000

#### Remarks

Test and Evaluation support cost are programmed in project 673858

Management Services (	\$ in Millio	ns)		FY	2011		2012 ise	FY 2	-	FY 2012 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	-	-		-		-		-	0.000	0.000	0.000

#### Remarks

Management and other program support cost are programmed in project 673858

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force			<b>DATE:</b> Februar	y 2011	
	R-1 ITEM NOMENCLATURE PE 0208006F: Mission Planning Systems	PROJECT 675380: Co Systems	ombat Air Forces	(CAF) Pla	nning

То	otal Prior									Target
	Years Cost	FY 2	2011	FY 2012 Base		2012 CO	FY 2012 Total	Cost To Complete	Total Cost	Value of
Project Cost Totals	-	40.172		35.671	-		35.671			

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force							
R-1 ITEM NOMENCLATURE PE 0208006F: Mission Planning Systems	PROJECT 675380: Combat Air Forces (CAF) Plannir Systems						

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force

APPROPRIATION/BUDGET ACTIVITY

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

BA 7: Operational Systems Development

DATE: February 2011

R-1 ITEM NOMENCLATURE
PE 0208006F: Mission Planning Systems

675380: Combat Air Forces (CAF) Planning
Systems

### Schedule Details

	St	tart	End		
Events	Quarter	Year	Quarter	Year	
F-15 v2.1 Fielding	2	2011	2	2011	
F-15 v3.0 Fielding	2	2012	2	2012	
F-15 v3.1 Fielding	4	2012	4	2012	
F-16 Blk 30 SCU 7 Fielding	1	2011	1	2011	
F-16 Blk 40/50 M5.1 Fielding	2	2010	2	2010	
F-16 Blk 40/50 M6.1 Fielding	4	2012	4	2012	
F-16 Blk 40/50 M6.2 Fielding	2	2013	2	2013	
F-22 v11.0 Fielding	1	2011	1	2011	
F-22 v11.1 Fielding	4	2011	4	2011	
F-22 v11.2 Fielding	2	2012	2	2012	
F-22 v12.0 Fielding	4	2013	4	2013	
A-10 Suite 7A Fielding	3	2011	3	2011	
A-10 Suite 7B Fielding	4	2012	4	2012	
A-10 Suite 8 Fielding	4	2013	4	2013	
B-1 Rel 4.0 Fielding	1	2011	1	2011	
3-1 Rel 6 Fielding	3	2012	3	2012	
3-1 Rel 7 Fielding	2	2013	2	2013	

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