

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2008
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BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0208006F Mission Planning Systems
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Cost (\$ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	139.217	104.575	97.560	98.574	99.261	101.224	101.635	Continuing	TBD
3858 Mission Planning Systems (MPS)	139.217	104.575	97.560	98.574	99.261	101.224	101.635	Continuing	TBD

FY2007 funding total includes \$13.3M in GWOT supplemental.

(U) 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). JMPS will enable the mission planning cycle to be compressed 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 JMPS 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-15, F-22A, KC-10, KC-135, RC-135, HH-60, and their associated weapons (e.g. Small Diameter Bomb (SDB), Joint Direct Attack Munitions (JDAM), Joint Stand Off Weapon (JSOW), Wind Corrected Munitions Dispenser (WCMD), Joint Air-to-Surface, Standoff Munitions (JASSM), etc...) and airdrop payloads. In addition, basic JMPS 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. Additionally, elements of mission planning will be utilized to continue development of a Joint Precision Airdrop System (JPADS) in conjunction with the Army. JMPS will significantly benefit 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.

JMPS uses an evolutionary acquisition approach, which emphasizes spiral development and the use of Increments (increment content is described below) to provide capabilities to individual AF platforms. Additionally, the JMPS architecture enables common components to be utilized by multiple service platforms and weapons systems where appropriate, thereby reducing duplicative software development efforts and increasing interoperability between services. Furthermore, JMPS is developed using a net centric strategy. The JMPS framework and common components 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. Mission Planning increments and modernization efforts are as follows:

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- a. Increment II - completed the migration of the F-15 from the legacy Unix-MPS system with the fielding of the F-15 Suite 5 Mission Planning Environment (MPE) in November 2007. It also provided an initial JMPS product for the RC-135.
- b. Increment III - continues the initial migration of additional aircraft platforms (F-22A, F-16, B-1B, A-10, and RC-135) and weapons (e.g. JASSM) to JMPS. 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. Additionally, engineering studies will be conducted to plan and support the migration of future platforms to JMPS.
- c. Increment IV - continues the JMPS migration effort by migrating Tanker Airlift Special Mission (TASM) aircraft [e.g. C-5, C-17, C-130, KC-10, KC-135, E-3, E-8], Mobility Air Forces (MAF) centralized planning systems, and the HH-60. It also upgrades the framework and several Common Components capabilities (e.g. Enhanced Air Refueling, Precision Guided Munitions Planning Software (PGMPS)). In addition, Increment IV updates platforms that previously transitioned to JMPS (F-15, F-16, A-10, B-1B, and F-22A) to enable use of new capabilities inherent in aircraft Operational Flight Programs (OFPs). It will also continue to develop new unique platform capabilities while also conducting engineering studies to plan and support future MPS modernization efforts.
- d. MPS Modernization - will develop new and improved mission planning capabilities for migrated platforms. It will also complete a variety of studies and analyses, including evaluating new Information Technology (IT) infrastructure technologies, in support of future system upgrades. In addition, the MPS modernization program will meet individual platform OFP requirements as specified by the Air Force. It will also develop and implement necessary enhancements to existing legacy systems to allow them to function effectively until they are replaced by JMPS.

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.

(U) B. Program Change Summary (\$ in Millions)

	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
(U) Previous President's Budget	129.259	105.371	99.028
(U) Current PBR/President's Budget	139.217	104.575	97.560
(U) Total Adjustments	9.958		
(U) Congressional Program Reductions		-0.129	
Congressional Rescissions		-0.667	
Congressional Increases	13.300		
Reprogrammings			
SBIR/STTR Transfer	-3.342		

(U) Significant Program Changes:

FY2007 funding total includes \$13.3M in GWOT funds supplemental for Airdrop/Joint Precision Airdrop System (JPADS)

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Cost (\$ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total	
3858 Mission Planning Systems (MPS)	139.217	104.575	97.560	98.574	99.261	101.224	101.635	Continuing	TBD	
Quantity of RDT&E Articles	0	0	0	0	0	0	0			

(U) A. Mission Description and Budget Item Justification

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b. Increment III - continues the initial migration of additional aircraft platforms (F-22A, F-16, B-1B, A-10, and RC-135) and weapons (e.g. JASSM) to JMPS. 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. Additionally, engineering studies will be conducted to plan and support the migration of future platforms to JMPS.

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d. MPS Modernization - will develop new and improved mission planning capabilities for migrated platforms. It will also complete a variety of studies and analyses, including evaluating new Information Technology (IT) infrastructure technologies, in support of future system upgrades. In addition, the MPS modernization program will meet individual platform OFP requirements as specified by the Air Force. It will also develop and implement necessary enhancements to existing legacy systems to allow them to function effectively until they are replaced by JMPS.

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<u>(U) B. Accomplishments/Planned Program (\$ in Millions)</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
(U) Increment III - Continues the migration of mission planning capability to JMPS	72.122	24.815	4.393
(U) Increment III - Test, Training, and Certification	5.790	2.165	0.303
(U) Increment III - FFRDC (Mitre)	3.788	1.770	0.214
(U) Increment III - Program Office Support	7.155	3.119	0.428
(U) Increment IV - Continues the migration of Mission Planning capability to JMPS	30.093	56.248	61.324
(U) Increment IV - Test, Training, and Certification	2.411	5.051	8.539
(U) Increment IV - FFRDC (Mitre)	1.578	4.130	6.038
(U) Increment IV - Program Office Support	2.980	7.277	11.580
(U) MPS Modernization			4.741
(U) JPADS GWOT	13.300		
(U) Total Cost	139.217	104.575	97.560

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

	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>Cost to</u>	<u>Total Cost</u>
	<u>Actual</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Complete</u>	
(U) Other Appn									
(U) OPAF PE 0208006F (Other Procurement Air Force, WSC 833040, Theater Air Control System Improvement)	28.855	16.870	24.902	32.285	25.720	25.267	23.896	Continuing	TBD

(U) **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.

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Exhibit R-3, RDT&E Project Cost Analysis

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(U) Cost Categories (Tailor to WBS, or System/Item Requirements) (\$ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) <u>Product Development</u>												
Mission Planning Enterprise Contract	C/Various	Various	90.066	89.102	Nov-06	67.172	Nov-07	55.372	Nov-08	Continuing	TBD	TBD
Systems Engineering and Integration	C/Various	Various	34.494	13.810	Nov-06	13.890	Nov-07	9.845	Nov-08	Continuing	TBD	TBD
MPS Modernization	C/Various	Various						4.741	Nov-08		4.741	
JPADS GWOT	C/Various	Various	13.300	13.300	Jan-08					Continuing	TBD	
Subtotal Product Development			137.860	116.212		81.062		69.958		Continuing	TBD	TBD
Remarks:												
(U) <u>Support</u>												
Software Engineering Institute (SEI)	C/T&M	Pittsburgh, PA	0.957	0.478	Nov-06	0.325	Nov-07	0.456	Nov-08	Continuing	TBD	TBD
Tecolote	C/T&M	Bedford, MA	2.136	0.756	Nov-06	0.757	Nov-07	0.787	Nov-08	Continuing	TBD	TBD
Subtotal Support			3.093	1.234		1.082		1.243		Continuing	TBD	TBD
Remarks:												
(U) <u>Test & Evaluation</u>												
46TW	PO	Eglin AFB, FL	16.831	6.188	Nov-06	5.738	Nov-07	7.114	Nov-08	Continuing	TBD	TBD
JITC	FFP/CPAF	Indian Head, MO		0.030	Jan-07	0.055	Jan-08	0.059	Jan-09	Continuing	TBD	TBD
Type I Training	FPAF	Hill AFB, UT	1.208	1.290	Nov-06	1.223	Nov-07	1.669	Nov-08	Continuing	TBD	TBD
Subtotal Test & Evaluation			18.039	7.508		7.016		8.842		Continuing	TBD	TBD
Remarks:												
(U) <u>Management</u>												
FFRDC (MITRE)	SS/T&M	Bedford, MA	21.880	5.366	Nov-06	5.900	Nov-07	6.252	Nov-08	Continuing	TBD	TBD
Program Office Support	C/T&M	Various	30.048	8.897	Nov-06	9.515	Nov-07	11.265	Nov-08	Continuing	TBD	TBD
Subtotal Management			51.928	14.263		15.415		17.517		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			210.920	139.217		104.575		97.560		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile

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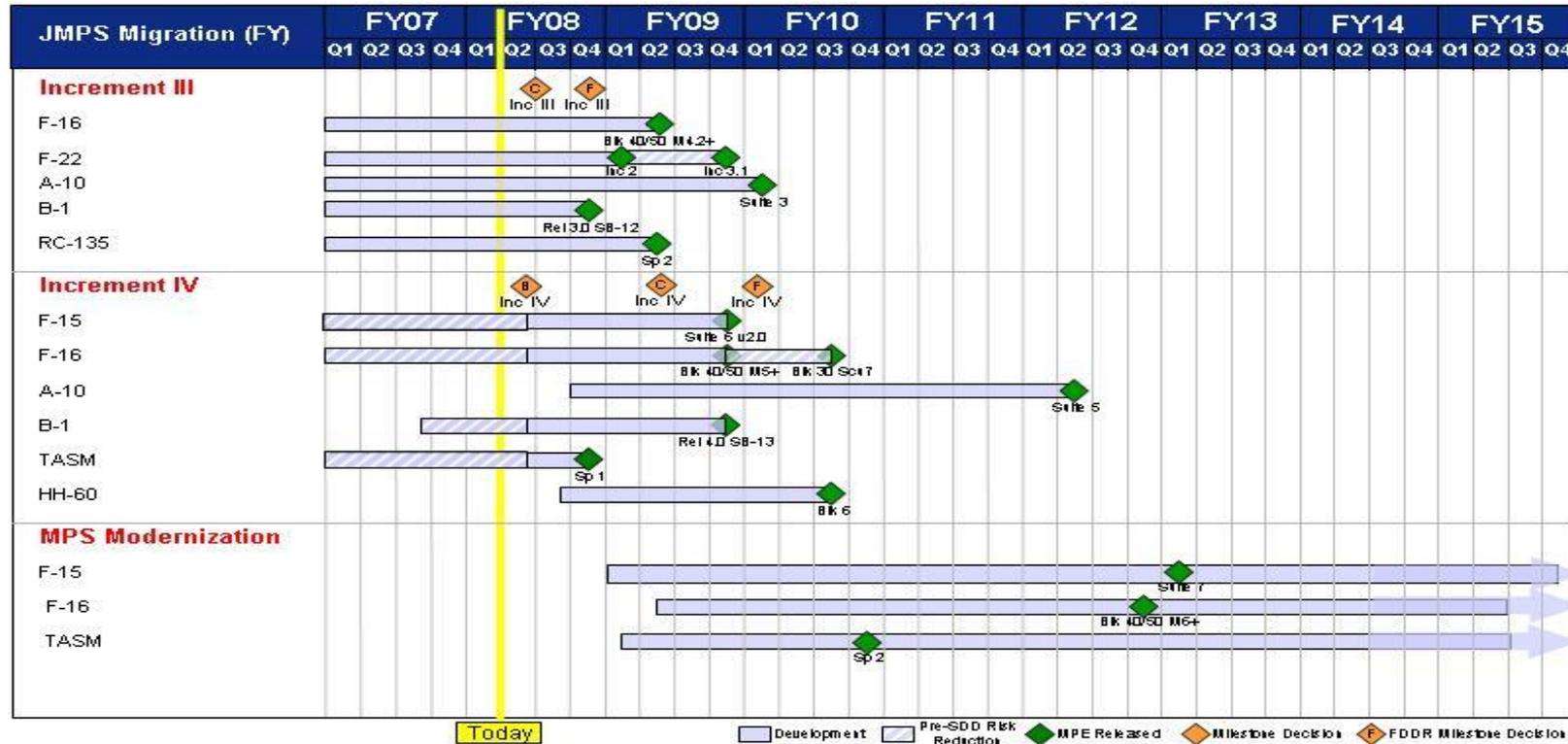


JMPS Migration Plan



Delivering what we promised when we promised

War-winning Capabilities... On Time, On Cost



as of: 9 Jan 2008

Integrity - Service - Excellence

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Exhibit R-4 (PE 0208006F)

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Exhibit R-4a, RDT&E Schedule Detail	DATE February 2008
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	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
(U) Schedule Profile			
(U) F-15A-E Suite 5 Fielding	3Q		
(U) FDDR for Increment II	3Q		
(U) A-10 Suite 3 Fielding			4Q
(U) F-16 (Block 40, M4.2+ and Block 50, M4.2+) MPE Release			2Q
(U) B-1 SB-12 MPE Release		4Q	
(U) Milestone C for Increment III		3Q	
(U) Milestone B for Increment IV		2Q	
(U) F-15 Suite 6 MPE Release			4Q
(U) TASM Spiral I MPE Release		4Q	
(U) Milestone C for Increment IV			2Q