

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)								DATE February 2002		
BUDGET ACTIVITY 07 - Operational System Development				PE NUMBER AND TITLE 0208006F Mission Planning Systems				PROJECT 3858		
COST (\$ in Thousands)		FY 2001 Actual	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	Cost to Complete	Total Cost
3858	Air Force Mission Support System (AFMSS)	19,589	17,887	17,002	73,841	146,687	159,620	265,472	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0
<p>(U) <u>A. Mission Description</u></p> <p>The Mission Planning System program was established in 1990 to consolidate mission planning system development efforts into a single unit-level mission planning system. This program maintains and preserves combat capability on existing legacy planning systems while migrating into a USAF wide standard mission planning system known as the Air Force Mission Support System (AFMSS). Integrating military and commercial software on Commercial-Off-The-Shelf (COTS) hardware, AFMSS encompasses evolutionary software and hardware development in an open systems architecture. AFMSS today consists of the Mission Planning System (MPS), a UNIX-based system; the Portable Flight Planning Software (PFPS), a personal computer (PC)-based system; and the Joint Mission Planning System (JMPS), which is the next generation PC-based system.</p> <p>The MPS provides comprehensive mission planning tools to conduct missions ranging from day-to-day training, peace time operations/exercises to complex operations supporting conventional and nuclear armed conflict. The MPS currently or will support the following aircraft and associated weapons: B-1, B-2, B-52, F-15, F-16, F-117, F-22, U-2, AGM-130, AGM-142, JDAM, JSOW, WCMD, ABL, JASSM, MALD, Global Hawk, and Predator. Platforms use tailored software called Aircraft/Weapon/Electronics (A/W/E) that integrate with the MPS core software to specialize the software for their mission.</p> <p>The PFPS provides flight planning tools that support day-to-day training, peace time operations/exercises, and conventional armed conflict. The PFPS design is based on single user PCs using Windows as its interface. The PFPS currently or will support the following aircraft: F-16, MC-130, EC-130, HC-130H/N/P, AC-130, E-3, E-8, C-130E/H/J, LC-130, WC-130, C-27, C-17, E-4, T-38, C-141, RC-135, KC-10, KC-135R/E, C-5, C-9, A-10, MH-53, MH-47, AH/MH-6J, and MH/HH-60.</p> <p>The JMPS is a continuation effort to move the AFMSS MPS and PFPS and the Navy's Tactical Automated Mission Planning System (TAMPS) to the Global Command and Control System (GCCS). The JMPS will provide a mission planning system that is scaleable, extensible, and configurable to meet the full range of mission planning needs from basic flight planning to planning precision guided munitions on low observable aircraft. The JMPS design uses an open architecture allowing a plug-and-play approach for additional capabilities to be added to the system. The JMPS will meet interoperability requirements through compliance with the Defense Information Infrastructure and Common Operating Environment (DII/COE). The JMPS will support all Air Force/Navy/Army weapons and aircraft.</p>										
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BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
07 - Operational System Development	0208006F Mission Planning Systems	3858
(U) <u>A. Mission Description Continued</u>		
(U) <u>FY 2001 (\$ in Thousands)</u>		
(U) \$331	A/W/E development/support/integration for the platforms listed above	
(U) \$14,929	AFMSS development effort	
(U) \$3,339	Begin AFMSS (PC-based) Combat Capabilities, to include Global Positioning System (GPS) crypto key, Global Air Traffic Management (GATM), PGM migration	
(U) \$990	Responsible Test Organization (RTO) support	
(U) \$19,589	Total	
(U) <u>FY 2002 (\$ in Thousands)</u>		
(U) \$344	Continue A/W/E development/support/integration for the platforms listed above	
(U) \$6,158	Continue AFMSS development effort (including but not limited to JMPS development and MPS enhancements)	
(U) \$8,870	Continue AFMSS (PC-based) Combat Capabilities, which could include but is not limited to GPS crypto key, GATM, PGM migration	
(U) \$1,015	Continue RTO support	
(U) \$1,500	Development/integration of Powerscene (Mission Rehearsal) into the Air Force Mission Support System (Congressional add)	
(U) \$17,887	Total	
(U) <u>FY 2003 (\$ in Thousands)</u>		
(U) \$351	Continue Aircraft Weapons and Electronics development/support/integration for the platforms listed above	
(U) \$5,929	Continue AFMSS development effort (including but not limited to JMPS development and MPS enhancements)	
(U) \$9,682	Continue AFMSS (PC-based) Combat Capabilities, which could include but is not limited to GPS crypto key, GATM, PGM migration, Conventional Weapons Planning, Automated Target Data Transfer, Airdrop Planning, Auto Routing, Low Observable Planning, Computer Based Training (CBT), Single Integrated Operational Plan (SIOP), Vertical Profile, Weather Planning, Sensor Prediction, Mission Rehearsal, Web Browsing, Electronic Warfare (EW) Planning, and System Security	
(U) \$1,040	Continue RTO support	
(U) \$17,002	Total	
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BUDGET ACTIVITY				PE NUMBER AND TITLE			PROJECT		
07 - Operational System Development				0208006F Mission Planning Systems			3858		
(U) <u>B. Budget Activity Justification</u>									
Mission Planning Systems is in budget activity 7, Operational System Development, because the program currently supports deployed AFMSS systems, which include transportable, non-deployable, and portable laptop workstations. AFMSS MPS C2.0, C2.1, C2.2, and PFPS 3.0, 3.1, and 3.1.1 are operationally fielded to the Combat Air Forces. PFPS 3.2, 3.3 (SOF only), and 3.4 updates will be released in FY02. MPS C2.2c software has been delivered for integration into platforms with releases staggered over FY01 and FY02. MPS C2.2d is under development with delivery scheduled in FY02. JMPS v1.0 began development in Jun 99. The first four of six JMPS Beta releases have been completed and are being evaluated by the Air Force.									
(U) <u>C. Program Change Summary (\$ in Thousands)</u>									
				<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>		<u>Total Cost</u>	
(U)	Previous President's Budget			20,755	16,904	17,154		TBD	
(U)	Appropriated Value			20,755	18,404				
(U)	Adjustments to Appropriated Value								
	a. Congressional/General Reductions			-190	-180				
	b. Small Business Innovative Research			-650	-337				
	c. Omnibus or Other Above Threshold Reprogram								
	d. Below Threshold Reprogram			-326					
	e. Rescissions								
(U)	Adjustments to Budget Years Since FY 2002 PBR					-152			
(U)	Current Budget Submit/FY 2003 PBR			19,589	17,887	17,002		TBD	
(U) <u>Significant Program Changes:</u>									
(U) <u>D. Other Program Funding Summary (\$ in Thousands)</u>									
		<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</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)	Other Procurement, AF WSC 833040, Theater Air Control System Improvement (TACSI)	12,800	8,921	13,440	14,218	14,493	15,483	16,068	TBD
(U)	Other Procurement, AF, WSC 86190A, Initial Spares	820	790	753	531	380	0	0	TBD
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BUDGET ACTIVITY 07 - Operational System Development				PE NUMBER AND TITLE 0208006F Mission Planning Systems				PROJECT 3858	
(U) D. Other Program Funding Summary (\$ in Thousands)									
	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</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) Operations & Maintenance, AF, 0208006F	32,074	38,887	38,910	38,063	38,411	41,977	40,684	Continuing	TBD
<p>O&M funds for PE 0208006F support the software and hardware maintenance costs of the Air Force Mission Support System (AFMSS) and the Common Mapping Production System. These funds also support the maintenance of the following existing operational systems until replaced by AFMSS: Mission Data Preparation System (MDPS) supports conventional and nuclear mission planning, aircraft/weapons avionics loading, compatibility between evolving B-52H avionics, its weapons systems, and USSTRATCOM. O&M funding supported approximately 240 older systems in FY94. By FY02, a similar amount of funding will support over 2900 AFMSS mission planning systems world-wide.</p> <p>There are no other AFMSS core related RDT&E activities for unit level mission planning in the USAF. Over 50 individual aircraft and weapons programs develop their respective software to be used in conjunction with the AFMSS core software. The aircraft and weapons software is a complimentary, synergistic effort that provides specific aircraft and weapons information and functionality to the core AFMSS software. The combined software gives the warfighter the full spectrum of mission planning and combat capabilities for their aircraft or weapon including interoperability with planned Theater Battle Management (TBM) systems.</p>									
(U) E. Acquisition Strategy									
<p>The Air Force Mission Support System (AFMSS) program is managed within the Combat Air Forces (CAF) Command and Control (C2) Systems Program Office, Electronic Systems Center, Hanscom AFB, Massachusetts. The AFMSS acquisition strategy leverages military and commercial software integrated on Commercial-Off-The-Shelf (COTS) hardware. AFMSS encompasses evolutionary software and hardware development in an open systems architecture. The contractors for the AFMSS projects are British Aerospace Engineering (BAE) Information Dominance Systems, Nashua, NH, for the MPS and C-17, KC-10, C-5, C-9, C-141, E-3, E-8, KC-135E/R A/W/Es; 46TS, Eglin AFB, FL, for the PFPS; and Logicon, San Pedro, CA for JMPS. A/W/E development is also performed in-house (government) by Oklahoma City Air Logistics Center (OC-ALC), Tinker AFB, OK; Warner Robins Air Logistics Center (WR-ALC), Robins AFB, GA; and Ogden Air Logistics Center (OO-ALC), Hill AFB, UT.</p> <p>The JMPS is in the development phase. Development and initial migration activities began in FY99. The current plan is to continue development and migration activities in the FY01-FY03 time frame while individual weapon systems transition with planned Operational Flight Program (OFP) upgrades. The Air Force is a minor player in JMPS Combat 1 which is a follow-on contract with Logicon for development of components. JMPS Combat 1 is primarily Navy unique components necessary to retire the Navy's Tactical Air Mission Planning Systems (TAMPS) in FY04. The Air Force is developing combat capabilities to plug into JMPS Version 1 to provide combat planning capability to Air Force as well as some Navy platforms. Combat capabilities (synonymous with common capabilities) provide mission</p>									
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<p>(U) E. Acquisition Strategy Continued planning functions required by multiple platforms. The Air Force has identified 24 such combat capabilities, grouped into 4 tiers. These requirements have been developed in close cooperation with our Navy and Army JMPS partners. Before a platform can migrate to JMPS, its applicable combat capabilities must be built, along with the platform's unique A/W/E. Acquisition of combat capabilities will be tailored for each combat capability requirement. The JMPS architecture allows for asynchronous development of combat capabilities.</p>																																																																																																																																													
<p>(U) F. Schedule Profile</p> <table border="0" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;"></th> <th colspan="4" style="text-align: center;"><u>FY 2001</u></th> <th colspan="4" style="text-align: center;"><u>FY 2002</u></th> <th colspan="4" style="text-align: center;"><u>FY 2003</u></th> </tr> <tr> <th style="text-align: left;"></th> <th style="text-align: center;">1</th> <th style="text-align: center;">2</th> <th style="text-align: center;">3</th> <th style="text-align: center;">4</th> <th style="text-align: center;">1</th> <th style="text-align: center;">2</th> <th style="text-align: center;">3</th> <th style="text-align: center;">4</th> <th style="text-align: center;">1</th> <th style="text-align: center;">2</th> <th style="text-align: center;">3</th> <th style="text-align: center;">4</th> </tr> </thead> <tbody> <tr> <td>(U) PFPS 3.1.1 Software OT&E</td> <td style="text-align: center;">*</td> <td></td> </tr> <tr> <td>(U) PFPS 3.2 Software OT&E</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;">X</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>(U) PFPS 3.3 Software OT&E</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;">X</td> <td></td> <td></td> <td></td> </tr> <tr> <td>(U) PFPS 3.4 Software OT&E</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;">X</td> <td></td> <td></td> </tr> <tr> <td>(U) MPS C2.2c (w/U-2) OT&E</td> <td style="text-align: center;">*</td> <td></td> </tr> <tr> <td>(U) MPS C2.2d Release</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td style="text-align: center;">X</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>(U) JMPS v1.0 Beta S/W Releases</td> <td></td> <td style="text-align: center;">*</td> <td></td> <td style="text-align: center;">*</td> <td></td> <td style="text-align: center;">X</td> <td style="text-align: center;">X</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>(U) JMPS v1.0 OT&E</td> <td></td> <td style="text-align: center;">X</td> </tr> </tbody> </table> <p>* denotes completed event X denotes planned event</p>													<u>FY 2001</u>				<u>FY 2002</u>				<u>FY 2003</u>					1	2	3	4	1	2	3	4	1	2	3	4	(U) PFPS 3.1.1 Software OT&E	*												(U) PFPS 3.2 Software OT&E						X							(U) PFPS 3.3 Software OT&E									X				(U) PFPS 3.4 Software OT&E										X			(U) MPS C2.2c (w/U-2) OT&E	*												(U) MPS C2.2d Release							X						(U) JMPS v1.0 Beta S/W Releases		*		*		X	X						(U) JMPS v1.0 OT&E												X
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RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)							DATE February 2002				
BUDGET ACTIVITY				PE NUMBER AND TITLE				PROJECT			
07 - Operational System Development				0208006F Mission Planning Systems				3858			
(U) A. Project Cost Breakdown (\$ in Thousands)											
						<u>FY 2001</u>		<u>FY 2002</u>		<u>FY 2003</u>	
(U)	Primary Software Development					13,835		11,220		10,216	
(U)	Aircraft/Weapons/Electronics (A/W/E) Integration Spt.					331		344		351	
(U)	Systems Engineering					2,850		3,638		3,778	
(U)	Program Management					1,484		1,570		1,517	
(U)	Test and Evaluation					990		1,015		1,040	
(U)	Miscellaneous					99		100		100	
(U)	Total					19,589		17,887		17,002	
(U) B. Budget Acquisition History and Planning Information (\$ in Thousands)											
(U) Performing Organizations:											
	<u>Contractor or Government</u>	<u>Contract Method/Type</u>	<u>Award or Obligation</u>	<u>Performing Activity</u>	<u>Project Office</u>	<u>Total Prior to FY 2001</u>	<u>Budget FY 2001</u>	<u>Budget FY 2002</u>	<u>Budget FY 2003</u>	<u>Budget to Complete</u>	<u>Total Program</u>
	<u>Activity</u>	<u>Vehicle</u>	<u>Date</u>	<u>EAC</u>	<u>EAC</u>						
	<u>Product Development Organizations</u>										
	Logicon (JMPS)	CPIF	Jun 99	TBD	TBD	12,375	11,107	4,423	1,340	Continuing	TBD
	BAE Information Dominance Systems (formerly Sanders)	CPAF	Dec 92	TBD	TBD	93,300	0	0	0	Continuing	TBD
	46TS Eglin AFB, FL	Project Order	Dec 98	TBD	TBD	3,030	25	25	25	Continuing	TBD
	A/W/E Integration Activity	Time & Mat'l	Oct 98	TBD	TBD	250	160	205	0	Continuing	TBD
	SPO Misc* (*Prior year total includes past, inactive contracts)					17,967	332	2,113	2,144	Continuing	TBD
	AFMSS Combat Capabilities* (*Parts of this effort may be rolled into the USN's Logicon contract for JMPS shown)	CPAF	Jul 01	TBD	TBD	0	1,905	4,648	7,183	Continuing	TBD
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RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)								DATE February 2002		
BUDGET ACTIVITY				PE NUMBER AND TITLE				PROJECT		
07 - Operational System Development				0208006F Mission Planning Systems				3858		
(U) <u>Performing Organizations Continued:</u>										
<u>Product Development Organizations</u>										
above. Also includes development/integration of Powerscene)										
<u>Support and Management Organizations</u>										
FFRDC			TBD	TBD	19,718	3,560	3,913	3,778	Continuing	TBD
Miscellaneous			TBD	TBD	12,894	1,510	1,545	1,492	Continuing	TBD
<u>Test and Evaluation Organizations</u>										
46TW (Eglin AFB)	Project Order	Oct 98	TBD	TBD	1,440	990	1,015	1,040	Continuing	TBD
(U) <u>Government Furnished Property:</u>										
	<u>Contract</u>									
	<u>Method/Type</u>	<u>Award or</u>								
<u>Item</u>	<u>or Funding</u>	<u>Obligation</u>	<u>Delivery</u>		<u>Total Prior</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget to</u>	<u>Total</u>
<u>Description</u>	<u>Vehicle</u>	<u>Date</u>	<u>Date</u>		<u>to FY 2001</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>Complete</u>	<u>Program</u>
<u>Product Development Property</u>										
N/A										
<u>Support and Management Property</u>										
N/A										
<u>Test and Evaluation Property</u>										
N/A										
					<u>Total Prior</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget to</u>	<u>Total</u>
<u>Subtotals</u>					<u>to FY 2001</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>Complete</u>	<u>Program</u>
Subtotal Product Development					126,922	13,529	11,414	10,692	TBD	TBD
Subtotal Support and Management					32,612	5,070	5,458	5,270	TBD	TBD
Subtotal Test and Evaluation					1,440	990	1,015	1,040	TBD	TBD
Total Project					160,974	19,589	17,887	17,002	TBD	TBD