

**UNCLASSIFIED**

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)									DATE June 2001		
BUDGET ACTIVITY 07 - Operational System Development					PE NUMBER AND TITLE 0208006F Mission Planning Systems					PROJECT 3858	
COST (\$ in Thousands)		FY 2000 Actual	FY 2001 Estimate	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)	17,136	20,565	16,904	17,154	17,499	17,862	17,900	18,051	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0	0

FY03-FY07 budget numbers do not reflect the DoD strategic review results.

(U) **A. Mission Description**  
 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 which will migrate 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.

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 design is centered around an open architecture, using standard protocols and interfaces, COTS hardware and software. 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.

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. The user interface is Windows 95 and Windows NT. The PFPS currently or will support the following aircrafts: 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.

The JMPS is a continuation effort of the AFMSS MPS and PFPS directed at merging the AFMSS and the Navy's Tactical Automated Mission Planning System (TAMPS), to form a single family of systems achieving Global Command and Control System (GCCS) compatibility through compliance with the Defense Information Infrastructure and Common Operating Environment (DII/COE).

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DATE

June 2001

BUDGET ACTIVITY

**07 - Operational System Development**

PE NUMBER AND TITLE

**0208006F Mission Planning Systems**

PROJECT

**3858****(U) A. Mission Description Continued****(U) FY 2000 (\$ in Thousands)**

(U) \$1,258 Continue PFPS software development support  
 (U) \$671 Continue A/W/E development /support/integration for the platforms listed above  
 (U) \$13,167 Continue AFMSS development effort  
 (U) \$720 Continue Responsible Test Organization (RTO) support  
 (U) \$1,320 Congressional add for the Joint Modeling and Simulation System (JMASS) program  
 (U) \$17,136 Total

**(U) FY 2001 (\$ in Thousands)**

(U) \$331 Continue A/W/E development/support/integration for the platforms listed above  
 (U) \$14,929 Continue AFMSS development effort  
 (U) \$4,315 Begin AFMSS (PC-based) Combat Capabilities, which could include but is not limited to GPS crypto key, GATM, PGM migration  
 (U) \$990 Continue Responsible Test Organization (RTO) support  
 (U) \$20,565 Total

The following net transactions are not reflected in the FY01 program total: BTR=-326K and SBIR=-650K. These transactions are not reflected in other sections of the R-docs where an FY01 total is shown.

**(U) FY 2002 (\$ in Thousands)**

(U) \$344 Continue A/W/E development/support/integration for the platforms listed above  
 (U) \$9,664 Continue AFMSS development effort (including but not limited to JMPS as well as MPS and/or PFPS enhancements)  
 (U) \$5,881 Continue AFMSS (PC-based) Combat Capabilities, which could include but is not limited to GPS crypto key, GATM, PGM migration  
 (U) \$1,015 Continue Responsible Test Organization (RTO) support  
 (U) \$16,904 Total

**(U) B. Budget Activity Justification**

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 and 3.3 (SOF only) updates released in FY01 and 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. JMPS v1.0 began development in Jun 99. The first three of six JMPS Beta releases have been completed and are being evaluated by the Air Force.

Project 3858

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Exhibit R-2 (PE 0208006F)

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)							DATE				
							June 2001				
BUDGET ACTIVITY				PE NUMBER AND TITLE			PROJECT				
07 - Operational System Development				0208006F Mission Planning Systems			3858				
<b>(U) C. Program Change Summary (\$ in Thousands)</b>											
				<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>		<u>Total Cost</u>			
(U)	Previous President's Budget (FY 2001 PBR)			16,764	20,755	16,976		TBD			
(U)	Appropriated Value			18,264	20,755						
(U)	Adjustments to Appropriated Value										
	a. Congressional/General Reductions			-81							
	b. Small Business Innovative Research			-501							
	c. Omnibus or Other Above Threshold Reprogram			-475							
	d. Below Threshold Reprogram										
	e. Rescissions			-71	-190						
(U)	Adjustments to Budget Years Since FY 2001 PBR					-72					
(U)	Current Budget Submit/FY 2002 PBR			17,136	20,565	16,904		TBD			
(U)	<u>Significant Program Changes:</u>										
<b>(U) D. Other Program Funding Summary (\$ in Thousands)</b>											
		<u>FY 2000</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>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>Estimate</u>	<u>Complete</u>	
(U)	Other Procurement, AF WSC 833040, Theater Air Control System Improvement (TACSI)	12,399	12,830	15,057	13,596	14,360	14,679	15,712	16,341	Continuing	TBD
(U)	Other Procurement, AF, WSC 86190A, Initial Spares	1,106	820	790	562	533	383	0	0	Continuing	TBD
(U)	Operations & Maintenance, AF, 0208006F	29,152	33,362	37,207	32,991	34,855	34,874	36,687	37,255	Continuing	TBD
	<p>O&amp;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 Support System II (MSS IIA) supports existing combat capability for the F-15 and F-16 aircraft mission planning (F/RF-4 and F-111 are now retired); Mission Data Preparation System (MDPS) supports conventional and nuclear mission planning, aircraft/weapons avionics loading, compatibility between evolving B-1B, B-52H avionics, their weapons systems, and USSTRATCOM. O&amp;M funding supported approximately 240 older systems in FY94. By FY02, a similar amount of funding will support over 2900 AFMSS</p>										
Project 3858			Page 3 of 7 Pages				Exhibit R-2 (PE 0208006F)				

<b>RDT&amp;E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)</b>	DATE <b>June 2001</b>
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BUDGET ACTIVITY <b>07 - Operational System Development</b>	PE NUMBER AND TITLE <b>0208006F Mission Planning Systems</b>	PROJECT <b>3858</b>
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**(U) D. Other Program Funding Summary (\$ in Thousands)**

	<u>FY 2000</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>Cost to</u>	<u>Total Cost</u>
	<u>Actual</u>	<u>Estimate</u>	<u>Complete</u>							

mission planning systems world-wide.

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.

**(U) E. Acquisition Strategy**

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.

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 FY00-FY02 time frame while individual weapon systems transition with planned Operational Flight Program (OFP) upgrades.

**(U) F. Schedule Profile**

	<u>FY 2000</u>			<u>FY 2001</u>			<u>FY 2002</u>		
	1	2	3	4	1	2	3	4	
(U) PFPS 3.1 Software OT&E		*							
(U) PFPS 3.1.1 Software OT&E					*				
(U) PFPS 3.2 Software OT&E								X	
(U) MPS C2.2c Release				*					
(U) MPS C2.2c (w/U-2) OT&E					*				
(U) MPS C2.2d Release								X	

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BUDGET ACTIVITY <b>07 - Operational System Development</b>					PE NUMBER AND TITLE <b>0208006F Mission Planning Systems</b>					PROJECT <b>3858</b>		
<b>(U) F. Schedule Profile Continued</b>												
		<u>FY 2000</u>				<u>FY 2001</u>				<u>FY 2002</u>		
	1	2	3	4	1	2	3	4	1	2	3	4
(U)	MPS C2.2d (w/F-16 Blk 40/50) OT&E											X
(U)	JMPS v1.0 Beta S/W Releases											X
	* denotes completed event											
	X denotes planned event											

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RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)							DATE June 2001			
BUDGET ACTIVITY 07 - Operational System Development					PE NUMBER AND TITLE 0208006F Mission Planning Systems			PROJECT 3858		
<b>(U) A. Project Cost Breakdown (\$ in Thousands)</b>										
					<u>FY 2000</u>		<u>FY 2001</u>			<u>FY 2002</u>
(U)	Primary Software Development				11,094		14,811			10,244
(U)	Aircraft/Weapons/Electronics (A/W/E) Integration Spt.				200		331			344
(U)	Systems Engineering				2,439		2,850			3,631
(U)	Program Management				2,622		1,484			1,570
(U)	Test and Evaluation				684		990			1,015
(U)	Miscellaneous				97		99			100
(U)	Total				17,136		20,565			16,904
<b>(U) B. Budget Acquisition History and Planning Information (\$ in Thousands)</b>										
<b>(U) Performing Organizations:</b>										
<u>Contractor or Government</u>	<u>Contract Method/Type</u>	<u>Award or Obligation Date</u>	<u>Performing Activity EAC</u>	<u>Project Office EAC</u>	<u>Total Prior to FY 2000</u>	<u>Budget FY 2000</u>	<u>Budget FY 2001</u>	<u>Budget FY 2002</u>	<u>Budget to Complete</u>	<u>Total Program</u>
<u>Product Development Organizations</u>										
Logicon (JMPS)	CPAF	Jun 99	TBD	TBD	0	9,050	11,247	6,070	Continuing	TBD
BAE Information Dominance Systems (formerly Sanders)	CPAF	Dec 92	93,773	93,773	93,201	0	0	0	Continuing	TBD
46TS Eglin AFB, FL	Project Order	Dec 98	TBD	TBD	0	530	0	0	Continuing	TBD
A/W/E Integration Activity	Time & Mat'l	Oct 98	TBD	TBD	0	0	45	0	Continuing	TBD
SPO Misc					4,449	1,758	1,308	2,101	Continuing	TBD
AFMSS Combat Capabilities*	CPAF	Jul 01	TBD	TBD	0	0	1,905	2,517	Continuing	TBD
(* This effort may be rolled into the USN's Logicon contract for JMPS shown above)										

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RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)								DATE		
								June 2001		
BUDGET ACTIVITY				PE NUMBER AND TITLE				PROJECT		
07 - Operational System Development				0208006F Mission Planning Systems				3858		
<b>(U) Performing Organizations Continued:</b>										
<u>Support and Management Organizations</u>										
FFRDC			TBD	TBD	15,480	2,970	3,560	3,631	Continuing	TBD
Miscellaneous			TBD	TBD	9,532	2,108	1,510	1,570	Continuing	TBD
<u>Test and Evaluation Organizations</u>										
46TW (Eglin AFB)	Project Order	Oct 98	TBD	TBD	0	720	990	1,015	Continuing	TBD
<b>(U) Government Furnished Property:</b>										
<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 2000</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</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>to FY 2000</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>Complete</u>	<u>Program</u>
<u>Subtotals</u>										
Subtotal Product Development					97,650	11,338	14,505	10,688	TBD	TBD
Subtotal Support and Management					25,012	5,078	5,070	5,201	TBD	TBD
Subtotal Test and Evaluation					0	720	990	1,015	TBD	TBD
Total Project					122,662	17,136	20,565	16,904	TBD	TBD