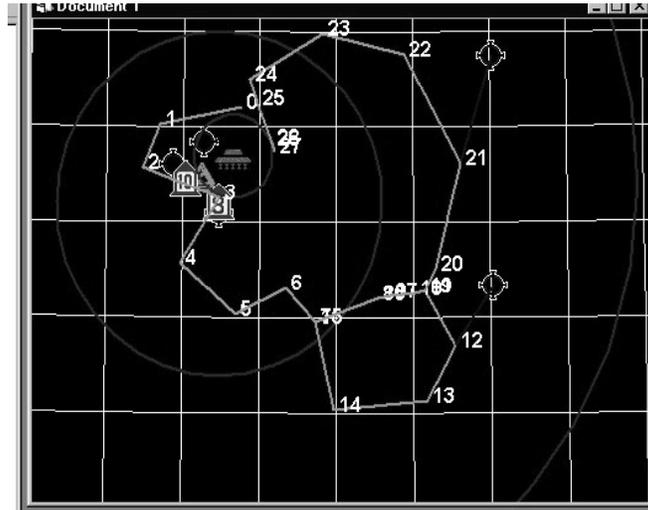


JOINT MISSION PLANNING SYSTEM (JMPS)



AF/Navy ACAT IAC Program

Total Program Cost (TY\$):	\$175M+
Average Unit Cost (TY\$):	\$N/A
Full-rate production:	
Version 1.0:	Incremental (beginning in FY02)
Version 2.0:	Incremental (beginning in FY03)
Version 3.0:	Incremental (beginning in FY04)

Prime Contractor

Logicon

SYSTEM DESCRIPTION & CONTRIBUTION TO JOINT VISION 2010

The Joint Mission Planning System (JMPS) is a cooperative development between the Air Force and the Navy. JMPS provides automated mission planning support for Air Force, Navy and Marine Corps aircraft, weapons, and sensors. JMPS will be a significant command and control enhancement used to provide *information superiority* in support of all four *Joint Vision 2010* concepts: *dominant maneuver, precision engagement, full-dimensional protection, and focused logistics*.

JMPS will provide mission planning capability for support of military aviation operations. It will also provide support for unit-level mission planning for all phases of military flight operations and have the capability to provide necessary mission data for the aircrew. JMPS will support the downloading of data to electronic data transfer devices for transfer to aircraft and weapon systems.

JMPS will be an evolutionary software development program with phased expansions of capability. Version 1.0 will provide basic mission planning. Later versions will provide expanded capabilities to support more complex missions and provide strike/force level planning capabilities. JMPS will comply with the requirements of the Defense Information Infrastructure Common Operating Environment (DII/COE) as applicable to Windows NT, with initial architecture compliance of at least Level 6 and a goal of evolution to compliance at Level 7. Hardware will consist principally of commercial off-the-shelf computers, ranging from laptops to desktop systems, to multi-processor workstations with substantial computing resources.

A JMPS for a specific aircraft type will consist of basic planning tools called the Joint Mission Planning Environment (JMPE) mated with a Unique Planning Component provided by the aircraft program. Aircraft using Version 1.0 are expected to be A-10, E-3, E-4B, E-8, C-5, C-17, C-21, C-27, C-130, C-141, KC-10, KC-135E, KC-135R, RC-135, V-22, KC-130, T45, H-60B/F/H, CH-53, AH-1, CH-46, P-3, EA-6B, and SH-60R.

BACKGROUND INFORMATION

The JMPS program began in 1997, based on an agreement between the Navy and the Air Force. The Services agreed to pursue joint migration of mission planning capabilities from the Air Force Mission Support System (AFMSS) and the Navy's Tactical Automated Mission Planning System (TAMPS) to a system compliant with the DII/COE and compatible with the Global Command and Control System architecture.

A two-phased development effort was initiated in 1998. The first phase was a competitive initial design, migration study, and multi-level security study. Contracts were awarded to GDE (now Marconi) and Logicon in September 1998. A competitive down-select to one framework/integration contractor was made in June 1999. The selected contractor, Logicon, will develop the JMPE framework and deliver the Version 1.0 system in FY01. The framework contractor is also responsible for delivering a generic Unique Planning Component that will be a working prototype able to be modified by independent developers generating aircraft-specific Unique Planning Components.

TEST & EVALUATION ACTIVITY

DOT&E approved a TEMP for the JMPS program in June 1999. Since requirements, implementation schedules, and design details were not fully defined, an update to the TEMP is required within one year.

Operational test and evaluation will consist of combined developmental/operational testing, followed by dedicated operational test and evaluation of each JMPS suite. Each Service's Operational Test Agency will perform operational test and evaluation at their test site, followed by testing at field/fleet sites. Tests will include developing end-to-end mission plans and accuracy/usability analyses. Field/fleet testing will include in-flight verification of JMPS products using test sorties and test crews.

Operational test and evaluation for Version 1.0 is planned for 4QFY01.

TEST & EVALUATION ASSESSMENT

DOT&E has participated in JMPS test planning from the start of the program. The program is progressing in the engineering and manufacturing development phase. Details now emerging on system design and capabilities will allow an updated TEMP and more definitive test plans to be prepared.

It appears that the developers and testers of JMPS are taking into account lessons learned during development of previous mission planning systems (AFMSS and TAMPS). Some areas requiring special attention during development are:

- Involving the users early in development to reduce complexity, extensive training requirements, and difficulty interfacing with other systems and data bases.
- Avoiding differences among Mission Planning Systems for those functions common to all users.
- Preserving simple graphical user interface common to all users.
- Establishing an iterative development process that does not attempt to deliver all capability at once.
- Correcting deficiencies rather than allowing them to accumulate or devising workarounds.
- Incorporating a mission briefing and debriefing capability.
- Providing timely and readable printed products.
- Implementing security controls.
- Establishing effective software support processes.

