

JOINT MISSION PLANNING SYSTEM (JMPS)



The Joint Mission Planning System (JMPS) provides computer tools to aid in planning aircraft missions. It will consist of computer hardware using common core software called the Joint Mission Planning Environment (JMPE), combined with Unique Planning Component (UPC) software that supports the particular aircraft or user. JMPS is intended eventually to support most DoD aircraft, weapon, and sensor assets.

JMPS hardware is expected to range from laptops with minimal computing resources, to desktop systems, to multi-processor workstations with substantial computing resources. The minimum required hardware package will be defined by each individual aircraft program office. JMPS user systems will include both stand-alone configurations and systems connected via multiple networks. JMPS is required to have the capability to update local data bases from remote data sources, disconnect from the network, and continue to support mission planning (i.e., load-and-go). Portable JMPS systems (e.g., laptop) will typically use this capability when deployed to remote locations.

As an evolutionary acquisition, JMPS starts with a baseline capability and grows with the addition of enhancements. Version 1.0 of JMPS, which provides basic mission planning capabilities, is required to have, as a minimum, the capability available in the Air Force Mission Support System (AFMSS) program's Portable Flight Planning Software (PFPS), Version 3.2. The first user of JMPS Version 1.0 will be the B-52H, which will employ JMPS, as PFPS is currently used, to develop basic flight routes for input into UNIX-based AFMSS. AFMSS will then be used to perform weapon delivery planning and prepare data transfer devices for loading data into the aircraft.

The next evolution of JMPS will be JMPS Combat One (JC1), which will provide additional functionality to support Navy carrier-based aircraft and replace the Navy's Tactical Automated Mission Planning System (TAMPS) AN/UYQ-81 (V). JC1 adds the ability to plan precision-guided munition (PGM) deliveries and link weapon plans to aircraft routes. It also provides GPS almanac data, weather data, and crypto key support. JC1 will have the capability to produce data transfer devices (i.e., cut cartridges) for carrier aircraft. Although labeled as a joint program, JMPS is actually being managed as a multi-Service program, with each Service following its own procedures. The program does not have a lead Service.

BACKGROUND INFORMATION

The program began in June 1999 with the development of the JMPS framework, which together with addition of government-furnished software will become Version 1.0. Development of JMPS Version 1.0 is proceeding in a series of six Beta releases, each with added functionality and culminating in the full functionality of a basic mission planning system in 2003. In July 2001, the Navy started development of JC1.

OT&E will consist of combined DT/OT, followed by dedicated OT&E periods for each user. The DT/OT activity includes evaluations by the JMPS Test Team of each Beta release and feedback to the developing contractor. JMPS Beta 1 was released in April 2000, Beta 2 was released in July 2000; and Beta 3 was released in February 2001. AFOTEC conducted a formal Operational Assessment (OA) after the September 2001 release of Beta 4, and OPTEVFOR will evaluate Beta 5 in March 2002. Upon delivery and certification of Version 1.0, AFOTEC will conduct IOT&E using Version 1.0 for B-52H route planning. OPTEVFOR will conduct OPEVAL on JC1 in September 2003. Software development problems have led to stretches in the Version 1.0 schedule compared to original plans, and there are risks of further delays.

TEST & EVALUATION ACTIVITY

During FY01, the principal JMPS T&E activity was DT/OT by the Test Team of Beta release number 3. Problems were documented in a government-integrated data base and, following review by a deficiency review board, were transferred to the contractor for resolution. Beta 4 was released in September 2001 and Beta 5 is currently in development.

AFOTEC conducted an Operational Assessment (OA) of JMPS, based on an OA plan approved by OSD in October 2001, following the release of Beta 4 from October – December 2001. Although Beta 4 has limited functionality, analysis of its capabilities will provide insight into the potential effectiveness of JMPS Version 1.0. DOT&E will be briefed on the results of the OA in February 2002.

TEST & EVALUATION ASSESSMENT

JMPS faces many remaining challenges in developing and integrating software components into a system that can be easily used by aircrew and mission planners to plan combat missions, while meeting DoD requirements for security and interoperability. The program is considered to have moderate to high risk of meeting user expectations for overall performance. Additionally, there are risks of further schedule delays to the program due to late delivery of both Logicon (now Northrop Grumman Information Technology (NGIT)) software and government-furnished software components.

OT&E planning for JMPS Version 1.0 and JC1 is still incomplete. The activities and resources needed to integrate UPCs, obtain necessary certifications, conduct training, and prepare initial planning suites for OT&E need to be defined. The JMPS TEMP (or TEMPs) requires updating, and more definitive OT&E test plans must be prepared prior to dedicated IOT&E (now planned for November 2002).