Teleport

The DoD Teleport System will provide deployed Satellite Communications (SATCOM) users access to Defense Information System Network (DISN) services and will provide cross-banding between different SATCOM systems. The Teleport program was established to satisfy the communications requirements and objectives specified in the DISN Capstone Requirements Document. The DoD Teleport directly supports the DISN Capstone Requirements Document requirements of worldwide coverage and connectivity, interoperability, responsiveness, and technology insertion. The Teleport system will perform its mission from six teleport core facilities, (Northwest, Virginia; Ramstein/Landstuhl, Germany; Lago Patria, Italy; Fort Buckner, Japan; Wahiawa, Hawaii; and Camp Roberts, California), and will be operated by the local operations and maintenance command at each installation or facility.

The Teleport fielding plan uses a spiral acquisition process for three generations of the Teleport System. Generation One Initial Operational Capability (IOC) 1, scheduled for 1QFY04, provides upgraded X-band, C-band, and Ku-band capabilities and capacities at existing Standardized Tactical Entry Point sites. Generation One IOC 2, scheduled for 3QFY04, provides Ultra High Frequency (UHF) capabilities. Generation Two, scheduled for completion during 4QFY05, incorporates Extremely High Frequency (EHF), L-band, and commercial/military Ka-band SATCOM capabilities, as well as High Frequency (HF) radio capability. Generation Three, Full Operational Capability, scheduled for 4QFY10, incorporates advanced Military SATCOM systems, including Advanced EHF and the Advanced Wideband System, into the Teleport design. The Defense Information Systems Agency is the lead agency for system development. The Joint Interoperability Test Command (JITC) is the lead operational test agency (OTA) for this program.

TEST & EVALUATION ACTIVITY

The Test and Evaluation Master Plan (TEMP) was initially written to support the Generation One program initiation at Milestone C. The primary focus of this version of the TEMP was the Operational Assessment (OA) supporting Milestone C and the IOT&E supporting the IOC 1 declaration. A TEMP update was approved July 2003, which supports Generation Two program initiation.

In support of Generation One program initiation, JITC performed an OA at the Northwest Interim Teleport during 2QFY02. The Northwest facility is one of the Standardized Tactical Entry Point sites selected as Engineering Development Model for the Teleport initial testing. An OA for EHF was conducted in 1QFY03 to support a Generation Two Milestone C decision for EHF long-lead items and a Milestone B for the remainder of the Generation Two program. The OA consisted of two major parts, a field demonstration using Marine EHF terminals at Camp Le Jeune, South Carolina, and Fort Bragg, North Carolina, to access DISN services, and observation of operational Navy EHF communications at the Naval Computer and Telecommunications Area Master Station Atlantic Area. Because the Navy was in the process of correcting several problems with the shipboard EHF terminal, the data collection for the OA will continue into the winter of 2003 to verify that these problems have been corrected.

During 4QFY03, JITC and the Service OTAs conducted the IOT&E at the Northwest Teleport facility in Virginia. The deployed users pulling services from the Northwest Teleport included one ship, five Air Force terminals, one Marine Corps terminal, and two terminals at JITC. During the three-week event, the deployed users exchanged five of the six DISN services over X-band, C-band, and Ku-bands, and demonstrated multiple hop, cross-banding and hub-spoke configurations. Availability of operational units was significantly limited by real world operations.
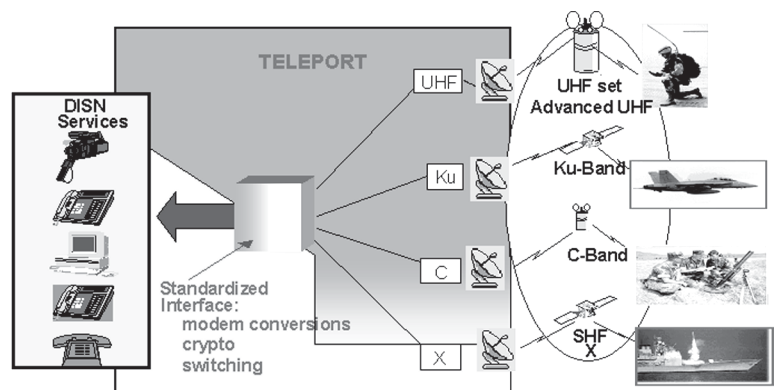
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JITC will conduct a follow-on test and evaluation (FOT&E) in 3QFY04 to support the Generation One IOC 2 decision. There will then be a subsequent FOT&E to support Generation Two IOC in 4QFY05 and a FOT&E to support Generation Three in FY10.

TEST & EVALUATION ASSESSMENT

Generation One IOC 1 Capabilities. In support of IOC1, JITC conducted the IOT&E in conjunction with the Service OTAs. Although several critical operational issues were not fully resolved, the results that were obtained were positive and indicate that the Teleport program is on track toward delivery of an effective and suitable system. Because the program follows an evolutionary strategy for both acquisition and fielding, capabilities will be added and tested in future system increments. The Teleport demonstrated effectiveness in coverage and quality of service and an ability to connect to five of the six DISN services. There were no operational Joint Worldwide Intelligence Systems (JWICS) suites available to test the connectivity into the JWICS, but testers will observe operational connections of these suites through overseas teleports as a follow-up activity. Testers also were unable to observe all of the required management and control functions, so this will be deferred until follow-on testing in 3QFY04. A Red Team performed an Information Assurance assessment but results of this test have not yet been released. With the exception of interoperability using JWICS, the Generation One system met all suitability requirements.

Although the Generation One Teleport will be operational in 1QFY04 with commercial gateways to support Ku-band and C-band deployed users, the Navy will continue to use its own commercially leased gateways because the DoD Teleports will not give the Navy the assured C-band access they now have and require. Under the Teleport Concept of Operations, the Combatant Commanders (COCOM) specify the priority for access and usage of the Teleports, so the Navy could risk losing access to its leased transponders if a COCOM gave higher priority to another Teleport mission. The COCOMs need to work with the Navy and the Teleport Program Office to evolve a flexible strategy that effectively utilizes the DoD Teleport capabilities.

Generation Two Capabilities. The JITC conducted an OA of the proposed DoD Teleport's Generation Two capabilities in October 2002. The OA focused on providing DISN service access to deployed users over a Milstar EHF connection. During the field demonstration, deployed Marines at Camp Le Jeune used a SMART-T EHF satellite link with a SMART-T at Fort Bragg to place Defense Switched Network (DSN) phone calls and send unclassified-but-sensitive Internet Protocol Router Network (NIPRNET) and Secret Internet Protocol Router Network (SIPRNET) messages. The exchanges successfully provided proof of concept for accessing DISN services via EHF using the general architecture proposed for DoD Teleport. A similar exchange of DSN phone calls and electronic mail messages demonstrated the feasibility of cross-banding from super high frequency to EHF. To complement the field demonstration, JITC also observed operational NIPRNET and SIPRNET traffic at the Naval Computer and Telecommunications Area Master Station Atlantic Area. This confirmed that deployed users are already using EHF satellite links to access DISN services and provided an assessment of the Navy medium data rate appliqué terminal.