

## Teleport

### Executive Summary

- Installation of new capabilities to the six Teleport sites continued to follow a spiral acquisition strategy.
- The Follow-on Testing and Evaluation (FOT&E) tested increased C, X, and Ku band capability, new Ultra High Frequency (UHF) band, new intermediate base-band management and mission control capability, and resolution of open items from previous operational tests.
- Due to UHF radio transmitter technical problems (constant lockup), FOT&E was terminated. The FOT&E is postponed until the radio transmitters can support the UHF operational requirements.
- All C, X, and Ku band installation deficiencies and safety issues previously noted were re-examined and found corrected during FOT&E.



### System

- The DoD Teleport sites consist of four segments:
  - Earth terminals
  - Base-band segment
  - Network services
  - Management and mission control
- Teleport earth terminals are Satellite Communications (SATCOM) terminals that operate in X, C, Ku, UHF, Extremely High Frequency, and Ka frequency bands.
- Base-band segment includes all encryption, switching, multiplexing, and routing functions for connecting data streams or packeted data to the Defense Information System Network services (DISN).
- Network services provide connectivity to the DISN long-haul networks and other interworking functions necessary to meet the warfighter's requirements.
- Management and mission control provides integrated and automated control and monitoring of Teleport base-band hardware, earth terminal hardware, electronic matrix switch, transmission security, and test equipment.
- The terminals provide the radio frequency links between the Teleport site, the satellite, and the deployed warfighter SATCOM terminal via commercial or military satellites.

### Mission

- Services, combatant commanders, and deployed forces will use the Teleport system to gain worldwide military

and commercial SATCOM services to support all phases of conflict, globally distributed from six core teleport facilities. The facilities are located at:

- Chesapeake, Virginia
- Ramstein and Landstuhl, Germany
- Lago Patria, Italy
- Fort Buckner, Japan
- Wahiawa, Hawaii
- Camp Roberts, California
- Teleport provides deployed forces with pre-positioned interfaces from anywhere in the world for all six DISN services:
  - Secret Internet Protocol Router Network (SIPRNET)
  - Unclassified-But-Sensitive Internet Protocol Router Network (NIPRNET)
  - Defense Red Switch Network (DRSN)
  - Defense Switched Network (DSN)
  - Video Teleconferences (VTC)
  - Joint Worldwide Intelligence Communications System (JWICS)
- Teleport will expand Standard Tactical Entry Point (tactical systems) concept to supply warfighters with pre-positioned standardized gateways into DISN services.

### Activity

- In June 2005, the Joint Interoperability Test Command conducted a Teleport FOT&E at the Northwest Teleport site in Chesapeake, Virginia.
- During FOT&E, the Joint Interoperability Test Command tested increased C, X, and Ku band capability; new UHF band; new intermediate base-band management; and mission control

capability. The test also re-examined the previous deficiencies to identify if corrective action was taken.

- In August 2005, the Joint Interoperability Test Command conducted an operational assessment at Camp Roberts, California, to assess the feasibility of conversion to Internet Protocol modems.

## Assessment

- The Teleport FOT&E was done in accordance with a DOT&E-approved Test and Evaluation Master Plan and test plan.
- All C, X, and Ku band criteria for installation deficiencies and safety issues previously noted were re-examined and found corrected during FOT&E.
- The FOT&E is postponed. A UHF test network was configured, but due to UHF radio technical problems (constant

lockup), the test was terminated. FOT&E will resume when the radio transmitters can support the UHF operational requirements.

- Multiplexer Integration and Defense Communications Satellite Subsystem Automation System and Teleport Management and Control System, Build 1, were observed during the regression testing and they meet the initial system requirements. These two systems are valuable tools for Teleport operation and they improve the site's capabilities to respond to warfighter needs.

## Recommendation

1. DOT&E recommends the use of System Verification Operational Tests and other test venues as a means to consolidate testing, thus reducing the number of test events.