

Warfighting Information Network-Tactical (WIN-T)/ Joint Network Node (JNN)

Executive Summary

- DOT&E is concerned that numerous Warfighter Information Network-Tactical (WIN-T) components lack the maturity normally demonstrated at Milestone C.
- Joint Network Node (JNN) is not a program of record and does not comply with “fly-before-buy.” The Army is procuring and fielding JNN to seven to 10 Army Divisions before conducting OT&E.
- The Army has been directed to initiate a program of record and describe the required test and evaluation, which will support the transition from JNN to WIN-T.
- Current JNN performance in Iraq is reportedly not satisfactory.

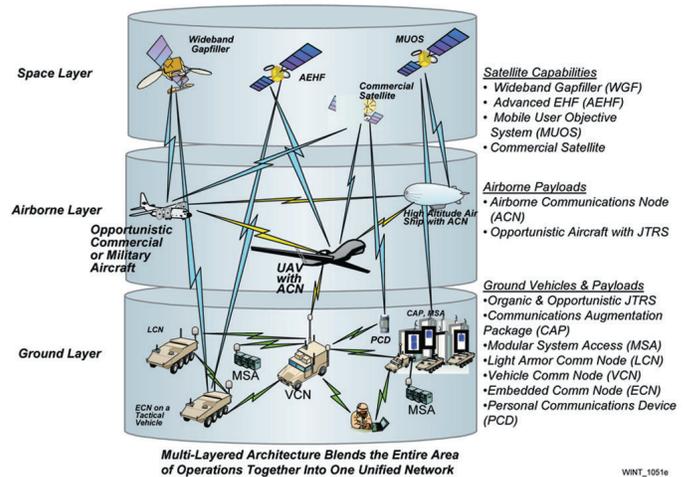
System

WIN-T

- The WIN-T is designed to be the Army’s tactical intranet and intends to provide reliable, secure, and seamless video, data, imagery, and voice services. WIN-T is a high-speed and high capacity backbone communications network intended to support communications from the sustaining base down to the Future Combat Systems (FCS) Brigade Combat Team.
- Key components of ground layer are the Joint Tactical Radio System (JTRS) Cluster 1, a personal communications device, and a secure wireless local area network.
- Airborne layer consists of unmanned aerial vehicles or tethered air vehicles in the WIN-T airborne communications node to provide beyond line-of-sight communications.
- Space layer includes commercial and military satellites such as the Wideband Gapfiller or Advanced Extremely High Frequency satellites to provide reach-back via the Global Information Grid.

JNN

- JNN is an interim communication system supporting Army tactical requirements for exchange of voice, data, and video from division to battalion. Components include commercial off-the-shelf shelters, trailers, antennas, transit cases, switches, and other equipment to access satellite communications and provide Secret Internet Protocol Router Network (SIPRNET)/



Unclassified-But-Sensitive Internet Protocol Router Network (NIPRNET) connectivity.

- JNN is intended to provide communications at the quick halt. JNN replaces capability provided by the Mobile Subscriber Equipment and is currently deployed with forces in Iraq.

Mission

- The Army intends for WIN-T to support Mobile Battle Command by integrating capabilities into maneuver platforms, and support dispersed operations over increased distances beyond line-of-sight.
- WIN-T will provide commanders at all echelons the ability to operate on the move and at remote locations. WIN-T will be the single communications network integrating the current force and the FCS.
- WIN-T integrates terrestrial, airborne, and military satellite-based transport capabilities into a network infrastructure to provide connectivity across an extended non-linear battlespace.
- WIN-T is designed to provide commercial satellite access and commercial off-the-shelf systems to satisfy bandwidth and network services demands.

Activity

- The Defense Acquisition Executive (DAE) approved combining the two competing contractor teams for WIN-T to permit a single architecture a year earlier than originally planned.
- WIN-T completed system design review, preliminary design review, and critical design review in 2005.
- WIN-T conducted three contractor demonstrations of equipment and selected capabilities.

ARMY PROGRAMS

- WIN-T developmental and operational testing is scheduled for November 2005 to support a low-rate production decision in March 2006.
- The Army continues to procure JNN as an interim satellite capability without conducting OT&E.
- JNN was fielded to Army units deploying to Iraq in Operation Iraqi Freedom 3 and 4, with additional fielding planned.

Assessment

- Based on contractor demonstrations, the program believes that WIN-T is ready to enter combined developmental and operational testing to support the low-rate production decision review in 2006. The WIN-T Test and Evaluation Master Plan must be updated for Milestone C.
- The contractor event held in December 2005 was a technical demonstration of the system capabilities.
- The demonstration was executed with a limited number of WIN-T components providing very basic insight to its capabilities.
- The operators, a mixture of soldiers and contractors, completed the scripted test vignettes to exercise the network.
- The maturity and integration of the hardware and software into the platforms was consistent with the early prototype designation.
- DOT&E is concerned that numerous WIN-T components lack the maturity normally demonstrated at Milestone C. The

WIN-T program will develop and integrate 80-90 software programs with 60 percent commercial off-the-shelf and 40 percent government off-the-shelf. WIN-T airborne platforms were not identified or fully funded at Milestone B. WIN-T is developing a unique command, control, computer, intelligence, surveillance, and reconnaissance (C4ISR) radio and waveforms to meet FCS throughput requirements. Current and near term satellite communications capacity will be exceeded without an unmanned aerial vehicle/airborne tier.

- The Army has been directed to initiate program of record and describe the required test and evaluation, which will support the transition from JNN to WIN-T.
- JNN performance in Iraq has problems.
- Capabilities documents and a Test and Evaluation Master Plan for JNN do not currently exist.
- The Army has followed neither program of record nor rapid acquisition guidelines to justify JNN procurement authority.

Recommendations

1. Synchronize WIN-T, FCS, and the Joint Tactical Radio System acquisition and test and evaluation strategies. Identify test opportunities for WIN-T during FCS Spin Outs.
2. JNN is fragile but provides some long haul capability. The Army is required to report to DoD how they plan to satisfy the test requirement prior to Milestone C.