

CS13

Network management, troubleshooting tools support capability sets

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In support of Capability Set 13 and future network enhancements, the Army is transforming the digital “glue” and monitoring tools that allow signal officers to configure the network and maintain fidelity of data.

Network Operations tools allow signal Soldiers to see the “big picture” so they can plan, initialize, monitor and manage the network. This “Situational Awareness for the S6” includes allocating bandwidth, tracking how effectively information is traveling over the network and managing network resources to best support the commander’s operational plan. As a complement to NetOps, Unit Task Reorganization tools and processes support network adjustments that are driven by changes in mission and battlefield task organization – such as attaching a company to a different battalion.

As the tactical network becomes more integrated and reaches lower echelons, it requires a more holistic, flexible approach to NetOps and UTR. The Program Executive Office for Command, Control and Communications-Tactical is leading efforts to streamline the



Soldiers use the Warfighter Initialization Tool to modify data files according to their current mission.

processes and tools involved in NetOps and UTR to simplify training, reduce execution timelines and give more control and flexibility to Soldiers.

“Our goal with both NetOps and UTR is to integrate and consolidate the individual system procedures of the network,” said Chad Claussen, network integration branch chief for PEO C3T’s Technical Management Division. “The network architecture is increasingly complex and interoperable, which calls for an integrated approach to how we manage it.”

While the Army is developing

a long-term roadmap to converge its numerous NetOps tool sets, it has already notched some early successes.

For example, CS 13 units are receiving the Joint Tactical Networking Environment Network Operations Toolkit, which collapses several lower tactical network tools – mostly radio management tools – onto one laptop so that users can monitor all radios on the battlefield. Before J-TNT, there were nearly 50 tools for signal Soldiers to plan, manage, monitor and control what is known as the Lower Tactical Network Environment, and

Soldiers had to haul multiple laptops and cables to accommodate them.

“I see this as a huge success in an austere environment,” said LTC Gregory Grzybowski, assistant Training and Doctrine Command capability manager for tactical radios. “J-TNT has been very successful in providing units increased capabilities and effective training, and it will only improve with time.”

For the “upper” tactical internet, the upgraded Warfighter Information Network-Tactical Increment 2 NetOps tools that are part of CS 13 give S6s more visibility of network nodes and the power to reach into the network and control operations from a central location.

CS 13 also includes a new capability known as the Warfighter Initialization Tool. Prior to WIT fielding, a unit receiving new communications equipment would need to electronically tag it with generic information until updated by a field service representative or added to a new set of system initialization data – the network “glue” that allows various systems to communicate across the Brigade Combat Team. An operational change could not be easily reflected in the unit’s data products. With WIT, updates to the network architecture can now be made much faster at the brigade level.

“The capability is tremendous,” said MAJ Graham Wood, S6 for the 3rd BCT, 10th Mountain Division. “With the WIT tool, we’ve got the ability to adjust the network on the demand for the unit. It takes a little time, but you’re now talking hours

and days instead of months.”

The long-term vision for UTR allows operators to have the ability to conduct a change in task organization using a graphical user interface, or drag-and-drop approach. Once the task organization change is validated and executed, adjustments to the affected portions of the network will be executed through an automated process, with human checks to ensure the change is intended.

Such a process would be a significant improvement for major UTR changes such as in the case of CS 13, when both the 3rd and 4th BCTs of the 10th Mountain Division were task organized from Infantry Brigade Combat Teams to Security Force Assistance Brigades, meaning the units would deploy fewer Soldiers in different combinations than a typical BCT.

“Dynamic task organization changes to support variations in operational sets remains a challenge,” said MAJ Gary Pickens, S6 for the 4th BCT, 10th Mountain Division. “We’ve found that to properly facilitate task organization, changes to networks supporting the company level and below must be managed at the brigade level.”

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ACRONYM QuickScan

BCT - Brigade Combat Team

CS - Capability Set

FSR - Field Service Representative

IBCT - Infantry Brigade Combat Team

J-TNT - Joint Tactical Network-

ing Environment Network Operations Toolkit

NetOps - Network Operations

PEO/C3T - Program Executive Office for Command, Control and Communications-Tactical

SFAB - Security Force Assistance Brigades

UTR - Unit Task Reorganization

WIN-T - Warfighter Information Network-Tactical

WIT - Warfighter Initialization Tool