Networked vehicles readied for delivery to 10th Mountain Division

U.S. Army

CHARLESTON, S.C. (Sept. 17, 2012) -- The Army is ramping up limited production on a new fleet of networked vehicles as part of a sweeping effort to transform its tactical communications network.

Major integration and installation efforts are now underway as the Army prepares to deliver the first mine resistant, ambush protected vehicles, known as MRAPs, equipped with components of Capability Set 13.

Capability Set 13 marks the first time the Army is delivering network systems as an integrated communications package that spans the entire Brigade Combat Team formation, connecting the static tactical operations center to the commander on-the-move to the dismounted Soldier. That requires a new, highly synchronized approach to production and deliveries of CS 13 equipment, aligned with unit training schedules and deployment dates.

Two brigade combat teams of the 10th Mountain Division will receive the first CS 13 vehicles on a staggered schedule starting in October, with multiple deliveries over the next several months. These MRAPs, configured with new tactical radios plus the Warfighter Information Network-Tactical, known as WIN-T Increment 2 and other Capability Set 13 components, will then accompany those brigades when they deploy in 2013.

"The Army has set an aggressive schedule in order to get these capabilities to the field quickly," said Col. Darby McNulty, the Army's Trail Boss for CS 13. "We have shifted our design and production processes into high gear to meet those goals, so Soldiers can train and fight with the most advanced, integrated Brigade Combat Team network possible. For the first time ever, the BCT will be networked from the BCT commander down to the individual rifleman."

As new equipment fielding and training for the 3rd and 4th BCTs of the 10th Mountain Division gets underway at Fort Drum, N.Y., and Fort Polk, La., engineers, technicians and other experts at Space and Naval Warfare, known as SPAWAR Systems Center Atlantic in Charleston, S.C., are tackling the complex task of integrating CS 13 systems on more than 150 MRAP vehicles.

Because of variant MRAP vehicle designs, each individual vehicle requires hundreds of unique network components such as cables, brackets and system controls. That means the vehicles cannot be integrated in identical fashion, assembly-line style. The baseline CS 13 designs, created by U.S. Army Tank Automotive Research, Development and Engineering Center, or TARDEC, in Warren, Mich., accommodate multiple unique vehicle configuration types, which correspond to the numerous

unique roles within a BCT and take into account the need for different combinations of communications systems, along with size, weight and power constraints.

The MRAP configurations for CS 13 were validated through the Network Integration Evaluations or NIEs, semi-annual field exercises in which an operational BCT evaluates network systems by executing realistic mission threads in the punishing terrain of White Sands Missile Range, N.M. The same engineers who integrated the MRAPs used at the NIE are now assigned to the CS 13 vehicle effort, where they can apply their on-the-ground expertise for a more efficient build process.

"There was a strong knowledge base created out there with our participation in NIE," said Christopher Bryant, SPAWAR's Tactical Vehicle Integration lead for CS 13. "We've taken the same team of engineers and technicians that were down at White Sands to begin implementing the integration of Capability Set 13."

Soldier feedback from the NIEs also led to design and user interface improvements for CS 13 vehicles. For example, the Army added a second screen inside vehicles equipped with WIN-T Increment 2 to better meet Soldiers' functional needs while communicating on-the-move. WIN-T Increment 2 provides one of the major upgrades of CS 13: mission command on the move, or allowing commanders down to the company level to take the network with them in their vehicles as they travel across the battlefield.

The vehicles being integrated in Charleston are based on five "super configuration" MRAPs designed by TARDEC. Those prototype vehicles completed production last month and are now undergoing safety release testing at Aberdeen Proving Ground, Md.

To ensure all of the vehicle-based CS 13 elements come together correctly, the Army performs quality checks on network performance throughout the build process. Each communications system is tested individually and as part of the larger network to ensure they transmit the required voice and data, and that the final integrated components function together and operate as a system of systems.

The CS 13 integration effort also has personnel from the Army's System of Systems Integration, or SoSI Directorate and the Army's network and vehicle project managers playing an active role on the ground to ensure successful integration.

The integration lines dedicated to CS 13 will continue running through the fall, as vehicles are completed and delivered in line with the 10th Mountain Division's training requirements. In all, CS 13 is on track to field to eight Infantry Brigade Combat Teams from 2012-2013.

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