

Special Forces to test electronic battlefield reporting device during Robin Sage exercise

By Debra Valine, Editor, The Eagle

Soldiers used to carry notebooks and pens that they used to record everything around them while in the field — where they were, the location of other friendly or enemy forces, type and number of aircraft or ground vehicles, and which way the group was heading. When the soldiers returned to where the unit was set up, the information they recorded was transferred up the chain of command.

The modern warfighter may soon carry a personal digital assistant (PDA) that will allow him to instantly transmit information such as where he is and what he sees at his location to a base unit — the Dismounted Intelligence Situational Mapboard software on the Low Earth Orbit Position and Reporting Device (LEOPARD) coupled with the Advanced Warfare Environment (AWarE) software. The LEOPARD system was developed by the U.S. Army Space and Missile Defense Battle Lab. The DISM software was developed by Trident Technology in Fairfax, Va.

This integration of software and hardware was requested by the Special Operations Command Battle Lab at Fort Bragg, N.C., as a sensor-to-shooter tool that will allow warfighters to communicate electronically. It was tested during the Robin Sage training exercise at Fort Bragg in late February.

“Robin Sage is the world’s largest unconventional warfighting exercise,” said MAJ Scott Stearns of the John F. Kennedy Special Warfare Center and School at Fort Bragg. “It is the culminating event in the Special Forces qualification course. It’s spread out through central North Carolina encompassing 14 counties and 7,500 square miles. The students work in an unconventional scenario where they are training to fight and win a battle.” The exercise has been held quarterly since 1952.

Instructors at the school tested the LEOPARD device during the conduct of the exercise, allowing stu-

dents to focus on their mission.

“We are looking at what is going to be the validation of near-real-time situational awareness within the unconventional warfare environment,” said LTC William Banker, chief of the Army Special Operations Digital Environment Center at Fort Bragg.

“Traditionally our communications have not been digital unless it was a text message,” Banker said. “Now we have a digital map which means it has icons on it that are placed there for near real-time reporting via a satellite link. We are looking at what that increased awareness brought about by near real-time display and reporting capabilities can do in terms of increasing combat effectiveness in the unconventional context.”

The instructors will provide their impressions of the device after the exercise concludes.

“We will use the lessons learned provided by the instructors to generate the next generation of the system,” Banker said. “We do not believe the LEOPARD is ready for production. We are looking at refining the system and improving the board design.”

LEOPARD is a product of the Battle Lab’s Army Space Exploitation Demonstration Program which identifies, tests, experiments, assesses and transitions emerging Space-based capabilities to the warfighter. LEOPARD’s target audience is dismounted units whose mission set causes them to operate beyond the coverage of typical tactical communications networks, for example, Special Operations Forces, scouts, forward observers, long-range detachments, etc.)

“LEOPARD provides global, two-way, on-the-move voice and data communications,” said Jeff Faunce, chief of the Experiments Division of the Space and Missile Defense Battle Lab. “It is a lightweight and rugged, user friendly portable device that also gives the



soldier the ability to send free text messaging up to 200 characters.”

LEOPARD provides the ability to track deployed soldiers, as well as receive real-time information from the forward battlespace. It consists of two devices: a hand-held unit carried by soldiers in the field — maybe one per team — and a base unit in the tactical operations center. Integrated into the hand-held unit, which looks like a PDA and weighs about 7 pounds, is a global positioning system and an Iridium satellite telephone.

“The global positioning system gives the position and when the soldier makes a call back to the base station, the base station updates the map it has of the battlefield,” said CPT Tim Tubergen of the SMD Battle Lab — West in Colorado Springs, Colo. “The base station not only records the soldier’s position, it also records any other information the soldier provides such as enemy location, friendly forces location, obstacles on the ground, etc.”

Another component of LEOPARD, the Viper Laser Range Finder — similar to binoculars — allows soldiers using LEOPARD to transmit targeting data. The laser measures the distance from the soldier to the item being targeted and the GPS system incorporates those coordinates with the coordinates of the soldier’s location to transmit accurate information on the target.

“The Laser Range Finder is an integral part of how Special Forces will use the capability to mark targets or other items of interest to the mission,” Faunce said.

“We have incorporated a transfer of information from the base station to the AWarE software,” Tubergen said. “Anything the soldier has entered is transferred from the field to the base station. The person monitoring the AWarE will automatically see what the soldier

sees.”

AWarE is a suite of configurable capabilities that supports the needs of today’s warfighter. These capabilities range from basic administrative functions using Microsoft Office tools to intelligence preparation of the battlefield (IPB). Some of the AWarE applications include Force Operations, Situational Awareness, Time Sensitive Targeting, Missile Warning, IPD, C4ISR (Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance) Management and Engagement Operations.

“AWarE supports mission planning and provides unprecedented situational awareness that is achieved through the combination of stove piped data streams into an integrated three-dimensional display,” said Michael Leech, of SMDC’s Battle Lab. “This state-of-the-art 3D situational awareness improves decision making within a tactical operations center, significantly reduces multiple data entry and in-theater footprint by merging capabilities into a multifunctional ‘plug and play’ architecture.”

“If I can report or update situational awareness without opening my mouth and talking on a radio, that is good stuff,” said COL Kevin Buckner, deputy director of the SMD Battle Lab in Huntsville, Ala. “As the system evolves, it can only get better for the warfighter. The enemy may know there are electrons floating around in cyberspace, but it’s difficult for them to know what those electrons are doing.”



Above, SGT David Watts, SSG Jesse English, and Capt. Tim Tubergen of SMD Battle Lab-West and Larry Ravenscraft, SMDC Battle Lab in Huntsville, view information recorded in the field and transmitted electronically to a base unit that will be part of the tactical operations center in Exercise Robin Sage at Fort Bragg, N.C., in February. The team was in Huntsville, Ala., Jan. 9 testing the integration of the Dismounted Intelligence Situational Mapboard (DISM), software on the Low Earth Orbit Position and Reporting Device (LEOPARD), and the Advanced Warfare Environment (AWarE) software.

Opposite Page, Kirk Davis, a contractor with ARINC in Colorado Springs, Colo., relays information back to the base station during a recent test of software being integrated into a system that will instantly update the battlefield situation map.

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