

Smaller satellite terminal solution being fielded following Network Integration Evaluations

U.S. Army

ABERDEEN PROVING GROUND, Md. (June 17, 2013) -- Taking advantage of lessons learned through several Network Integration Evaluation cycles, the Army is fielding to its first unit a new, smaller ground satellite terminal designed to provide high-capacity, beyond-line-of-sight communications to newly digitized command posts at the company level.

"One of the main goals the Army had in creating the Company Command Post was the reduction of size, weight, and power consumption, referred to as SWaP," said Lt. Col. Greg Coile, product manager for Satellite Communications, or PdM SATCOM, which manages the terminals. "We leveraged the NIE (Network Integration Evaluation) Process to inform a SATCOM solution that would reduce the Soldier's burden and improve unit mobility."

The Secure Internet Protocol Router/Non-secure Internet Protocol Router Access Point 1.2 meter Lite, referred to simply as SNAP Lite, was chosen as one of the SATCOM solutions to meet the requirement for a small form factor terminal to support the enhanced communication and mission command capabilities of the Company Command Post, or CoCP. This very small aperture terminal is a rapidly deployable, pack-in-the-box solution that extends the Army's network and improves situational awareness for maneuver companies.

An Expeditionary Signal Battalion, or ESB, is the first unit to be fielded under the Department of the Army-directed requirement for CoCPs. The unit is scheduled to receive SNAP Lites, followed by two weeks of new equipment training. ESBs provide communication connectivity to disadvantaged users, often in austere environments, and Army modernization efforts call for an increase in ESB transport capability to improve battlefield communication.

The ESB's SNAP Lites will be used to support the unit's worldwide contingency operations as well as potential NIE support in the future. Additional SNAP Lites for the Army's CoCPs will be procured and fielded as funding is determined, while other CoCPs in theater will utilize the larger legacy SNAPs for their SATCOM requirements.

"In the past we have always relied on larger aperture satellite dishes, but now we are fielding one that is smaller, lighter and more compact and can fit inside a rapid force deployment," said John Lundy, SNAP project lead for PdM SATCOM. "The reduction in setup time and SWaP makes the unit more mobile."

Like the legacy SNAPs, SNAP Lites provide secure and non-secure satellite communications for the CoCP. The communications and mission command systems that make up the Army's newly enhanced, digitized CoCP are intended to deliver a

new level of advanced voice and data communications to the company level and improve the flow of critical battlefield information.

"CoCP users can take their mission command systems and plug right into the SNAP on both classified and non-classified networks," said Michael Sidwell, SNAP systems integration engineer for PdM SATCOM. "With the addition of these beyond-line-of-sight capabilities, the CoCP becomes a hub in battlefield operations where users can exchange critical battlefield information from the Soldier on the ground on up to higher headquarters."

SNAPs work in concert with both Warfighter Information Network-Tactical, or WIN-T, Increment 1 and WIN-T Increment 2, which together make up the Army's current tactical communications network backbone, essentially the Army's Internet. In the past, Army maneuver companies did not have high-capacity entry into digital networks, and that reach-back to the network backbone is critical for today's evolving missions.

"The introduction of SNAPs into the company level command post gives company commanders access to those high-speed digital networks," Sidwell said. "The company command post connection completes an important part of the network architecture."

The capabilities of SNAP Lite, along with other potential CoCP industry-proposed solutions, were evaluated during NIE 12.2 held in May 2012. The intent of the NIE process is to assess and integrate systems that meet an operational need or gap, primarily through Soldier-led evaluations during the semi-annual field exercises. The Army established a realistic operational environment at Fort Bliss, Texas, and White Sands Missile Range, N.M., to conduct these evaluations. NIE systems under evaluation, such as the CoCP SNAP Lite, are submitted by government and industry and go through a selection process to participate in the NIEs to receive a full assessment.

The Army's solicitation for a small form factor terminal to support the CoCP included required vendor participation in a demonstration held at the Joint Satellite Engineering Center, Aberdeen Proving Ground, Md. Engineers from Aberdeen Proving Ground's Communications Systems Design Center were also leveraged to review and ensure the validity of the demonstration's technical data, Lundy said.

"The CoCP directed requirement demonstrated that we could evaluate the latest technology and capability through the NIE then complete that requirement to gain the best value for the Army," Coile said.

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