



FORT BENNING, GEORGIA

MANEUVER CENTER OF EXCELLENCE

# AEWE puts emerging technology in Soldiers' hands

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FORT BENNING, Ga. – How does the U.S. Army make sure its squad has the capabilities it needs to achieve overmatch against enemies on the battlefield? One way is by putting emerging technology into Soldiers' hands early.

This is the objective of Training and Doctrine Command's live prototype campaign of experiments known as AEWE – Army Expeditionary Warfighting Experiments – now gearing up for its seventh iteration – known as Spiral G – at Fort Benning's Maneuver Battle Lab and across the science and technology community.

"It's not just a single annual experiment because the learning builds from one year to the next in terms of capabilities," said Gary Daniel, AEWE project manager for the battle lab.

The experiment is sponsored by the Army Capabilities Integration Center, formerly TRADOC-Futures, and provides capability developers, the Science and Technology community and industry an operational venue to experiment with technologies in support of Soldier requirements.

The campaign began its first spiral in 2005 under the moniker Army and Air Assault Expeditionary Force. The first few years of the campaign were focused on network-enabled operations at the small unit level, Daniel said.

Some early Soldier feedback confirmed that due to near-perfect and real-time situational awareness commanders now receive on the battlefield, "companies can begin to do what you had to have battalions do in the past ... (like) bring in precision fires and use higher echelon sensor assets to shape the battlefield," Daniel said.

The AEWE campaign has evolved to align with the Army's priorities for the future force.

Gen. Martin E. Dempsey, the chairman of the Joint Chiefs of Staff, directed that "as we build the Army of 2020, we begin looking at the force from the bottom up with the squad as the foundation."

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Focusing the Army of the future on gaining overmatch at the squad level, the AEWE Spiral G experiments will “get back to some challenges that still face us in the Soldier domain” like Soldier load, Soldier power, resupply, robotics, network and mission command, Daniel said.

Small units are working in and around the combat outposts of Afghanistan in disbursed, continuous operations, he said. Spiral G aims at bridging the existing capability gaps that challenge our battlefield dominance in these types of isolated environments.



Sgt. Matthew Cook of A Company, 1st Battalion, 29th Infantry regiment, 197th Infantry Brigade, launches the Night Hawk Small Unmanned Aerial System (S-UAS). The Night Hawk S-UAS is hand launched and equipped with Infrared and Hi Definition Electro-optical imagers, offering easy quick-launch capability for immediate airborne surveillance. The Night Hawk S-UAS, produced by Lockheed Martin, is being used in the Army Expeditionary Warrior Experiments being conducted Oct. 17- Nov. 4 at Fort Benning, Ga.

The AEWE process begins with an unmet Soldier requirement – things the Army needs to fix will drive the objectives. Objectives must resonate within the community of practice – other centers of excellence – and the Science and Technology community to ensure the experiments are looking at the right capability gaps, Daniel said. Once the objectives are set, ARCIC issues a technology call.

“There are a lot of things that would be neat to look at and assess,” Daniel said. “But if they don’t align with a requirement, then when it comes to execution resources, you have to draw a line between what you need to look at and what would be cool to look at.”

“In the old days, you wouldn’t get a technology into Army experimentation until it was very mature,” he said.

This scenario often resulted in developers finding their products weren’t appropriate after they’d expended a lot of time, energy and money to bring them to maturity, he said. Now AEWE experimentation takes place as early in the development process as is feasible.

“Both military and industry have started to learn that Soldier feedback is invaluable. It accelerates their development and it saves them a ton of money because they can get it right as they go,” Daniel said.

AEWE is not limited to experimenting with technology. The Army also tests new doctrine to look at what may need to change within an organization to meet the needs of the current operating environment.

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“It could be that we want to take a look at what needs to change organizationally – if we’re a network-enabled force and we’re employing robotics, is there something at the company or platoon level that needs to change from a doctrine perspective? From an organizational perspective?” Daniel said.

One example the program manager cites in this year’s experiment is a company-level robotics section.

“We’re going to give a company these assets to employ but how do they do that? How do they pack it, inspect it, train on it – how do they recover it? ... Does the existing organization need to change to allow them to employ the systems more effectively? We are by no means just technology-focused,” he said.



Soldiers from A Company, 1st Battalion, 29th Infantry Regiment, 197th Infantry Brigade conduct training with the BATLSKIN MPAS – Modular Protection and Attachment System. The BATLSKIN MPAS is intended to provide modular protection against ballistic impact, non-ballistic impact and blast waves, allowing Soldiers to match their protection levels to threat levels. The BATLSKIN MPAS, produced by Revision Military, is being used in the Army Expeditionary Warrior Experiments being conducted Oct. 17-Nov. 4 at Fort Benning, Ga.

For more information about AEWE or for information on how to submit a technology to be considered for the AEWE Spiral H, please go to <http://www.benning.army.mil/mcoe/cdid/MBL.htm>.

**Editor’s note:** This article was written by Jennifer Gunn and photos are by Kristian Ogden, both of the Maneuver Center of Excellence Public Affairs Office. For high-resolution images suitable for reproduction, please call the MCoE PAO at 706-545-2211.