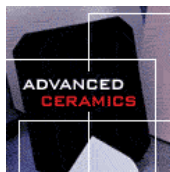


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Special Ops Helmet to Be Fielded Army-wide

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by Elizabeth Book

A new lightweight military helmet already fielded to U.S. special operations forces and elite Army infantry units could, in the future, be distributed among conventional troops, officials said.

During the past three years, the Special Operations Forces Special Projects Team, located within the U.S. Army Soldier Systems Center at Natick, Mass., spent \$1.5 million to develop the Modular Integrated Communications Helmet (MICH).

The helmet has numerous advantages over the traditional combat headgear, said Richard Elder, project officer for the MICH.

Elder, a former U.S. Army Ranger, told National Defense that the helmet is not only comfortable and reliable, but also provides improved communications capabilities.

"First, the higher cut [of the helmet] allows a user to have complete range of motion while using the complete range of load carriage systems and body armor employed by our user groups," he said. "It allows a user to lay in the prone and engage a target. This is huge. This task was very difficult to impossible with the old PASGT (Personnel Armor System Ground Troops) helmet while wearing most body armor and load carriage," Elder said.

He explained that it was impossible to engage a target from the prone position while wearing night-vision devices, and the MICH provides a more solid platform.

The MICH has a six-, seven-, or eight-pad foam suspension system. The pads can be added, removed or changed, based on the soldier's comfort level. Pads in the crown portion of the helmet can be replaced by oblong or oval pads. The pad suspension is "universally tailorable to the users' head shape while affording greatly increased impact protection," Elder said. The pads within the MICH, after being worn for several minutes, loosen up and eventually conform to the shape of the soldier's head.

The MICH helmet only comes in two sizes, while past helmets have come in five sizes, Elder said. This is because the pads are adjustable and can be molded more accurately to the head. "They can accommodate a lot more," he said.

Elder said that the slow-impact protection is better than any fielded helmet in the Army or Special Forces inventory. "This helmet is the only ballistic helmet within Special Operations Command to be authorized for use with motorcycles, [and] all terrain vehicles."

The helmet also protects from flying bullets. "The ballistics are rated to stop a 9 mm bullet traveling 1,450 feet per second, from 0

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degrees of obliquity (straight on, with no angle) with a high degree of survivability," Elder said.

"I'm sorry that this survivability factor can't be better equated to some known unit or metric, but the variables are too many to speak of," he said.

However, "This helmet already has saved lives during combat. Users have been shot in the head and survived with the ability to fight on. There are no guarantees, but it is definitely the safest headwear to date," Elder said.

Elder noted that the suspension system has special components which add to the helmet's durability. "The bolts used to hold the suspension onto the shell are ballistic. These must pass the same ballistic tests as the shell itself. This is important, because all of the current ballistic helmets out there have non-ballistic hardware in place. If you received a round strike on the bolt head, it would send secondary projectile into the user. Basically, the back of the bolt could break off and become its own projectile.

"The MICH is rated to stop this from happening. This has also been proven in combat and is key to the helmet's success," Elder said.

Elder added that a reversible helmet cover, in woodland and desert camouflage patterns, is available and useful for forces that might change location frequently. For special operations forces, the MICH is fielded with high- and low-noise headsets.

A speaker system can be used inside the headset and can also be worn by itself. The high-noise headset can buffer noise and can be used for group communications. The low-noise headset does not buffer outside noise, but it also can be worn without the helmet.

The communications piece was developed by modifying commercial off-the-shelf technology, with different versions developed for both land and maritime operations. The helmet is compatible with approximately 30 communications platforms specific to the special operations community. "Those include aircraft intercom systems, fixed-wing and rotary wing aircraft, boat intercom systems, ground-mobility vehicle intercom systems (HMVS), and of course commercial and military specific radios," Elder said.

The Army Soldier Systems Center's Special Operations Forces Special Projects Team worked with contractor MSA/Gallet to develop the helmet. In October 2002, SOCOM awarded a \$6.3 million contract to CGF Helmets, Inc., of Newport, Vt., which has since been acquired by MSA/Gallet. "There is an option for 70,000 helmets, but only 20,000 have so far been fielded," said Elder. The dollar amount of the contract is much larger now, as the \$6.3 million represents only approximately 10,000 helmets, Elder explained.

"The Special Operations Forces Special Projects team is made up of a combination of former users and specialists from industry to include engineers, contracting specialists and logisticians. With this type of mix, the development and fielding of gear on a rapid timeline (12-15 months from concept to fielding) is the common practice for our customer groups," Elder said.

The helmet was tested by the Army Test and Evaluation Command (ATEC) at Aberdeen Proving Grounds, Md., and by the Airborne Special Operations Test Directorate (ABSOTD) at Fort Bragg, N.C., Elder said.

"The helmet fielded fully to all of the United States Special Operations Command. This consists of the Rangers, Special Forces, Navy SEALs and Air Force Special Operations. This helmet is also fully fielded to the Marine Corps reconnaissance community, the FBI's Hostage Response Team, and a brigade at the 82nd Airborne

Division," he said.

The Army currently is type-classifying the MICH. "This would lead to its inclusion/fielding to large portions of the conventional force and use with the Land Warrior program," Elder said.

"My goal for this project is to see it progress and fielded to the conventional forces. There is no reason a conventional infantryman should not be afforded this level of protection. This also would help to perpetuate the helmet system and replacements for SOCOM and other user groups," Elder said.

The Special Operation Forces Special Projects team is working on multiple programs for SOCOM. "We hope to see more transition to the conventional forces in the long term. As a team, we work for any 'special operations' type of force which would required shooter's-type gear," Elder said.

The MICH helmet is part of a broad modernization effort called the Special Operations Forces Advanced Requirements (SPEAR), designed to provide for the unique equipment needs of Army, Navy and Air Force special operations units.

The SPEAR program has developed, for example, advanced body armor, a load carriage system and lightweight environmental protection. The Soldier Systems Center also is working to develop ballistic/laser eyewear, lightweight nuclear, biological and chemical protection, modular target identification and modular target acquisition, team/platoon C4, and is making improvements to physiological management.

The body armor/load carriage system (BALCS) provides ballistic protection, buoyancy compensation and load carriage capacity,

while minimizing the burdens of weight, carriage and heat stress. The body armor component protects against fragmentation, handgun and rifle threats. The system contains a soft armor vest, front and back interchangeable upgrade plates, and modular neck and groin protection. The medium-sized vest weighs approximately 6 pounds.

The equipment load carrying subsystem includes a modular pocketing and harness system, which helps soldiers tailor their load to their mission. There is also a modified commercial backpack system, which includes a backpack, patrol pack and butt pack. The backpack can carry 120 pounds and can be adjusted to fit most male special operations soldiers. The patrol pack can carry 50 pounds, and the butt pack can carry 13 pounds.

The SPEAR lightweight environmental protection garments include underwear, stretch bib overalls, wind resistance jackets and pile jackets. Lightweight underwear is made with Capilene-treated polyester knits, to take perspiration away from the body. The stretch bib overalls' outer surface is a smooth, non-snag nylon, while the inside is made with a stretch polyester fleece.

The wind resistance and pile jackets are both manufactured with heavyweight fleece, hand-warmer pockets, a windproof front and back yoke.

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