



PEO STRI — Ensuring U.S. Warfighters Maintain Their Prominence

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The U.S. Army Program Executive Office Simulation, Training, and Instrumentation (PEO STRI) provides responsive interoperable simulation, training, and testing solutions for warfighters and the Nation. PEO STRI offers life-cycle support for the Army's most advanced training systems around the world.

PEO STRI oversees the production, fielding, and sustainment of the EST 2000. The EST 2000 enables Soldiers to go through initial and sustainment marksmanship training, along with collective gunnery and tactical instruction. (U.S. Army photo by Doug Schaub, PEO STRI.)

“The strength of the Nation resides in our Soldiers, Sailors, Airmen, and Marines,” said Dr. Jim Blake, PEO STRI’s Program Executive Officer. “It is our duty to ensure these warfighters maintain their prominence as the strongest force in the world by equipping them with unsurpassed modeling, simulation, testing, and training devices.”

The organization executes programs valued at \$3.2 billion with a workforce of nearly 950 military, civilian, and contractor personnel. PEO STRI’s Acquisition Center manages more than 850 contracts valued at almost \$9.3 billion. The Army acquisition agency sustains 335,000 training systems at 472 sites worldwide, including 19 foreign countries. In addition, PEO STRI’s Foreign Military Sales program supports 63 countries. Headquartered in Central Florida’s Research Park, the organization also has offices in Redstone Arsenal, AL; Fort Bliss, TX; and Fort Huachuca, AZ.

Nearly all Soldiers deployed to a theater of combat operations have trained on a PEO STRI-derived device. Some of these training aids and simulations include the Training Improvised Explosive Device, Engagement Skills Trainer (EST) 2000, Laser Marksmanship Training System, Mobile Military Operations on Urban Terrain, Aviation Combined Arms Tactical Trainer, Call for Fire Trainer, and Medical Simulation Training Centers (MSTCs).

HEAT — A 2007 Army Greatest Invention

Among many recent achievements, PEO STRI proudly worked in close collaboration with other Army components to rapidly produce and field the High-Mobility Multipurpose Wheeled Vehicle (HMMWV) Egress Assistance Trainer (HEAT) in response

to the dangers warfighters were facing in the contemporary operating environment. The device represents the U.S. Army’s first standardized trainer of this kind.

The HEAT, which properly trains Soldiers to egress from a rolled-over vehicle, proves to be an Army solution for an Army problem. Recently, the trainer was named one of the Top 10 Greatest Army Inventions of 2007 by the U.S. Army Materiel Command.

It provides Soldiers with the familiarity of how it feels when a vehicle is on the verge of rolling over and what precautions to take to brace their bodies. Furthermore, it instructs them on what to do once the HMMWV has rolled — how to properly egress and help other Soldiers, especially the injured, get out as well.

If a gunner is in the hatch, Soldiers are responsible for pulling him or her back into the HMMWV when the rollover is about to occur. Since the gunner is in the most vulnerable position in the vehicle, the gunner’s cage on the HEAT trains Soldiers to react safely and effectively. The device is capable of rotating and stopping in various positions, making

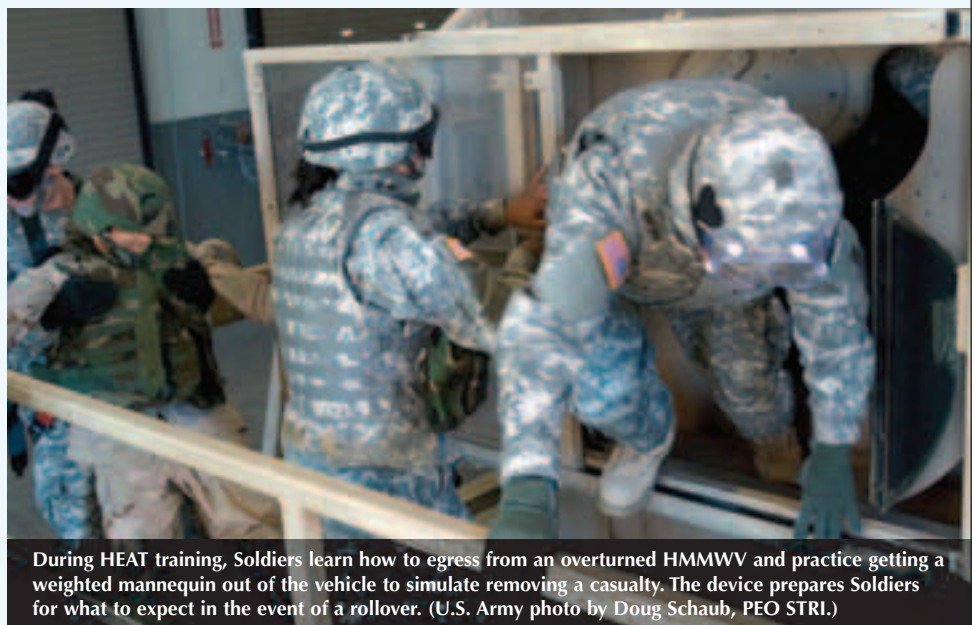
it the only Army trainer that allows Soldiers to practice a variety of egress techniques at different angles.

External door locks allow the instructor to simulate obstructed doors so that trainees can think about actions to take if they face a blocked door in an actual rollover. As soon as an exit is identified, the Soldiers are instructed to yell, “Right rear door open!” Each Soldier exits the HMMWV, establishes security, and administers first aid if needed.

HEAT is produced and fielded by PEO STRI, which worked in cooperation with the U.S. Army Tank Automotive Research, Development, and Engineering Center, Warren, MI, and Red River Army Depot, TX, for their engineering and manufacturing capabilities respectively. To date, 53 systems have been fielded to stateside and worldwide locations, where thousands of Soldiers have trained on the system.

MSTCs

Real-world operational needs also prompted the rapid fielding of the MSTCs, state-of-the-art trainers where Soldiers learn basic combat casualty care in a classroom and simulated battlefield environment.



During HEAT training, Soldiers learn how to egress from an overturned HMMWV and practice getting a weighted mannequin out of the vehicle to simulate removing a casualty. The device prepares Soldiers for what to expect in the event of a rollover. (U.S. Army photo by Doug Schaub, PEO STRI.)

This combat casualty care instruction represents the U.S. Army's standardized medical training program. The program has reduced the died-of-wounds rate on the battlefield by providing Soldiers with the skills to save wounded warfighters in combat.

The capability, managed by the Assistant Project Manager Medical Simulation at PEO STRI, has trained more than 78,000 Soldiers since the program's inception in 2006. PEO STRI has fielded 15 of the 18 MSTCs to domestic and worldwide

locations; the remaining three will be fielded in 2008. One MSTC resides in theater and a deployable site can be used for contingency operations. An additional 18 sites are expected to be fielded over the next several years.

Through this instruction, Soldiers learn how to treat the three most preventable combat deaths: a collapsed lung, a blocked airway, and blood loss. Students can also practice performing intubations and tracheotomies, inserting catheters, applying

splints, treating chest wounds, and inserting intravenous needles.

Before the simulated battlefield training, Soldiers are provided classroom-based instruction to learn how to apply medical treatment in a high-stress combat environment. After the students complete their coursework, their knowledge is validated on this simulated battlefield.

During the hands-on training, Soldiers are assessed on a computer that monitors a mannequin's condition. Since the mannequins are physiologically based, their survivability is dependent on what the trainee does or does not do. If a student fails to administer proper care, the simulator will deteriorate and shut down. Conversely, the students can also experience what happens when they successfully treat the simulator and the mannequin's conditions improve. The Soldier's actions are monitored and recorded in the master patient monitoring station. If the simulator "dies," the Soldier is retrained in the classroom and reassessed.

A large number of Soldiers undergo this training before they deploy to Iraq or Afghanistan because the combat arms warfighter is usually the first responder since he or she is there at the point of injury. As a result, it is very important for nonmedical Soldiers to learn these lifesaving methods.

Warfighters who have undergone MSTC instruction and trained on the human-patient simulators said they feel they are learning critical skills that will increase survivability on the battlefield.

Language and Cultural Training

The current fight has greatly changed the way U.S. forces are trained.

Whether it is high-paced, high-skilled



A Soldier treats the mannequin's tension pneumothorax, or collapsed lung, through a needle decompression at a recent training exercise intended to prepare students for basic combat medical care. This instruction is part of PEO STRI's medical simulation program. (U.S. Army photo by Doug Schaub, PEO STRI.)

medical instruction or HMMWV rollover training, U.S. Soldiers are refining their skills like never before.

For language and cultural training, this phenomenon is no different. Because of the nature of urban combat, Soldiers regularly interact with the Iraqi people, often without the support of a translator. In response, PEO STRI fielded a device, the Vcommunicator, which allows Soldiers to effectively engage with the local Iraqi and Afghan populations.

PEO STRI saw the importance of quickly acquiring and fielding this device as the Army is currently experiencing a severe shortage of human translators in theater. For that reason, PEO STRI expedited the acquisition process to get the Vcommunicator into the hands of the 1st Brigade Combat Team (BCT) at Fort Drum, NY, and the 4th BCT at Fort Polk, LA, faster.

In fact, Soldiers from the 10th Mountain Division are currently using this state-of-the-art language and cultural hand-held translator in Iraq and Afghanistan. Considering the generation of Soldiers deployed to the theater of combat operations, the Apple iPod®-based translator is not only easy to use, but also a trendy way to translate.

The device provides Soldiers with the ability to converse in Arabic, Kurdish, Pashtu, and Dari languages while mimicking the correct cultural mannerisms. To do this, the Vcommunicator shows realistic, virtual characters that can lip-sync the spoken language while displaying culturally appropriate gestures.

The Soldiers can use the Vcommunicator either for training during downtime or during a mission. They can select a message on the device

and the iPod, equipped with a speaker, that will amplify that command. Soldiers can select from a list of orders associated with interrogations, vehicle checkpoints, and raids, for example.

A Soldier assigned to PEO STRI, SGT Dennis Godfrey, got the chance to experience the Army's newest language and cultural training tool firsthand. "In an ideal situation, everyone would have an interpreter, but with that not always being possible, the Vcommunicator will help fill the gap," Godfrey said. "Soldiers will now be able to get their point across easier and be able to ask simple 'yes' and 'no' questions. I think the Vcommunicator will definitely help Soldiers communicate better with non-English speaking people in the absence of an interpreter."

Before Godfrey got to test out the new technology, the Vcommunicator was field tested by the 10th Mountain Division's 1st BCT at the Joint Readiness Training Center at Fort Polk.

The device received positive feedback. One of the sergeants from the 1st BCT said it was incredibly easy to use and puts the "friend in user-friendly." He also said that he was able to use the device with no training or reference to a user's manual.

Warfighters around the globe are being positively impacted by PEO STRI's recent undertakings, to include becoming an acquisition authority for the Army's system and nonsystem training devices, housing



While examining the Vcommunicator translation device's equipment, SFC Thomas Poindexter, Co. B, Division Special Troops Battalion, 1st Cavalry Division, speaks to Ernie Bright, one of the device's developers, during a demonstration at Fort Hood, TX, July 22, 2008. (U.S. Army photo by SSG Jon Cupp, 1st Brigade Combat Team, 1st Cavalry Division.)

an Army Acquisition Center of Excellence, and forging strong Joint partnerships to better contribute to warfighter readiness.

"For those of us who acquire training and testing enablers, we will remain relentless in meeting the urgent needs of our customers — U.S. Soldiers and all American and allied armed forces alike — by providing them the best possible solutions," Blake said. "By standing up an Army Center for Acquisition Excellence, PEO STRI is achieving a higher level of service to the Nation's men and women in uniform."

Enabling the Soldier with training is strong; working in collaboration with other Army components and the Joint community to provide unsurpassed support to the warfighter is "Army Strong."

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