

# TRADOC Seeks Wartime Solutions From Rapid Equipping Force

A magnifying glass is positioned over a globe of the Earth. Inside the lens of the magnifying glass, a dense collection of electronic components, including resistors, capacitors, and integrated circuits, is visible. The background is a soft, out-of-focus pinkish-purple.

**S**ince its genesis two years ago, the Rapid Equipping Force (REF) has evolved from a small experiment that supplied robot-mounted video cameras to soldiers exploring caves in Afghanistan to a thriving “technology innovation and insertion” organization that has quickly—sometimes within a few hours—fielded hundreds of urgently needed items into the Afghan and Iraqi theaters of operation.

REF responds to a critical requirement with whatever technology solution is most readily available. Whether using commercial or government off-the-shelf technologies to solve equipping issues, or applying Future Force technologies for

**By Tim Kennedy**

Camera-equipped robots—known as Packbots because of their portability—routinely help soldiers search caves and suspicious buildings in Afghanistan and Iraq.



U.S. Army

insertion, REF offers the quickest solutions to the field commander's requirement.

"We tell commanders: 'If you're not as effective in your environment as you want to be—whether it's because of a force protection issue, a weapons issue or a deployment issue—we will try to find solutions that make you more effective,'" says Col. Bruce Jette, REF's director.

Operating with a 45-person staff—approximately half serve overseas in "hunter teams" that routinely visit deployed units—REF serves as a solutions catalyst, scouring the earth for existing technologies rather than wasting time developing new products from scratch.

Last summer, REF's ability to shrink the Army equipping timetable from many months to a few days caught the attention of Army Chief of Staff, Gen. Peter J. Schoomaker, who summoned Col. Jette to the Pentagon and instructed him to apply REF's rapid-equipping methodologies to the Army's Future Force. Gen. Schoomaker was particularly eager to have REF examine emerging concepts, technologies, surrogates and threshold capabilities to determine if they can be inserted onto the battlefield "right now, rather than later."

To better enable REF to establish links with operational forces before deployment as well as in the field, REF has established partnerships at key locations within the U.S. Army Forces Command and Training and Doctrine Command (TRADOC).

"The mission Gen. Schoomaker has given to REF is closely aligned with the TRADOC mission, particularly its responsibilities for training development, doctrine devel-

opment and combat development for each of its key materiel groups," says Joe Henry, a REF strategic plans consultant.

As REF's liaison with TRADOC, Henry works closely with the Combined Arms Center (CAC), at Fort Leavenworth, Kan., and the Futures Center, at Fort Monroe, Va. "The focus of REF's partnership with CAC is to support predeployment training at combat training centers [CTCs], as well as finding technological developments available now that can be inserted into areas of the Army's battle command," says Henry.

One of Henry's frequent points of contact at Fort Leavenworth is Brig. Gen. Timothy Livsey, CAC's deputy commanding general for Training. "The beauty of the REF is that they have small, closely connected elements spread throughout the Army," says Livsey. "By having their foot in everybody's camp, they know exactly what's going on inside TRADOC."

Livsey says CAC's partnership with REF has additional value because REF is frequently asked to find technology solutions to issues sent from deployed units to the Center for Army Lessons Learned (CALL), a CAC component. "The CALL relies on REF to quickly turn operational lessons learned into solutions," says Livsey. "In addition, the REF works with CAC to gain access to the CTCs to rapidly test-prove candidate technology solutions.

"The CAC is closely connected to the forces that are actually in the fighting," Livsey adds. "We deal with current training and warfighting issues, whereas the Futures Center—REF's other partner at TRADOC—deals more with the force of the future."

"Our relationship with the TRADOC Futures Center is focused on surrogate and threshold technologies that are

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## Force Capability Gaps

The Chief of Staff of the Army has identified 10 force capability gaps that frequently affect units deployed in harm's way. The REF-TRADOC partnership is using REF's expertise to find technology solutions for several of these gaps.

1. Network-enabled battle command.
2. Soldier protection in counterinsurgency environments.
3. Protection of the force in noncontiguous battlespace.
4. Logistics in a high operating tempo, noncontiguous battlespace.
5. Training the force how and as it fights.
6. Responsive, networked, precision fires.
7. Ability to conduct joint urban operations.
8. Special operations forces and conventional forces integration.
9. Joint interoperability.
10. Timeliness of analysis and information dissemination.

currently earmarked for future combat systems," says Henry. "We also try to match these potential technology solutions with initiatives in which REF is engaged."

The focal point of the REF-TRADOC partnership at the Futures Center is a set of 10 force capability gaps for which the Chief of Staff of the Army has specifically asked REF to find technology solutions.

"REF and TRADOC have been working together since March 2004, with a REF representative in my office on a daily basis working to find technological solutions to shortfalls we've found," says Brig. Gen. Phillip Coker, director for Capabilities Development at the TRADOC Futures Center.

Soldier protection in a counterinsurgency environment is a force capability gap for which TRADOC has recently supplied REF a solution: an explosive-resistant coating originally developed by the Navy. Essentially a paint-on armor, the polymer-based coating significantly enhances the ability of metal surfaces to absorb blast effects without being penetrated.

"This is an example of where we had a force capability gap, became aware of a solution to the gap and then made that solution known through REF's people in the field and their contacts through the G-3 with divisions about to deploy," says Coker.

Coker acknowledges that senior leaders at TRADOC "have had a lot of give-and-take regarding the exact interpretation of what the Army Chief of Staff has instructed REF to do," but Coker says he has assured the TRADOC leadership that "REF is a valuable tool that will enable TRADOC to accelerate the insertion of capabilities into ei-

ther the current force or forces about to deploy."

According to Coker, REF and TRADOC base their partnership on three areas of mutual interest. First, while excelling at finding a solution to an identified need for a deployed force, REF does not have the resources to turn a single-point solution into a solution applicable to the whole Army. TRADOC enables REF to achieve this goal by offering access to its managers and their network of associated program executive officers, program managers and project managers. Second, REF actually delivers products. "TRADOC, on the other hand, very often only has an ability to deliver the requirements—in a deliberate and responsible manner—of an acquisition system," says Coker. "For TRADOC, it often takes three to five years to get a capability into the hands of a soldier, even when we're working very hard at all the right things as quickly as possible. "On average, Bruce Jette can work this in about 90 days," he says. "Clearly, REF can answer an immediate need with a much greater ability than we can." Third, TRADOC is willing to learn from the point solutions that REF has implemented.

"Previously, under the leadership of former Army Chief of Staff, Gen. Eric K. Shinseki, the Army operated on the theory that we were going to field a lot of the Future Force some time in the 2010-2012 time period," says Coker. "But those circumstances and those conditions have changed.

Now, we are bringing the Future Force into the present and putting it into the hands of soldiers." Coker believes REF offers TRADOC "a window into the future, and gives us the ability to give something to soldiers that is consistent with this future."

Coker is aware that some of his Army counterparts are hesitant to form partnerships similar to TRADOC's affiliation with REF. He says their concern is unwarranted. "As partners, Jette and his REF professionals act as tenants at the TRADOC Futures Center," says

Coker. "They are pledged—just like doctors are pledged under the Hippocratic oath—to 'Do no harm.'"

Coker says REF does not want to take any existing capability away from a soldier, nor does he believe REF ever plans to use its partnership "as some sort of Machiavellian experimentation process."

"The acquisition community has the most to gain by establishing a partnership with REF," adds Joe Henry. "REF was never intended to be a full-up program office running long-term programs. Our focus is to fill gaps. REF was created to provide rapid equipping. This is a mission distinct from the acquisition community, which provides Army-wide fielding."

For additional information about the Rapid Equipping Force, log on to <http://www.ref.army.mil>.



*The Rapid Equipping Force found a company in Phoenix, Ariz., that could quickly install protective armor panels inside Humvees.*

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