

Internet & Technology

Military Tech Wares Met Challenge In Iraq

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The war in Iraq was a showcase for the future of military communications.

A number of military systems had their debut, handling everything from tracking supply trucks to delivering live video feeds from the front. Analysts say the technologies are a just of preview as the military boosts spending on satellite and data communications.

"The stuff we're seeing today may not be around in the next 10 years," said Isaac Porche, a researcher with Rand Corp. "Military communication is set to change so much over the next decade, we'll likely see entirely new systems be put in place."

Compared with the first Gulf War, the Defense Department is using 10 times the amount of network bandwidth in Iraq, say most estimates. The reason is that today's weapons can send and get much more data.

"The battlefield is naturally opaque," said Alfred Hansen, chief executive of satellite company EMS Technologies Inc. "The commanders in the field want to do everything they can to lift that fog."

Hansen, a former Air Force general, cites the Predator unmanned aircraft as an example of the new, bandwidth-hungry weapons. The remote-controlled airplane does reconnaissance and fires missiles using live satellite video feeds.

But the number of Predator missions was limited because the Air Force couldn't get enough satellite bandwidth, Hansen says. The military was so strapped for bandwidth, it had to lease space from

commercial satellite providers.

Commanders in Iraq also consumed a lot of bandwidth by getting live video from the front lines. EMS built a combination satellite video phone and data terminal that provided commanders a front seat to the action.

The \$6,500 device provides data at broadband speeds. Gen. Tommy Franks, U.S. commander in Iraq, used it to watch ground forces enter Baghdad. Special forces had portable versions of the device.

Commanders were once limited to radio communications with the front. They had to rely on what was being described to them without the benefit of actually seeing a battle, Hansen says.

"The commanders are able to pull together more intelligence, reconnaissance, and in real time," he said. "That's never been done before in a combat situation."

Also tested in battle was the Movement Tracking System.

Comtech Telecommunications Corp. won the \$418 million contract to build MTS in 1999. The units are being installed in 6,000 Army supply vehicles.

The MTS consists of a rugged laptop computer mounted inside the truck. The laptop holds maps and contains a global positioning satellite unit. GPS uses a constellation of 28 satellites to home in on the location of earth-based units.

Using satellite links, the laptop lets supply trucks communicate with headquarters via e-mail. A truck's position can be tracked at headquarters through the GPS system. The GPS tracking and satellite relays let supply trucks identify each other.

The problem of communicating



Soldiers used the Movement Tracking System—a mounted, rugged, GPS-equipped computer—to track many of the supply trucks used in Iraq.

with supply trucks became apparent during the plight of Pvt. Jessica Lynch. Her supply convoy, which was not yet equipped with MTS, reportedly became lost because information about a new route wasn't passed on to her unit.

"Had this been available (to Lynch's squad), a master sergeant back at base might have been able to see where they were headed and redirected them," said Joe Gentile, an executive with Comtech.

Supply trucks too were once limited to radios, Gentile notes. A broken-down truck would have to wait for a tow truck to find it. Or crew members would have to guess their location and radio for help.

"A driver could tell the wrecker, 'I'm a couple of miles past the big rock or near some brush,'" Gentile said. "Now they can just look on the laptop."

Combat units are also getting MTS. It will help tanks and other fighting vehicles track one another to prevent friendly fire incidents.

The military hopes to expand the use of such systems. The Defense Department plans to

make satellite and data communications more widely available under its Transformational Communications Architecture, or TCA, plan.

TCA includes launching more military satellites and looking at how to include data networking in weapons. The department plans to spend \$439 million on TCA next year. Over the decade, the TCA program could total \$12.5 billion.

Rand's Porche says TCA will let the Army, Air Force, Navy and Marines communicate better with their own units and each other's.

Once the system is in place, the military hopes to get more real-time intelligence about what's happening at the front. Porche says such a system will mean soldiers can be equipped with video cameras to relay information to headquarters.

"There's this whole idea of a networked battlefield," Porche said. "Intelligence and reconnaissance should be clear to both the commanders and the front-line soldiers."

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