

## OnSite ERT™ Answers the Age-Old Question: “Who’s Inside?”

### New Technology Tracks Firefighters at Emergency Scenes

by Pete Wicklund

A chance meeting at a technology forum has led to the development of a product designed to keep better track of personnel at fire scenes.

Based in Ann Arbor, Michigan, ERT Systems, LLC (Emergency Resource Tracking) offers a portable and rapidly deployable system for tracking and locating personnel and equipment on-scene during emergency incidents. First installed in early 2006 in Michigan, OnSite ERT has earned a number of awards and accolades, including recognition at the Michigan Homeland Security Consortium’s SELECT awards.

The product is not yet in use in Wisconsin, but sales have taken off for OnSite and the system. It is now in use in 14 departments across the United States, including in Texas, Oklahoma, Kentucky, New Jersey, Connecticut, Illinois, and of course in several departments in OnSite’s own backyard in Michigan. That accounts for approximately 1,000 firefighters. Software engineer Dennis Carmichael, who developed OnSite ERT with retired firefighter John Ellis, said systems have been sold to departments ranging in size from small one-station all-volunteer forces, to mid-size career city departments, including Ann Arbor, Mich. The partners are hoping to soon add a big city department to their rapidly growing list of clients.



Portable OnSite ERT Command Interface in Engine (Photos furnished by ERT Systems, LLC)

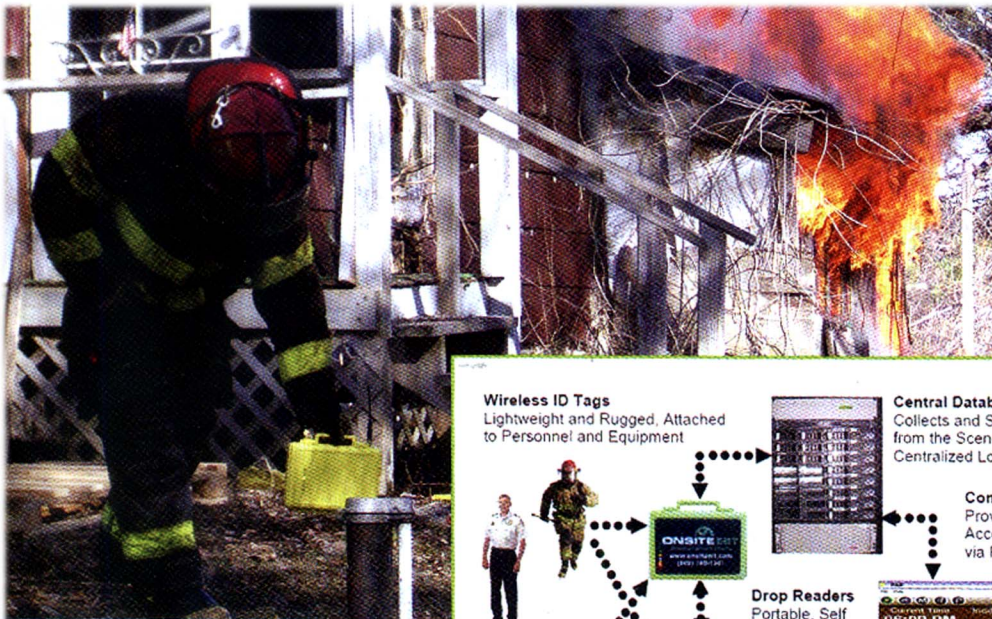
The OnSite ERT system uses a combination of inexpensive, lightweight ID tags, portable, rugged “Drop Readers,” and streamlined Incident Command software to provide a complete view of the operating theater in real time. Some features of the system include:

- Automatic check-in for responders, vehicles, and equipment at staging and command areas.
- Fast deployment via wireless Drop Readers that provide continuous tracking for the entire scene.
- Sensors and automatic PAR alerts that provide additional data to the incident commander in real time.
- Built-in technology that makes the system easily compatible for mutual aid and regional interoperability.
- Open computer architecture that allows data sharing with other software and systems.

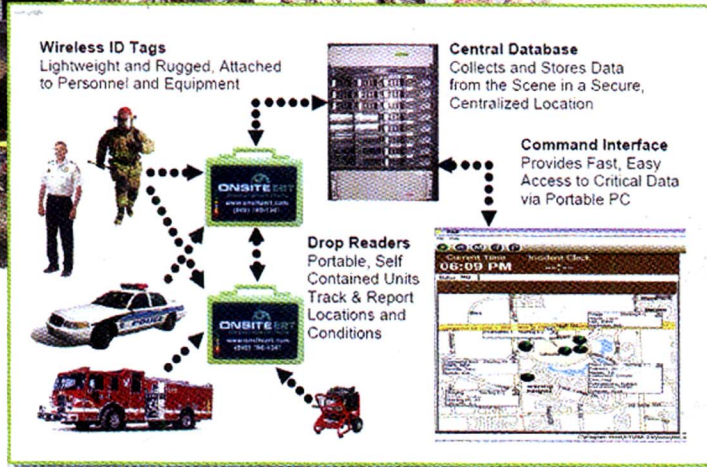
The system costs between \$25,000 to \$50,000 per fire station depending on factors such as the number of personnel and apparatus. Grant dollars can be used to purchase OnSite ERT. The company offers “lease-to-own” financing options as well.

Key components are the accountability transmitters that are affixed to vehicles or sewn into a pocket on firefighter turnout gear. Those transmitters in turn send signals to the drop box units (about the size of a lunch box, Carmichael says). Those drop boxes then send data to a computer in an incident command vehicle or station.

The range of the network will vary depending on the environment, but the average range between drop-readers (or between the PC and individual drop-readers) is 1/2 mile line of sight outside and 1,000 feet inside.



OnSite ERT Drop Reader tracks and reports locations and conditions



Carmichael, whose background is in software development for industry product tracking, describes OnSite ERT as “a zoned-based tracking system” that tells fireground officers where personnel are, when they got there and how long they’ve been at a specific location.

“Firefighters love it because they don’t have to do anything special. It’s one more responsibility off their backs,” Carmichael said.

And it provides peace of mind to incident commanders. Ellis, a retired lieutenant with the Fraser, Mich., Fire Department, said that accountability was a key concern brought up again and again when he attended meetings of a mutual aid consortium that the Fraser department was part of.

“Every time we went to these meetings, I’d hear that people aren’t turning in their tags or that someone was forgetting to track them,” said Ellis. “As I went from department to department I was finding that those problems weren’t unique. With the technology that’s out there, I felt that there had to be a better way to do this.”

Ellis found willing ears to hear his idea when he attended a meeting of the Automation Alley, a technology consortium. There he met Carmichael, who spent much of the last 15 years running his own businesses, including Cimulus, a software integration company.

A few bugs have had to be ironed out in the three years since the product was introduced, but Carmichael and Ellis say their customers have been pleased and no system failures have been reported.

But just don’t take their word. Michael Hewko is chief of the Dayville Fire Co., an all-volunteer department in northeast Connecticut. The department’s response area is mostly urban with some rural. The coverage area includes an industrial park and a 792-MW generating plant.

“I had been trying to find a better way to help account for our members at incidents. We were using the tag system, but it was limited,” Hewko said. “When I saw OnSite ERT tracking system, I was very interested. It looked like a system that would work

for us. I set up an online demo so my three other chiefs could see it. We talked it over and we agreed it was a system for us.”

Hewko notes initially the system had some shortfalls. He said the drop box readers would sometimes be slow picking up members or not at all. But a software upgrade remedied the situation and the readers now pick up the department’s 58 members right away.

“The changes they made are like night and day,” Hewko said. “They (Carmichael and Ellis) are a gem to work with. You can call them

night or day they are always willing to work with you. I have only great things to say about the OnSite ERT tracking system - we are very glad we spent the money.”

Ed Dziubinski, assistant chief with the six-station, 94-member, Ann Arbor Fire Department, agreed with Hewko regarding OnSite’s responsiveness.

“When we first sat down with them and they explained their system and technology, we came right back with what our battalion chiefs wanted to see and how they wanted a system like theirs to work for them,” Dziubinski said. “Currently our training division is working with operations to try and push this system to its limitations and see just how far into buildings the readers can go and further utilization in high-rise floor assignments. Being in OnSite’s back yard has its advantages in software and product testing with the manufacturer. They have really worked hard in allowing us to utilize our city GIS map data with their product.”

For more information, go to [www.OnSiteERT.com](http://www.OnSiteERT.com) ■