

New funding from Intel should help Bluesoft drive sales of its wireless real-time location system as a complement to RFID technology.

By Jonathan Collins

Feb. 12, 04—[Bluesoft](#), a maker of wireless security and location systems, has just secured \$5.7 million in Series B funding, with part of that investment coming from Intel's Communications Fund, which invests in developers of innovative networking and communications solutions. The company says it will use the new money to drive sales of its Wi-Fi-based AeroScout location system, which, Bluesoft believes, provides an RFID deployment with additional location-tracking functionality.

Launched by Bluesoft last year, the AeroScout wireless LAN location system uses Wi-Fi technology to communicate between AeroScout's Wi-Fi tags and location receivers. Combined with the company's software, the AeroScout real-time location system (RTLS) can track equipment fitted with Bluesoft's tags. The system can also track standard Wi-Fi-enabled clients (802.11b/g), including devices such as laptops, PDAs, barcode scanners and RFID readers and even forklift trucks—many of which ship with onboard PCs.



AeroScout Wi-Fi tag

According to Bluesoft, another advantage of Wi-Fi is that the technology is already in the mainstream, and therefore components for the AeroScout system are low-priced commodity items. However, the company understands that RFID tags—especially when item-level tagging becomes popular—will always be cheaper than Wi-Fi tags.

“This is absolutely complementary to RFID,” says Andris Berzins, vice president of business development at Bluesoft, which is based in San Mateo, Calif. “We are not competing against 50-cent tags. Our tags would be placed on expensive assets such as trailers or containers or aerospace tools so that they can be automatically located.”

Bluesoft's active tag is priced at \$65 and includes a battery that can power the tag for up to five years. The two-inch-square tag, says the company, will soon be joined by a far smaller version within the next few months.

The increasingly mainstream nature of Wi-Fi means that many companies are already deploying Wi-Fi technology for their mobile data networks. That brings a level of customer comfort with Wi-Fi, but the key advantage of the technology over RFID, says Berzins, is the additional range that Wi-Fi can give its tags. The company says its current two-inch square tags Wi-Fi can communicate with receivers up to 600 feet.

Bluesoft maintains that unlike RFID deployments, the AeroScout system gives the location of a tagged

item or Wi-Fi-enabled device anytime the item or device is within the operational area of the deployed Wi-Fi network and not just when it passes by an RFID portal.

For example, in one retailer pilot, AeroScout technology is being used in a supermarket to track the location and flow of shopping carts fitted with Bluesoft's tags. The main goal is to help improve store design. But by knowing the position and number of carts approaching the checkouts, the system can also calculate the number of cashiers required at anytime and be sure there are enough checkout stations open to handle the demand.

"To try and track the same carts with RFID would mean having to place readers at the end of every aisle and more," says Berzins. The shopping-cart trial uses six AeroScout location receivers to cover the entire store with RTLS, and cost about \$50,000 to \$60,000 for the entire deployed system, including location receivers, server software, application software and tags. Bluesoft estimates that an RFID-based solution would have cost more than \$100,000 and have required 46 RFID readers to get the maximum possible coverage. The RFID system, however, would still not be comparable to Bluesoft's, because the RFID solution wouldn't be able pinpoint where a customer is in some of the store's more open areas.

"That is not to say that RFID does not have a very valuable place in the store for inventory tracking, but it won't work for shopping-cart tracking or employee productivity-improvement applications," says Berzins. Bluesoft maintains that when Wi-Fi-enabled handheld scanners, such as those made by Symbol and Intermec, read RFID tags, the information the scanners receive could then be linked to Bluesoft's system to add location information to the collected RFID data.

The AeroScout system has already been deployed by military equipment supplier Sarnoff, which is using Bluesoft's system as part of a project for the U.S. Army Communications-Electronics Command (CECOM) to track soldiers moving about a building. The technology is also being used in trials that track shopping carts at two European retailers and to track children at a European theme park. At the theme park, parents rent the tags and place them on their children's wrists so that the parents would be able to find their children should they lose sight of them.

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