RFID Update
THE RFID INDUSTRY DAILY

UWB RTLS Vendor Improves Sensitivity, Lowers Cost

Wednesday, July 23, 2008

By John Burnell

Ultra wideband (UWB) real-time locating systems (RTLS) provider Time Domain has improved the system it introduced last December to work better for organizations with more sensitive item location needs -- and for those with sensitive budgets. The Huntsville, Alabama-based company said the PLUS 2.0 system it announced today is sensitive enough to locate items within 12 inches, can track items to a specific floor of a facility, and costs less than its previous-generation system.

Time Domain says the PLUS 2.0 system costs about the same as WiFi RTLS technology. WiFi RTLS systems provide less precise location data than UWB systems, but are popular because they can leverage legacy wireless LAN access points to provide coverage.

"Price is always the first question you get when you talk to customers about RTLS systems. They want to know how much the tags cost, and how much the readers cost," Time Domain vice president of worldwide sales and marketing Greg Clawson told RFID Update. "The system we introduced last December required 20 to 30 percent more reader coverage than a WiFi system, and cost about 50 percent more. We've improved our reader performance by 50 percent. Now customers can get UWB performance at a WiFi price."

The cost reductions came from a combination of more production-friendly product designs, reduced manufacturing costs, and a decision to target a lower price point, according to Clawson.

PLUS 2.0 has a range of up to 150 feet per reader and can report an item's location within 12 inches, according to Time Domain. Significant new performance features in this version include "2.5-d" tracking, which provides the ability to determine what specific floor a tag is on, a feature Clawson said is lacking in other RTLS systems. The Nesconset Nursing Center in New York implemented the PLUS 2.0 software and 50 readers in June. The system monitors activity on two floors, according to Clawson, providing precise patient location data on one floor, and working in "proximity mode" on the other to track assets.

System software can also track items in one or two dimensions. Two-dimensional tracking on the X-Y axes is traditional for RTLS systems. One-dimensional tracking is beneficial for determining where an item is on a production line and for other linear operations, according to Clawson. Tracking in one dimension requires fewer readers to cover the area.

"A factory doesn't really need an X-Y location. They need X, but the data has to be precise enough so they know exactly where it is on the line, such as the specific manufacturing cell," Clawson said. (See Thousands of Auto Parts Verified with RFID and UWB for details about a recent UWB work-in-process tracking trial.)

The PLUS 2.0 system also requires no "reference tags" to be left behind after installation. Facility location data is stored in the system software, so no permanent-location tags are needed to recalibrate the system after a power outage or other failure.

Clawson said healthcare is the largest market for the company's UWB RTLS solutions, but interest has been growing most rapidly in manufacturing. Time Domain plans to introduce a new manufacturing product line by the end of Q3, he said. The company introduced its first commercial product line last December (see Time Domain to Release UWB-based RTLS Products). The company champions UWB as the most precise RTLS technology, but has struck deals so its systems can be integrated with WiFi and passive RFID systems (see New RTLS Solution Combines WiFi, UWB, and RFID).