

The three companies have brought together RFID and electronic shelf labeling to create a real-time shelf-management system for retailers.

By Claire Swedberg

May 23, 2006—IBM, [Vue Technology](#) and [Pricer](#) have combined RFID technology and electronic shelf labels (ESLs) to create what they call the first real-time shelf-management system for retailers. The system is commercially available through IBM and is also being marketed independently by Vue Technology and—to a limited extent—by Pricer.

Originally, IBM was seeking store management systems for its retail customers that would include either RFID or electronic shelf labels (wireless LCD displays that attach to store shelves to identify products and their prices), according to Dennis Osterlund, retail-solutions executive at the company's Global Business Services division. "Basically, we look at the best-of-breed technologies to meet the needs of our clients," he says.



Jamie Kress, Vue
Technology

"We partnered with Vue and Pricer and were working with them independently on the RFID side, and the ESL," he says. He and his colleagues ultimately came to the conclusion that the two technologies could be integrated.

The resulting system combines Vue Technologies' TrueVue Platform, Pricer's Continuum ESL Platform and IBM's Store Integration Framework. The TrueVue Platform consists of technology linking a network of interrogators to an array of antennas that can be built into shelves for holding tagged products. The Continuum ESL Platform allows retailers to change prices electronically at shelf labels and registers. IBM's Store Integration Framework is a set of middleware that integrates a retailer's devices. The combination of the three systems allows stores or manufacturers to track tagged items sitting on sales-floor and back-room shelves.

The RFID data goes through the TrueVue Platform and is routed to Pricer's ESL server, which sends it on to an infrared transceiver mounted on the store ceiling. The transceiver then transmits product data to the ESLs in the store via an infrared signal. "It all happens very, very fast," says Pricer's president, Craig Ibsen.

The ESL's LCD screen displays specific information, such as a product's name and price, for the benefit of customers and store employees. The screen can also indicate where more of the product can be found in the store if the quantity on that particular shelf has run out. Ibsen says that because the LCD has 184 segments—points of light that can configure letters, numbers or images—there is almost no limit to what data could be displayed on the screen. In addition, the ESL can illuminate a red light to notify employees when a product is running low on the shelf.

Vue Technology's director of sales and marketing, Jamie Kress, says RFID-tagged products can be monitored at the shelf by the antennas there, or by handheld or portal readers. The entire RFID system is managed by Vue's IntelliManager software and utilizes the company's IntelliSwitch device (which can support up to 16 RFID antennas) and IntelliRouter device (which can route data to and from multiple IntelliSwitches).

"The TrueVue platform can manage hundreds or thousands of antennas with one reader," Kress says. Each item can be tagged with a unique identification number, and RFID antennas are retrofitted onto the shelves and in store backrooms.

If the system were deployed at a grocery store, Kress says, it's most likely that only high-cost items would be tagged and tracked. In an apparel retailer, the ESLs could be used to display not just what items were on the shelf, such as a stack of jeans, but also what sizes could be found in the pile. Electronics stores could use the system to display the prices and model numbers of their merchandise, as well as whether each product is in stock in the back room.

In addition, the system can be used for price changes, allowing store managers to use a PC to change prices on items and have the new pricing immediately displayed on the shelves.

To get a quick return on investment, retailers would probably tag the most expensive items immediately, then expand tagging to the other items in the store. "At first, it's going to be in a specialized area where it makes the most sense to the retailer," says Osterlund.