

The use of HF tags enables the stores to perform a daily inventory, reduce shrinkage and restock goods in a timely manner.

By Claire Swedberg

Oct. 31, 2007—Two fashion retailers in Singapore are deploying an RFID-based tagging system to manage their inventory, using handheld interrogators to capture ID numbers attached to garments for stocktaking purposes. Bella East Fashion Studio, located in central Singapore's Kovan Heartland Mall, and [77th Street Pte. Ltd.](#), at ITE College East in eastern Singapore, are each using the system. Both stores report a reduction in stocking time from 12 hours to 25 minutes.

The deployments began as a pilot in March 2007, in which the retailers used [Tracient](#) PadI-R handheld RFID interrogators to obtain real-time stock visibility by tracking which items were on store shelves and which high-demand items needed to be reordered.



Ketan Lee

Like other apparel stores in Singapore, the pilot's participants had previously conducted inventory counts using a manual system. Employees had hand-counted items at the front of the store, and in the back room. Because it was so time-consuming, however, they only conducted such inventories a few times per year, says Ketan Lee, director of SeeNow, a Singapore-based RFID solutions provider that provided RFID integration services for the pilot.

Using SeeNow's "Smart Shop" inventory management system and Tracient's PadI-R interrogators, Lee says, the time needed to complete the process is reduced to a few minutes and can be accomplished on a weekly or daily basis. The two stores tag each garment with a high-frequency (HF) 13.56 MHz RFID tag complying with the ISO 14443 standard. Each tag's unique identifying number is linked to data related to that garment—such as its type, size and color—stored in the inventory management system by store employees. The Smart Shop system includes point-of-sale (POS), accounting and payroll applications.

Store employees currently fasten a tag to each new garment as it arrives at the store, though the retailers eventually hope to have manufacturers—mostly based in China—tag the garments themselves. Staff members use a PadI-R interrogator to read the garments' tags, first in the stockroom as they unpack and tag the items, then on the sales floor. The tag information, along with the date and time the garments were taken to the sales floor, is uploaded wirelessly to the Smart Shop inventory management system in the store's PC.

If an employee or customer needs a specific item, the staff can key in the details of the requested garment and quickly determine if it is in the back room or in the storefront, based on where it was most recently scanned. The system also enables the retailers to match the receipt of goods against invoices

Two Singapore Fashion Retailers Use RFID to Track Inventory

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from manufacturers to verify that the store is being accurately billed. The garment tags are removed at the point of sale and later applied to new clothing.

Lee says the response to the system pilots has been "very positive" thus far, citing ease of deployment, efficient stocktaking and affordable price for small retailers. "Stocktaking becomes much easier and more accurate," he explains. The reduction in labor will allow for daily stocktaking, he adds, as well as reduce shrinkage and improve the staff and customer experience since garments will be more readily located and inventory replaced in a timely manner. Other benefits the stores can expect as a result of the more accurate inventory counts, Lee says, include a reduction in the stockpiling of items in large quantities to ensure they don't run out. In the past, he notes, such stockpiling required "frequent mark-downs to clear stocks."

According to Lee, the trial results indicate that the reduction in labor and shrinkage should enable the retailers to recoup the cost of the system within a year. He adds that both companies chose to replace their stores' existing POS system by adopting SeeNow's Smart Shop Solution.

This month, 77th Street transitioned directly to a full permanent deployment of the system, while Bella will launch a permanent deployment in the first quarter of 2008. Bella has purchased 2,000 RFID tags, and 77th Street has bought 1,000. In such small volume, the tags cost about Singapore \$.50 (US\$0.35) apiece.

Tracient's PadI-R HF reader costs about US\$749. SeeNow has declined to release the cost of the software and integration, but says it expects to install the Smart Shop system in 13 more stores in Singapore this year.