Marks & Spencer Expands RFID Trial

After assessing the results of a trial using RFID tags to track items of clothing at its High Wycombe store near London, U.K. food and clothing retailer Marks & Spencer (M&S) says it plans to extend its trial of item-level tagging. Though final details have to be determined, those additional trials could

start as soon as the spring and are expected to extend to a number of M&S stores.

James Stafford

“We are very pleased with the results of the trial. It has proved that the technology works and that it has a contribution to make, but we still have work to do on the business case and the implementation costs,” says James Stafford, technical executive of the Marks & Spencer’s intellectual property. Before rolling out RFID technology across its operations, M&S wants to study the technology and its business potential.

“We need to understand any clear business benefits, and that will mean a rigorous financial analysis of the cost of any implementation,” says Stafford.

In the initial trial, which was partially funded by the U.K.’s Department of Trade and Industry as part of the New Wave Technology program, M&S tagged 10,000 items of men’s suits, shirts and ties between Oct. 13 and Nov. 7 and sold 7,000 of the tagged items during that period.

Items were tagged with what M&S calls “intelligent labels.” Operating at 868 MHz, the five-inch-long paper labels were developed by Paxar, a White Plains, N.Y., a retailing technology company, and Dewhirst, a major supplier of clothing to Marks & Spencer, with microchips from Swiss company EM

Microelectronic.

The company chose to tag three types of menswear because they represented three different ways that clothing items are delivered from the company's distribution centers to its stores. The suits are shipped on hangers, the shirts are shipped flat in reusable totes, and the ties arrive at the distribution centers in boxes and are then transferred to hangers before shipment to stores.

According to M&S, item-level tagging of its clothing offers the benefits of knowing exactly what stock is in each of its stores. The retailer wants to use RFID to help further its goal of 100 percent stock accuracy that will enable it to ensure the right goods are delivered to the right store at the right time.

As well as tracking shipments to the store, RFID was used to provide an accurate reading of the items remaining in the store at the end of the day. This information was then sent to M&S' central inventory database to help ensure the right items were delivered the next day. Prior to the trial, the only way this data had been collected was using point-of-sale terminals equipped with bar code scanners. The results of the trial showed that there were significant differences in the true inventory levels, as determined by the RFID system, the estimated inventory levels that were deduced from using information collected by the point-of-sales terminals, which remained in place during the trial.

"All retail businesses suffer from only being able to deduce what stock is in a store. They make that deduction by knowing what was set to a store and what has been sold, but errors occur. RFID enables us to know exactly what is in the store," says Stafford.

The trial used two types of RFID readers with a fixed portals

at the distribution center and at the loading bay of the store, and mobile reader, fitted on a cart, that was used to scan garment tags on the shop floor. The trial used readers developed from Intellident and SAMSys technologies.

While M&S maintains the technology trial was a success, the company says its fixed portals read only around 95 to 98 percent of tags that passed through, whereas the mobile reader—which consisted of a PC and a reader mounted on a cart with batteries to run the system for at least two hours—offered greater accuracy as well as flexibility. Although the company may decide to replace its fixed portals with mobile readers, the mobile device used in the trial also had its limitations despite producing 100 percent read rates.

“We needed to be able to read between 1,000 to 2,000 tags a minute, and there are no handheld readers available that can match that kind of speed,” says Stafford. M&S says it expects to modify the mobile reader, making it more rugged and changing its role from that of being a processor of information to that of being merely a transmitter of information in order to cut down on power consumption and battery size.

Wary of some consumer concerns regarding the potential of RFID to help track specific consumer activity, the company posted leaflets at each cash register describing the new tags and explaining that the information on the tags was being used only for stock tracking. The M&S tags carried just a number unique to each garment, which would relate to information such as the product’s size, style or color.

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