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For Clothing Retailers, Item-level RFID on Upswing

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An ABI Research study finds the garment industry's purchasing of item-level RFID solutions will triple in the next five years, with footwear lagging behind.

By Claire Swedberg

Sept. 16, 2009—In the retail industry, apparel is expected to drive a deployment of item-level RFID tagging during the next five years, according to an ABI Research study entitled "RFID Item-Level Tagging in Fashion and Apparel." ABI anticipates the apparel industry worldwide will spend $44.8 million on item-level RFID solutions in 2009, tripling to $125 million spent on RFID systems for 2014.

The study was based on interviews conducted over the summer with approximately 20 manufacturers, systems integrators and end users. However, ABI's RFID practice director, Michael Liard, notes that the respondents—particularly the end users—were reluctant to share details regarding their use of RFID technology. "As we were doing interviews," he says, "we found that there are lots of nondisclosures, and that's a promising sign." End users, he adds, see their RFID use as a competitive advantage, and are thus unwilling to share their experience with the public.

Michael Liard, ABI Research

In the past, RFID adoption was hindered by the need for larger-volume purchases to drive down the cost of tags, but companies were reluctant to make high-volume purchases until tag prices dropped. Today, there is a new Catch-22. "Adoptions will increase as customers talk more about them," Liard explains, "but customers won't talk more about them" unless adoptions increase.

"We are very thankful for those who have been public about their use of RFID," Liard says, including American Apparel, Marks and Spencer and Charles Vögele (see American Apparel Expands RFID to Additional Stores, Conversation With Avery Dennison's James Stafford and Charles Vögele Group Finds RFID Helps It Stay Competitive, respectively).

These end users' adoptions, Liard indicates, have helped fuel the latest increase of deployments and pilots. It was on these deployments and pilots—which utilize EPC Gen 2 passive UHF RFID tags and interrogators—as well as on interest from end users, that ABI Research based its prediction of a three-fold increase in global sales of item-level RFID systems to apparel companies in five years.

"We see a mixed bag of activity," Liard states, though much of item-level RFID adoption is in specialty retailers that can employ closed-loop solutions, such as those that manufacture, supply and sell their own products. That model was first created by companies such as American Apparel, which is tagging its products and tracking them from the point of manufacture to the point of sale.

The greatest driver is return on investment, Liard says. As tag cost has dropped, investment in RFID

technology is beginning to be low enough to ensure that an end user recoups its costs within a few years. The systems, when they are deployed, are proving to reduce the cost of labor previously spent in such activities as inventory counting, he adds, while also decreasing the level of out-of-stocks, shrinkage and counterfeit products (which can impact the reputation of retailers unknowingly selling fraudulent products). Tags are also getting smaller—and, therefore, more attractive and less cumbersome—when attached to garments. And some companies are offering total RFID solutions, including integration, hardware, software and installation. Such firms include Checkpoint Systems, which serves the CPG, retail and pharmaceutical markets.

According to Liard, footwear is not taking off at the same rate. That industry has been slower to adopt the technology, he says, in part because tagging is more complicated. To tag apparel, a single RFID-enabled hangtag is attached to each garment, but to tag a pair of shoes, RFID inlays must be attached to both shoes (or embedded in their soles), as well as to their shoebox. The movement of shoes and their boxes around a store, he adds, also makes the business challenge different than that of the garment industry. Thus far, the challenge for footwear has been to use RFID to help match a shoe with its mate and their box, thereby ensuring customers purchase the proper pair. Shoe retailers have been piloting this application, but few are fully deploying the technology at this point.

Areas of innovation that may still be necessary for wider RFID adoption, Liard states, include the handheld interrogator market. While fixed readers are being deployed at dock doors and in back rooms of stores, the handheld is still an important part of most retail deployments. Nonetheless, he says, handheld RFID interrogators still need to be further developed. Most are too large and bulky for use on a store's sales floor, he notes—especially if the handhelds are to be used in the presence of customers, such as reading a tag for them to gain information regarding a specific garment. The price of handheld interrogators is also still too high for many retailers, though Liard cites new products provided by such companies as Hong Kong-based Convergence Systems Limited (CSL), with a reader that costs $1,750, as opposed to many handheld devices that can cost several thousand dollars apiece.

Other RFID-enabled technologies that are spurring the expected growth, Liard says, are mirrors (see To Glimpse RFID's Future Down Under, Gaze into the EPCmagic Mirror), shelf labels (see Two Food Chains Trial RFID-based Electronic Shelf Labels), shelving and point-of-sale systems (see Clothing Designer Brings RFID to Its Shoppers).