

## Retailers and manufacturers from around the world shared experiences and discussed challenges at RFID Journal's Apparel & Footwear Summit.

By Mary Catherine O'Connor

Aug. 18, 2006—"RFID will be a good-news story for your company," James Stafford, head of RFID for UK department store [Marks & Spencer](#) (M&S), told attendees of RFID Journal's first [Apparel & Footwear Summit](#) on Wednesday, which it co-presented with the [American Apparel & Footwear Association](#) (AAFA) at New York City's [Fashion Institute of Technology](#) (FIT). "RFID will be good news for your customers, too. And even if you don't use RFID, it'll be good news—but for your competitors, not for you."

He went on to explain the steps Mark & Spencer has taken toward rolling out its current item-level RFID apparel tracking trial for inventory control, which it is now conducting at 42 of its stores. Stafford was joined by 15 other retailers, manufacturers and RFID technology vendors who shared information on the state of current RFID technology trials and rollouts within the apparel and footwear industries. The goal of the event was for end users to help the more than 200 attendees understand how they can benefit by using RFID within various parts of their operations by describing the steps they took toward deploying the technology and the lessons learned along the way.

Presentations and conversations throughout the daylong conference and preconference forums revolved around four main themes: consumer privacy, RFID applications, tag standards and tag cost.

### Privacy

Of all industries that are currently testing and deploying RFID technology today, the apparel and footwear industry has received the most attention and negative publicity from privacy advocacy groups, led by Consumers Against Supermarket Privacy Invasion and Numbering (CASPIAN). CASPIAN has launched grassroots campaigns that criticize clothing manufacturers and retailers testing RFID to track products at the item level. The groups worry that these companies, as well as government entities, will one day use RFID tags for surveillance, infringing on consumers' privacy and civil liberties.

Mary Howell, conference cochair and AAFA vice president of industry relations, said that AAFA members should band together to establish industry-wide policies regarding consumer privacy protections and RFID. She said the AAFA wants to help its member companies that test and/or deploy RFID to inform and educate consumers about RFID in a consistent, industry-wide voice. Another person speaking at the event was Uwe Quiede, RFID project manager for German department store Galeria Kaufhof, part of the Metro Group chain of retailers. Galeria Kaufhof conducted an item-level RFID tracking pilot with one of its women's fashion manufacturers, Quiede said, and in order to inform consumers about how and why it is testing and deploying RFID at the item level, Metro Group has worked with both EPCglobal in Germany and privacy advocacy groups, including CASPIAN, to distribute educational materials.

Marks & Spenser has also addressed privacy concerns through communications programs and pamphlet distribution. "You don't solve privacy issues with technical solutions," he told the crowd, "you need to talk to [consumers] and find out what their real concerns are. It's about trust. No technology will work if you don't have trust [from your customers]."

## Technology Applications

Mischa Reis, director of RFID marketing for [Avery Dennison Retail Information Services](#), provided overviews of pilot programs in which RFID technology was used to improve inventory accuracy and the receiving process at distribution centers, and a project aimed at improving customer service.

In the latter, sales associates at a Japanese shoe retailer carried handheld RFID interrogators and used them to check back-room inventory for size and style availability of RFID-tagged display shoes. The project led to a 10 percent sales increase during a holiday season, a boost attributed to being able to more quickly locate the right size and style of shoes for customers.

Gotz Pfeifferling, the CIO of Lemmi Fashion, a children's clothing brand based in Germany, described how his company has integrated RFID into its production, supply chain and retail operations and saw cost savings and inventory accurate throughout its business.

Speakers also talked about the potential for integrating RFID into electronic article surveillance (EAS) systems that most retailers already use to reduce shoplifting--especially of high-value items. EAS tags use low radio frequencies and do not contain microchips that uniquely identify items.

But Kevin Donahue, director of business development for RFID solutions at [Checkpoint](#), a major EAS vendor, noted that his company is interested in developing reusable EAS tags (the hard plastic security tags removed at the point of sale) that would contain RFID tags that could be used for item tracking. Donahue says the company is currently talking to tag makers and is developing prototypes of such tags. Retailers could use EAS-RFID tags to conduct real-time highly accurate inventory of high-value goods within their stores.

Bosco Law, director of corporate development for [Lawsgroup](#), a contract clothing manufacture in Hong Kong, described how his company replaced a manual system using paper tickets to track work-in-progress garment production with one that uses HF RFID smart cards. The company was able to recoup its RFID investment, through better product visibility and improved production agility, within one year of deployment.

## Tag Cost and Standards

Apparel and footwear companies that are deploying UHF tags agree that the EPCglobal Gen 2 tag standard far outperforms the earlier Gen 1 tags. The materials used in apparel and footwear do not tend to cause RF interference problems, so reading these products at the pallet, case and item level is considerably easier than reading consumer goods such as groceries, electronics or healthcare products that contain water or metal. But Gen 2 has enabled faster throughout than Gen 1 because more Gen 2

tags can be read more quickly, and often from a greater distance, than Gen 1 tags.

However, many of the speakers and attendees at the summit say that tag cost is still a major barrier to adoption of RFID technology. Stafford noted that for applications such as Marks & Spencer's that do not require all of the extra user memory or advanced tag features that are written into the Gen 2 specification, a scaled-down and lower-priced version of the Gen 2 tag would be a way to address tag cost. No such tags, however, exist today. What's more, chipmakers seem set on advancing chip technology rather than scaling it down.

Vince Moretti, vice president of RFID systems with RFID chipmaker Impinj, explained that future RFID tags will incorporate more technology, rather than less. Impinj last week announced two new Gen 2 chips that will allow end users to use tags not only to track items but also to ensure they are authentic or to record supplemental data (see [Impinj Introduces Two New Gen 2 Chips](#))

With the current cost of passive UHF RFID tags (as finished labels or hangtags) approximately at 15 to 20 cents each, or lower in very high quantities, Avery's Reis says apparel and footwear companies are not likely to reap financial benefits from item-level tagging of goods priced lower than \$30 (retail price). At the \$30 price point, however, Reis' pilot program showed that RFID could provide a return of 15 to 25 cents per garment.

The companies in attendance also talked about two other overarching issues. One involved the need for the industry to define a single frequency band for item-level tags. While Wal-Mart requires EPC Gen 2 UHF tags, HF tags are more widely used in Europe, where regulations make UHF technology more difficult to widely deploy. Attendees, both retailers and manufacturers, wonder if and when companies across the supply chain will adopt RFID. Such industry-wide buy-in is needed, they say, in order to reap as much benefit from RFID as possible - and to share its costs. "We don't want to throw a 20-cent tag on every box of shoes without our retailers also using the tag," said Frank Cornelius, senior advanced manufacturing engineer for New Balance shoes.