

The tag maker's head of RFID adoption explains how companies like shirt manufacturer Seidensticker are benefiting from RFID, and describes the technology's past, present and future—as well as his own.

Sept. 2, 2009—[Avery Dennison](#) supplies a range of RFID tags and labels, including those for shipping containers, pallets and cartons, as well as for such items as clothing, jewelry or cosmetics. James Stafford, the company's head of RFID adoption since 2007, spoke with *RFID Journal* regarding the many RFID deployments his company has been involved with—including that of shirt maker [Seidensticker](#). Stafford also discussed his long career in the radio frequency identification industry, along with his experiences at [Marks & Spencer](#), where he led the retailer's RFID rollout.

Q: How did you first get involved in RFID, especially its use by retailers?



James Stafford

A: My father and grandfather owned a retail shop, so I was brought up in retail. In 2000, my job at Marks & Spencer was to look for retail innovation. We saw an electronics revolution coming that would impact the retail sector, and we began to look at RFID. I was in a lucky position because I had a good understanding of retail, and I learned about the opportunity for RFID. I was running a number of development projects in clothing and food, but RFID became the big cuckoo in the nest—the dominant project. We saw quickly that it was going to be a good opportunity.

Q: Marks & Spencer is seen as a leader in RFID. What was your role there?

A: Marks & Spencer started trials in 2003, and rolled out RFID in 2006. Today, the people working there don't see RFID as a new technology. Instead, they're interested in how it can be applied in new ways. In 2007, we got to a plateau, and I wanted to develop the technology in the field with a wider number of retailers. That's when I moved to Avery Dennison. Avery Dennison has supplied Marks & Spencer with millions of tags for its wholly owned stores. They are applied in the country of origin by the garment manufacturers for about 15 different merchandise departments. Tags are usually applied to those garments with complex sizes, such as bras and suits or jackets and trousers.

Q: What is your job at Avery Dennison?

A: My job is to support our local teams around the world as they develop business cases for retailers that want to use RFID. This means I systematically analyze the true value of the benefits of RFID, and compare this to the cost of the RFID equipment, systems and tags. Retailers need to know that they are going to get a good return on their investment from deploying RFID. I do everything from explaining the technology to working closely with clients to analyzing which business problems can be overcome. What I constantly emphasize when looking at business applications is that this is not really about the

technology: It's much more about developing a compelling business case.

Q: How, then, should retailers approach RFID?

A: The starting point is to develop a business case on paper for using RFID. Many companies start with a technology trial and hope that a business case emerges. Today, companies can do most of the preparation using the knowledge available to work out a powerful business case before buying a single tag or reader. The purpose of the trial is to prove that what you have on paper holds up in reality. And if you have a specific business case, it's much easier to choose the right tags for the application.

Q: Avery Dennison is specialized in RFID labels for apparel. What gives you your edge?

A: We have a whole team of people in R&D developing tags. Much of the RFID industry is focused on tagging cartons and pallets in warehouses. Although we do some of that, our focus is item-level. Almost 90 percent of all trials done on apparel are done with Avery Dennison tags. Most are built to the EPC Gen 2 standard. We're also experienced in customizing the tags, and we produce tags around the world in locations that are close to the locations of garment manufacturers.

Q: Do manufacturers make their own Avery Dennison tags on site?

A: We have installed label printers in factories to help our customers react to the demands of their customers. Since all the label printers are networked together, we ensure that duplicate tags are not made at other factories, or by Avery Dennison. An example of a major garment producer and key supplier to Marks & Spencer that uses in-house RFID tag printing is Dewhirst, in Indonesia and Morocco.

Q: Mr. Stafford, as head of RFID adoption, are you working on RFID deployments in other sectors besides retailing?

A: I have a European role, and I work for the Information and Brand Management Division, where we focus upon solutions for retailers and brand owners. As I personally have a retail background, I tend to concentrate in the area with which I am most familiar—but, of course, other team members have backgrounds in a variety of industries.

Avery Dennison, as a whole, does have a prime focus on the supply chain and retail, but is always interested in developing solutions for other markets, as indicated by the Hong Kong airport project. We provide RFID inlays for all the baggage tags at the airport that are used by 48 million passengers per year [see [Hong Kong Airport Says It Now Uses Only RFID Baggage Tags](#)].

Q: Since joining Avery Dennison, you helped Seidensticker, an international shirt manufacturer based in Bielefeld, Germany, implement an RFID deployment earlier this year. Please tell us about that.

A: Seidensticker will use roughly 1 million RFID labels in 2009 as it expands its RFID tagging of garments at its factories in Asia. The manufacturer is tagging garments to improve its delivery acceptance verification processes, and to meet retailers' requests for item-level tagging.

Q: Why did Seidensticker implement RFID?

A: Like other manufacturers, Seidensticker experiences delays when boxes are packed incorrectly and their contents do not match the packing list. It now uses RFID to identify boxes that are packed incorrectly and repack them before those boxes are sent to retailers. This saves transport and packaging costs.

Q: How does the application work?

A: The garments are tagged in Asia and read upon receipt at the Seidensticker distribution center in Bielefeld. Workers place boxes of almost 50 individually tagged shirts, for instance, on a moving belt that goes through a virtual tunnel reader that Seidensticker has installed. The reader was developed by Austria-based [RFiT Solutions](#), which is the integrator on the project.

The garments' EPC Gen 2 tags are read, and the contents of the box are compared with the information on the packing list. Once the system notifies workers that the carton's contents are correct, they sort garments based on orders and ship those out to retailers. Large retailers that already have RFID systems in place, such as [Karstadt](#) and [Metro](#), can use their systems to read the tags upon receipt of the garment. At a Karstadt store, for instance, the items' tags are read upon receiving with a gate reader, as they are moved to stockrooms and when they are moved to the store floor.

Q: How many tags will Seidensticker use per year?

A: Seidensticker is expected to tag 4 million shirts in 2010, and eventually all 13 million shirts it produces under various brands each year. Seidensticker uses the AD-826 inlay, which was developed by Avery Dennison. Avery Dennison prints and encodes tags at its service offices in Hong Kong, Vietnam, India and Germany, and delivers the tags to Seidensticker factories to be attached to finished garments.

Q: What sort of new business cases and uses do you foresee for RFID, especially by retailers? Do you see any developing trends?

A: The new business cases for RFID are all about using item-level tags for a variety of purposes throughout the supply chain—from the source to the consumer. This can be summarized as a "one tag/many functions" strategy.

The Seidensticker project is an example of this, since the individual items are read at various points

throughout the supply chain, and then ultimately in the retail store. Previously, people might have thought of doing this using larger RFID tags on pallets or cartons. Today, you can do it using item-level tags.

Another new use is RFID for improving the customer experience in the store. When a customer approaches an RFID-equipped mirror or screen with a tagged garment, this can trigger an automatic display of matching items, available sizes, suitable accessories or even a video of a model wearing the item. This is an area of enormous development potential, as the use of RFID tags becomes more widespread. One company active in this area is [Thebigspace](#) [see [Magicmirror Could Assist Retail Customers](#)].

Q: Anything else?

A: A fast-developing application is the use of the RFID tags to replace more traditional antitheft tags [see [Metro Group's Galeria Kaufhof Launches UHF Item-Level Pilot](#)]. When a standard RFID tag is read at the point-of-sale counter, it can be coded to indicate that it is attached to an item that has been paid for. If a customer leaves a store with items without this coded confirmation, an alert can be triggered and appropriate action initiated. A big advantage of using RFID tags in this way is that when items are stolen from a store, the system can record exactly which items have been taken, and the inventory can be updated. Traditional antitheft tags can't do this.