

# Lemmi Fashion

## Making (13.56) Waves

Lemmi Fashion has been forging new ground since it opened its doors in 1959 as Lemmi Trousers, specializing in different fits for children.

Today, it is forging new ground by improving its supply chain, moving products to market more quickly and accurately through the use of radio-frequency identification (RFID).

The Fritzlar, Germany-based company, which has expanded into items such as jackets, ski wear, T-shirts and dresses, continues to offer a wide variety of size and fit options in a wide variety of styles and colors for its customers' "action-packed childhood days."

### Sky-high SKU count = tracking nightmare

Perhaps "wide variety" is an understatement. The company produces approximately 80,000 SKUs annually, in some cases making as few as four of any given SKU. Lemmi — still owned and operated by the founding Lehmann family — offers approximately 250-280 styles per season, and about 1 million garments per year for the European and Asian markets.

The small batches might seem counterproductive, "but we need them," says

Fashion-forward children's wear brand Lemmi is breaking new ground with item-level RFID tagging on 100 percent of its apparel.

Götz Pfeifferling, CIO, "because the Lemmi concept is about offering different fits in all trousers and styles."

Such small lots and multiple offerings made inventory tracking and deliveries particularly difficult, yet significantly more important, he says.

"When four customers order two each [of one SKU], and we order [a total of] eight pieces, and China doesn't deliver two of those eight, we have a huge problem," he says.

There's not a lot of wiggle room with a two-piece order.

Lemmi also struggled with inefficiencies in its warehouse. Though it used barcodes, it relied on manual counts to take inventory, and salespeople often sold merchandise that didn't exist or could not be located. There were always some garments tucked away in the warehouse where no one could find them.

### Taking the RFID plunge

Seeking to improve its speed to market, inventory management and order accuracy, Lemmi embarked in 2004 on an initiative to improve its supply chain transparency.

The company needed better information from its manufacturing partners in Asia and Poland about goods in transit so that

it could improve warehouse planning, flexibility and ultimately, customer delivery.

After the goods arrived at its 30,000-square-meter distribution center (DC) in Germany, the company also needed the ability to quickly track, count, stock and pick merchandise and to better plan its distribution.

### systems at a glance

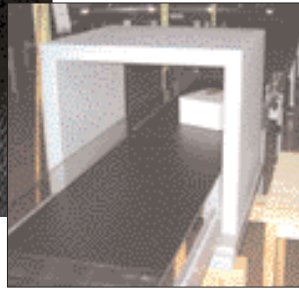
- **Business Reporting:** Business Objects
- **CAD:** Lectra
- **ERP:** Microsoft Navision
- **RFID:** Infineon (software and hardware) Philips (chips) Checkpoint (RFID hangtags) Avery Dennison (printer)
- **WMS:** Microsoft Navision

*Lemmi Fashion's children's wear is unique in offering different fits and five different sizes for trousers (slim, mid, big, superbig and superbig+) as well as two different fits for tops and jackets.*





*From production through delivery, Lemmi's garments are tracked at the item level with a one-way RFID hangtag that contains size, color and style information.*



"We needed to be able to tell our customers when we would be able to deliver our goods to them," says Pfeifferling.

That's when the company turned to technology solutions provider Infineon, which specializes in RFID implementations. After research that included visits to pilot projects Infineon was conducting with other companies, Lemmi decided to implement RFID.

Most notably, unlike other companies beginning to employ the technology, Lemmi never considered pallet- or case-level tagging, bypassing it completely to implement RFID tagging at the item level.

"Because the number we produce of each SKU is very small, pallet- and even container-level tagging were never [viable options]. We need to have information about those very, very small numbers [of different garments within a single case]," says Pfeifferling.

In early 2005, Lemmi began the project, fully integrating the RFID technology into its supply chain, from production to end consumer.

Simultaneously, the company undertook two other major projects, implementing a new ERP system from Microsoft's Navision, and fully automating its DC with Navision software and Siemens hardware. All of the systems are fully integrated, e.g., you can't do a booking in the ERP system without the assignment of corresponding RFID tags.

Also, because the information from the RFID readings automatically populates the ERP and Navision systems, it is available company-wide to anyone who needs it.

"So we have a very complex, but a very smooth process," says Pfeifferling.

By mid-2005, the RFID implementation was fully operational, and 100 percent of product was tagged for holiday 2005 deliveries.

### Accounting for each garment, reaping the rewards

Lemmi's garments are tagged at the point of production with a one-way RFID hangtag operating at a frequency of 13.56 megahertz. The hangtag contains size, color and style information that enables Lemmi to track each garment's whereabouts four times: 1) in transit from vendor to DC, 2) upon arrival at the DC, 3) as it moves from quality control into its assigned warehouse section

## Establishing RFID Best Practices for Apparel

### View from a new European consortium

Lemmi Fashion's RFID program uses the 13.56 megahertz (MHZ) frequency instead of the 860-960 MHZ (UHF) frequency favored by U.S. companies.

Götz Pfeifferling, CIO of the German company, says Lemmi opted to use the 13.56 MHZ frequency because of its high accuracy. UHF offers a greater range but poorer quality, he says.

The distinction goes to the heart of the RFID wars over standardizing frequencies and RFID best practices, says Andreas Schneider of Germany-based consulting firm GCS.

In partnership with standards organizations GS-1 Germany and EPCglobal, GCS has organized two related fashion-oriented business groups, comprised of European companies\*, to develop a system of standardized RFID best practices that will allow RFID-tagged items to work not only at the point of sale but throughout the entire supply chain, regardless of the individual logistical environments involved.

The goal is to develop a system, based on participant experiences, which can be used worldwide as a base RFID solution — one that can be used efficiently in all apparel market segments, and that encompasses an approved way of embedding RFID tags permanently into any garment, says Schneider. This would create maximum efficiency and aid in theft protection.

Other goals include: the development of a textile "smart label"; the initiation of group price negotiations with systems and components suppliers; and PR efforts with consumer protection organizations about privacy issues and other concerns.

Schneider says that standard frequencies as well as best practices are crucial if RFID is ever to work on an industry-wide basis. Best practices would include, for example, establishing a standard height at which hanging garments are carried and moved through RFID readers.

Regarding frequency, Schneider says that UHF is viable only for readings at the pallet and case level. Assumptions that UHF tags will be easy to implement at the item level once tag costs decrease are erroneous, he says.

GCS' recommendation for item-level tagging is 13.56 MHZ, which he says offers a wide range of benefits over UHF chips, such as greater data storage capacities, superior EAS properties and better technology that eliminates unwanted readings.

► for more information:  
[www.gcs-consulting.de](http://www.gcs-consulting.de); [Schneider@gcs-gcs.de](mailto:Schneider@gcs-gcs.de);  
[www.epcglobalinc.org](http://www.epcglobalinc.org); [www.gs1-germany.de](http://www.gs1-germany.de)

\*Members of the consortium include Adler, Bultel International Fashion Group, Gardeur, Gerry Weber, Hellmann Meyer and Meyer, Hennes & Mauritz, Karstadt, Kaufhof, Mustang, Otto Versand, Philips, RF-IT Solutions (formerly Infineon RFID Division), Rosner, Siemens Business Services and Windsor.

and 4) in shipping, where it is reconciled with the purchase order.

The RFID hangtags, which include a visible version of the RFID tag and a traditional bar code, are read by mounted RFID readers, antennae and handheld readers positioned at these four points along the supply chain.

Lemmi already is witnessing improvements in its daily business operations as a result of its RFID implementation. For instance, better visibility into the location of warehoused goods has led to improved accuracy of deliveries, and better ability to pinpoint the source of problems if they do occur.

The other standout benefit of RFID is the overall increased speed from ex-factory through delivery. "We are much faster in all processes: Taking the goods into the DC, getting goods into the warehouse, counting goods," Pfeifferling says. "And the qual-

ity of the counting is much better than by hand, because the antenna doesn't make any mistakes."

### Retailers getting in the game

Retailers also can reap the benefits of the tags, to the extent that they have implemented RFID technologies of their own. Pfeifferling says that German retailers in particular are very serious about moving toward the technology, and that Lemmi plans to move to an even more integrated supply chain with its major customers.

Apparel retailer Kaufhof, for example, started a project several years ago to track merchandise at the item level. Its parent company, mega retailer Metro Group, is one of the forerunners of RFID technology. Like Wal-Mart, the Metro Group mandated RFID implementation — at the case and pallet level — for its top 100 suppliers.

Lemmi is involved in a project with one major customer whereby the two companies identify redundant processes or other areas where they can save money by working together and "trusting" each other, says Pfeifferling. For example, because Lemmi does a 100 percent check of its outgoing deliveries, the retailer does not do a 100 percent check as Lemmi orders come into its warehouse.

Pfeifferling says he is excited about the options that RFID brings to the table. "RFID and EDI combined open completely new options for integrating sales and production planning into the fastest-possible supply chain you can imagine," he concludes. ■

*Jordan K. Speer is senior editor of Apparel. She can be reached at [jspeer@apparelmag.com](mailto:jspeer@apparelmag.com).*

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