

The German children's clothing manufacturer says falling costs and global standardization influenced its decision to migrate from HF to UHF tags for product tracking.

By Mary Catherine O'Connor

Aug. 21, 2007—[Lemmi Fashion](#), a German supplier of children's apparel, is an RFID maverick. Two years ago, when most retailers were taking baby steps, running small-scale pilot tests involving hundreds of cases and pallets, Lemmi was busy scaling up to deploy RFID for tracking 100 percent of its SKUs at the item level. The company's aggressive approach—which begins with its suppliers (one in Asia and two in Europe) tagging each piece of apparel at the point of manufacture—paid off, says Lemmi's CIO, Goetz Pfeifferling. RFID enabled the company to double, and sometimes triple, the number of goods it processes at its distribution center, which in turn allowed it to add two more product deliveries to its retailers per year. RFID also sped its business processes so much that the company slashed its rush order processing from six hours to three or, occasionally two. It also brought inventory accuracy up to 99.9 percent.

But it wasn't just Lemmi's fast and thorough adoption of RFID that set it apart. In 2004, while most of the retail industry debated the merits of the globally standardized, more mature high-frequency (HF) RFID tags against the nascent but promising ultrahigh-frequency (UHF) EPC tags being developed for supply chain applications, Lemmi made a bold decision. It embraced the older, standardized HF (13.56 MHz) technology because it believed UHF tags were not viable for item-level tagging. Now, however, advances in UHF EPC tag performance, backed by falling UHF tag costs and Lemmi's desire to work with its retail partners on an end-to-end product tracking system based on a single technology, has led to the company to switch to the higher frequency band. Beginning in October of this year, the company will begin a complete migration from HF to EPC Gen 2 UHF technology. It expects the project to take two months.

While he won't say what Lemmi is paying for the UHF tags and hardware, he says the savings over its current HF system is significant. "Gen 2 hardware is cheaper than HF, and we will be generating a return on investment on the UHF project within eight months," he says.

Lemmi already knows RFID has improved its internal systems, and now believes it will provide benefits through better product tracking and visibility with its retail customers. "We see our customers moving towards [UHF] RFID. Kaufhof [owned by German retail giant Metro], Karstadt and Wal-Mart have been sending out strong signals and are using UHF, a reason for our customers to follow suit," he says. "UHF technology and standardization of UHF and the EPC have undergone a massive development within the last two and a half years. The broad availability of UHF Gen2 products nowadays...finally convinced us to move away from a HF solution that does work very well."

Lemmi will work with German RFID systems integrator [Meco Group](#) to manage the change throughout Lemmi's DC and three manufacturing facilities. As a certified reseller and integrator of [Reva System's](#) RFID reader networking infrastructure, Meco will install the Reva Tag Acquisition Processor (TAP)

servers. The TAP servers are rack-mountable appliances that will let Lemmi centrally control the network of [Impinj](#) Speedway UHF Gen 2 RFID interrogators that will be installed at each manufacturing facility and the DC. The TAP servers will link the networks of readers into Lemmi's local area network (LAN). They will also filter and aggregates tag reads before sending the tag data to the [Microsoft](#) Navision enterprise software the Lemmi uses as an enterprise resource planning platform.

[Checkpoint Systems](#), which provides the HF (13.56 MHz) ISO 15693-standard tags that Lemmi uses today, will supply the EPC Gen 2-compliant tags for the new system. It will also handle the installation of the Impinj interrogators and other RFID hardware needed at the various facilities, such as antennas and portal read stations.

"We will continue to ship our remaining stock tagged with HF tags for approximately three months, until we will turn off the last remaining HF readers," says Pfeifferling. (The readers will be kept on hand for use in identifying returned HF-tagged items from Lemmi's retail partners.) But by November, he says, all goods that the company ships will carry UHF Gen2 tags.

In time, Lemmi may begin using the Checkpoint's hybrid UHF RFID-electronic article surveillance (EAS) tags (see [Checkpoint Combines EAS Tags With RFID](#)), but doing so would mean that all of its retailer customers would need to be able to deactivate and remove the specialized tags and would therefore need Checkpoint Systems equipment, which not all of them have presently.

Pfeifferling will describe Lemmi's plans for migrating to UHF at the [RFID Journal-AAFA Apparel & Footwear Summit](#) in New York City on Wednesday.