

Metro Opens 'Store of the Future'

Updated: At a store in Germany, the European retailer and its partners will learn whether RFID can reduce out of stocks.

April 28, 2003 - Metro AG, Germany's largest retailer, today will open what it calls the "store of the future." The concept store is designed to test RFID and other technologies under real-world conditions to see how they perform and how consumers respond to them.

"We are not just building up a store," says Albrecht von Truchsess, a Metro spokesperson. "It's about developing visions for retail in the future."

One of Metro's Extra stores in Rheinberg, Germany, has been outfitted with smart shelves, RFID self-checkout systems, kiosks, smart scales and other leading-edge technologies. The store is open to customers who can either chose to use the new systems or shop the old-fashioned way.

The store boasts a wide variety of advanced technologies. Among the major vendors involved in the project are Cisco Systems, IBM, Intel, Intermec, Philips Semiconductors and SAP. But RFID is the most important technology being tested because it is being used to track goods from suppliers to distribution centers to the back of the store and finally to the shelves. The aim is to see if the system can reduce out of stocks.

At the DC, RFID readers from Intermec scan tags on cases as pallets are being loaded with product. The tags can be programmed at the manufacturer with a Global Trade Identification Number (GTIN) and a serial number. This information then is read as the tagged items pass through dock doors and at transshipment points. Pallets and cases are scanned to provide accurate shipment and inventory data, which is transmitted to the project's SAP system.

Suppliers, including Gillette, Kraft, and Procter & Gamble are working with Metro to tag goods. Gillette is tagging its razors, which are tracked using smart shelves that were developed by OAT Systems. The shelves monitor the number of items on it, and alert staff when more product needs to be brought out from the back room (see Is This the Future of Retailing?).

Individual products in the Future Store, including CDs, DVDs and videos, are tagged using RFID tags with I-Code microchips from Philips, which incorporate theft protection. The tags operate at 13.56MHz and have a read range of up to 1.5 meters (5 feet). Cosmetics and food products are also being tagged to provide real-time inventory data and to track expiration dates.

"Not all of the technology that we are using in the store is new," says von Truchsess. "But this is the first time they've been used together in an integrated environment. We want to see how they will all work together and how customers will accept them."

In addition to showing the benefits of tracking items with tags, the store will also show how the tags can provide additional benefits to Metro customers. For instance, when you swipe a tagged music CD near a reader, the system will play a sample of music from the disk.

Shopping carts have RFID tags on them, and readers at the door tell the store manager how many carts have entered or left the store. If there is an increase in the number of carts entering the store, more checkout aisles can be opened.

Inside the store, customers can cruise down the aisles pushing a shopping cart that has a touch screen computer that provides directions to products. Shoppers who opt-in can scan their ID card into the computer. They can then scan the bar codes on products they want and put them into the cart. (Later, this could be done with RFID.) The computer on the cart sends the prices to checkout by radio signals through a wireless local area network network. When the customer checks out, the cash register system displays the total and the cashier takes your money and gives you change.

The store also features price displays on shelves that can be updated remotely. There's also a vegetable scale with a built in camera. The device, developed by IBM, can recognize the fruit or vegetable being weighed and print out the price sticker.

Metro plans to share some of what it learns with other retailers. Von Truchsess says one aim of the project is to help to develop uniform standards and processes for retailing. The company believes that by helping to promote some of these standards, all retailers can gain new efficiencies.

The project uses EPC infrastructure technology, but not actual EPC numbers because there is no organization to issue those numbers yet. The store is the largest deployment of EPC technology in Europe so far. Tesco has been testing smart shelf technology with Gillette at one of its UK stores. And Marks & Spencer revealed that it plans to launch a pilot in which it will track clothes using EPC technology (see EPC in Fashion at Marks & Spencer).

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