

To Future-Proof its Future Store, Metro Opted for EPCglobal Standards

The retailer claims that its Future Store's butcher shop uses one of the world's first full-blown EPCIS software stacks.



noFilis



Sept. 26, 2008—The Metro Group's RFID application in the butcher shop of its new Future Store uses one of the world's first full-blown EPC Information Service (EPCIS) stacks since all layers of software ("stacks") are compatible with EPCglobal standards, the retailer says.

EPCIS network infrastructure enables companies to store data associated with EPC RFID tags in secure databases on the Web and to provide different levels of access to that data to different groups. Some information associated with an EPC might be available to everyone, while other information might be available only to a manufacturer's retail customers.

The butcher shop is using EPC Gen 2 passive UHF tags to track individual packages of meat, ensuring its display cases are well stocked, and that no one buys expired products (see [RFID Helps Assure Meat Quality](#)). The designers of the system also had another goal: They wanted to develop a system that complied with EPCglobal standards on all levels so that outside companies could easily connect to it.

"We strongly believe that it is strategically vital to avoid proprietary software interfaces because it is the only chance to establish a dual-vendor strategy not only in hardware but also on the software components in the stack," says Christian Plenge, the head of research and innovation at Metro Group Information Technology. "All interfaces of the system at our new Future Store are standardized, allowing us to change the application or the vendor. If you have standardized interfaces, you can exchange data with supply chain partners much easier than without, and we're much less vulnerable if we lose a technology partner to a merger or due to insolvency."

The butcher application uses **noFilis'** CrossTalk Control Center device management software to format data collected via RFID for Metro's ERP system. CrossTalk also controls devices so they can communicate effectively. By using the CrossTalk Control Center rather than connecting readers directly to Metro's SAP ERP system, Metro gains flexibility and openness, NoFilis claims. For instance, if a person replaces a piece of hardware, the CrossTalk Control Center will make sure it is configured in the same way the previous hardware was configured.

Dimitri Rjavine, the chief software architect at noFilis, says the system also complies with EPCglobal's low-level reader protocol (LLRP) and application level events (ALE) standards. LLRP specifies an interface between RFID readers and clients, enabling control of RFID air protocol operation timing and access to air protocol command parameters. ALE specifies a

software interface through which client applications may interact with EPC data. The software layer filters and aggregates data following instructions from EPCIS about what should be read, how it should be read and what data should be reported for the application.

The two companies say Metro's system is very important for the whole RFID industry since they believe the EPCglobal approach of creating standardized layers of software interfaces—that is, end-to-end EPCglobal standards—is very important for speeding the adoption of RFID.

"Some people take the short way and implement an RFID reader directly into the back end of their system," Rjavine says. "But we believe that it is not the way to help the RFID industry to become a commodity. We're thankful to Metro for pushing these RFID standards."

Frank Kuhlmann, a senior project manager in research and development for EPC RFID solutions at GS1 Germany, the German member of EPCglobal, says Metro's application is consumer-oriented and delivers practical benefits to the end customer. Since Metro uses EPCIS-based applications, it is able to steer its operations in real time. It processes information in a standardized way and makes it available for analysis by creating so-called EPCIS events. These EPCIS events can be managed by means of the latest IT technology, made available for all sorts of software applications and used in a wide variety of business processes."

Kuhlmann says the worldwide EPCglobal community is working to make the standardized discovery of EPCIS data sources possible so that companies can search for every RFID interrogator that has ever read a particular EPC. This will make supply chains more transparent and make it possible to pull up information about goods in supply chains anytime and anywhere.

Looking ahead for its Future Store, Metro plans to deploy a wireless payment technology that complies with the Near Field Communications (NFC) standard. NFC systems use high-frequency RFID technology to send data between devices at close range. The application will let Future Store customers use NFC-enabled mobile phones to pay for their purchases, in the manner similar to way they might use a contactless credit or debit card. The retailer recently announced it is in the process of planning a long-term trial of the application with selected consumers.



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