

Microsoft Spells Out RFID Strategy

The company plans to be a major player in RFID by providing a platform for managing retail-time information and bringing RFID-enabled applications to midsize enterprises.

Jan. 30, 2004—Microsoft plans to be a major player in the RFID market. The Redmond, Wash.-based software company aims to provide the software infrastructure large companies need to take advantage of real-time data and that the company's technology partners need to offer RFID-enabled products. In addition, Microsoft will offer a complete suite of RFID-enabled applications for midsize companies.

"We are committed to this space because it's an important technology for our customers and our partners," Javed Sikander, Microsoft's program manager for industry solutions enablement, tells *RFID Journal*. "We're committed to providing the technology that our customers want and that our partners need to RFID-enable their solutions. You'll see us bringing innovation to this space."

Sikander has been helping to lead Microsoft's RFID efforts for about a year. For large corporations, Microsoft's strategy is to focus on the software infrastructure that will sit between the RFID readers and enterprise applications. The company has identified three areas where it will provide infrastructure elements built around the Windows CE operating system, SQL Server Accelerator for Business Intelligence (data-mining software used with SQL database) and BizTalk, a middleware that uses the extensible markup language (XML) to enable incompatible software applications to share data.

The first area involves Windows CE, Microsoft's operating system for small devices, such as handheld computers. The company is encouraging original equipment manufacturers to use the operating system to manage RFID readers.

"We are hearing from our customers—especially those who have large environments where they need to deploy various types of RFID devices: dock door readers, handheld readers, RFID controllers and so on—that they require better solutions to manage these devices," Sikander says. "RFID readers [from different vendors] function differently and communicate differently, so there is no single way to manage them as network devices, no one way to turn them on and off, check their health and so on."

No licensing agreements have been announced yet, but Windows CE could provide a consistent way of managing readers and make it easier to integrate the readers with bar code scanners and handheld computers. Many bar code scanners and handheld computers already use the operating system.

The second thrust of Microsoft's strategy is to provide middleware that can take data feeds from a reader, aggregate the data, do data smoothing and filtering, and then store the data. This layer would also provide a level of intelligence by interpreting the data in basic ways, such as determining which applications to route data to.

"We see our existing products like SQL Server providing the functionalities that are needed for RFID data management," Sikander says. "You also need to analyze this data and take actions. Finally you need to aggregate the data and route it to your line-of-business applications. BizTalk has all these capabilities."

To help companies manage this real-time data, Microsoft may offer new server software that will provide functionality to enable companies to route RFID data to the real-time database and business applications. (The company is currently determining whether a new product is needed or existing server products can handle these tasks.)

"This piece of software will have an extraction layer that allows you to communicate with all the readers, gather the data, do the product lookups, and stage the data in SQL databases," Sikander says. "We are engaged in pilots with customers using our technology and have seen some interesting results."

Microsoft recently announced a pilot with KiMs, the largest snack food maker in Denmark (see [Microsoft Pilots RFID Middleware](#)). As part of that pilot, Microsoft developed new RFID-capable middleware that it plans to integrate with its Axapta warehouse management system by next year.

The third area of Microsoft's strategy is providing the capability to act on real-time data. "There's a need to make some real-time tactical decisions outside of the line-of-business applications, in a point solution that could incorporate tactical business processes," Sikander says. "For instance, if you are shipping a pallet and you are missing two cases, you don't need to send that information to your line-of-business applications; you need to make a decision about what to do right then and there."

Microsoft plans to provide the infrastructure capable of supporting real-time decision-making through a combination of SQL Server Accelerator for Business Intelligence and BizTalk. The idea is to create a real-time database where information can be "staged" and acted upon before being aggregated and passed on to line-of-business applications or operational databases.

For example, if pallets are being assembled and cases are missing, the infrastructure layer would provide business rules that would check the real-time database to see whether the cases were in stock, and then recommend a course of action based on the results. If in stock, the cases could be retrieved and the inventory management database could be updated, an advance shipment notice could be sent to the retailer, and a record of the shipment could be recorded in the company's financial system.

Microsoft's strategy in the software market for midsize companies is to RFID-enable all of the business applications it acquired when it purchased enterprise software companies Great Plains (acquired in April 2001) and Navision (acquired in May 2002), the original developer of the Axapta software that Microsoft is using for the KiMs pilot.

Most midsize enterprises will add RFID capabilities only after the major players do so, according to Sikander, but he says Microsoft's philosophy is to take technology that previously only tier-one and tier-two companies could afford and bring it to tier-three and tier-four companies. Microsoft plans to offer business applications that are RFID-ready right out of the box.

"We will offer retail management, warehouse management and other solutions for midsize companies that will be RFID-enabled," he says. "RFID gives the bigger players visibility that lets them better serve their customers, and the midsize companies can't afford to let the big players have an unfair advantage."

Although not currently a member of EPCglobal, the organization commercializing Electronic Product Code technology, Microsoft is committed to open standards for RFID. "We have been engaged with EPCglobal for past five or six months," Sikander says. "We are working with them on their intellectual property policy, and we're getting close to the point where those policies are in line with other open standard policies and we can join. We're fully committed to supporting EPCglobal."

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