

Wipro Starts Up RFID Retail Pilot

In its company store, Indian software and IT services provider Wipro Technology deploys RFID to better serve its retailer customers.

By Jonathan Collins

July 26, 2004—To help it understand the issues surrounding RFID deployments in a retail setting, Indian software and IT services provider Wipro Technology has been testing RFID in a retail store the company operates on the campus of its headquarters in the Electronics City industrial park in Bangalore, India. In early July, Wipro finished building out an RFID system in the 1,000-square-foot campus store. The company maintains it is the first RFID-enabled store in India. Tagged apparel in the store can be tracked in order to enable the store manager to monitor the purchase, theft and stock maintenance of items. The concept store, as Wipro calls it, has already been visited by the company's existing and potential customers so they could see RFID in action.

Wipro says it spent about three months scoping, analyzing, designing, implementing and testing the project deployment. Configuration, deployment and testing took around one week.

According to Wipro, designing, developing and deploying its own RFID pilot provided the company with a great deal of first-hand experience regarding the kinds of issues its retail customers will face with their own deployments. As well as highlighting the requirements of middleware and software integration, the project taught the company about the significance of a site survey, the need to design and deploy RFID hardware within the context of the business for which it is deployed, the importance of antenna orientation for smart shelves, the impact of an RFID system on existing business processes and applications and the amount of work required to develop new systems to work with RFID.

“The concept store deployment allowed us to analyze and understand the roadblocks to a successful RFID deployment, such as knowing where to place reader antennas to get accurate tag readings. We also learned about the software requirements, and what we learned will be documented and put into our knowledge bank,” says Bhanu Murthy, vice president of Wipro's retail vertical division. Wipro provides software development and IT services to some of the world's largest retailers and is working to develop a range of RFID software products that can be customized according to individual customer requirements (see Wipro Seeks Expanded RFID Role).

With two antennas placed on the store shelves and tags on individual garments, the system is able to report to the store manager when stock levels are low on the shelf or when tagged items are placed on the wrong shelf. Another antenna placed at the point-of-sale terminal can be used to verify purchases. Near the store's entrance are placed two antennas—one to record which products are leaving the store and the other to read the RFID identification tags of people entering or leaving the store. (Only a few of the 6,000 employees on Wipro's campus presently have RFID tags attached to their employee ID cards.)

The company deployed two Alien Technology 915MHz EPC Class 1 Specification ALR 9780 readers with five linearly polarized Alien antennas. The readers are connected to an Ethernet hub, which in turn is

connected to OATSystems Senseware 3.0 Beta middleware. During a weeklong trial of the technology in mid-July, the company used a mixture of Alien read-only and programmable Class 1 tags. Both types of tags were used in the same manner to identify the items to which they were attached. The two types of tags were used to experience and demonstrate the respective capabilities of a read-only tag and a programmable one that could be reassigned a new identification number for subsequent item identification.

The company says that during the next few months, it plans to extend the trial by tagging other items, including frozen goods and soda cans, in order to test the ability of tags and readers to provide a reliably high rate of successful reads. The RFID system will be a permanent feature of the store and will be constantly upgraded, says Wipro.

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