

# DHL to Test Tags on Returns

The trial is part of a larger initiative to test RFID systems with the help of partners Philips, IBM, SAP and Intel.

By Mary Catherine O'Connor

Mar. 16, 2006—Next month, courier service DHL will begin a proof-of-concept RFID technology trial in the United States, involving an undisclosed DHL customer that manufactures consumer electronics. This represents one of the first RFID technology trials the company is rolling out in connection with its "DHL Innovation Initiative," a global partnership project in which DHL is working with Philips Semiconductors, IBM, SAP and Intel to develop and introduce new technologies for the logistics industry. DHL's parent company, Deutsche Post World Net, announced the initiative in February.

IBM is the main technology partner working with DHL on this initial U.S. RFID pilot, which will track parcels being sent to and from the electronics firm's repair facility. IBM's RFID middleware, part of its WebSphere platform, will be used to manage RFID hardware provided by Intermec. This hardware is being deployed for the trial, and to process the RFID tag data in accordance to the project goals. The smart labels to be used are made with Philips' Gen 2 chips.

"IBM has existing relationships with the other technology partners [Philips, SAP and Intel] in this initiative," says Scott Burroughs, IBM's solutions executive for sensor and actuator solutions. "We work together frequently on many end users' RFID projects."

In the past, when purchasers of the electronics firm's products needed to have items repaired, DHL sent those customers specialized padded shipping boxes. The customers placed the devices into the boxes and returned them to DHL, which delivered them to the firm's repair facility. For the field trial, DHL will add RFID tags to the shipping boxes, encode a tracking number onto each tag and associate the tracking number with the return authorization number IBM issues for products in need of repair. The goal is to automate the shipping and receiving process.

"The repair facility has a one-day turn-around policy on the repairs," says Bob Berg, DHL Express RFID program manager. "So the faster it can receive the devices into [its] facility, the faster its technicians can begin their repair work."

For the trial, RFID printer-encoders at DHL's Wilmington, Ohio, hub will generate smart labels with the shipping information and DHL's tracking number encoded to each smart label's tag. These labels will then be placed on the empty boxes before delivery to consumers.

Each day, workers at the hub will receive an average of 1,000 boxes containing items for repair. The workers will stack the tagged boxes onto pallets, which will then be loaded onto a plane headed for the repair facility in Memphis, Tenn. There, they will be pulled through an RFID portal interrogator collecting the tag IDs. These IDs will be forwarded to the repair facility so administrators can determine, in advance, how many parcels it will receive each day—something Berg says is not done today because scanning each bar code as

the boxes are placed onto the pallets in the DHL hub would be too time-consuming. Furthermore, while the average shipment contains 1,000 devices for repair, it might sometimes consist of as few as 500 devices or as many as 1,500. With the RFID system in place, the repair facility will be able to use this information to schedule its workforce to handle each day's incoming repairs, says Berg.

Through this advance shipping notice, the repair facility can also access each box's corresponding return authorization number, which it can use to look up the customer's service file and know up front the types of repairs likely to be required for each parcel.

Once the pallets arrive at the Memphis repair facility, the pallets will again move through a fixed RFID portal interrogator, which will read the tags. In the WebSphere platform, the tags' IDs will be compared with the advance shipping notice to determine if any boxes are missing. This process should lead to significant time and labor savings for the repair facility, Berg predicts, because in its current receiving process, it generally takes workers anywhere from a half hour to a full hour to scan the bar codes on 500 to 1,500 parcels. This will also mean time savings for the DHL crews that deliver the shipments each day, enabling them to be back on the road delivering more packages sooner.

Once repaired, the product will be shipped back to the customer in the same box in which it was received. A new smart shipping label will be applied to the box, printed with the address of the consumer, and with the same DHL tracking number encoded to the tag.

In addition to such time savings, Berg hopes the trial will increase DHL's visibility into its shipping and receiving process by being able to compile a manifest of each pallet full of parcels being sent to and from the repair facility. He says DHL could expand the pilot to other hubs if successful, including one in Miami, where DHL handles repair shipments for the electronics firm's customers in Latin America.

Berg notes that as part of the DHL Innovation Initiative, a number of RFID pilot projects are already underway or being planned in Europe. These include a project to track DHL uniforms throughout the supply chain, from the point of manufacture, through distribution, and to the point of receipt by DHL. He says another project with a pharmaceutical company will involve using RFID to track medical specimens and samples in transit. Additionally, Berg says, projects are being developed to use RFID to track products throughout each of the project partners' own supply chains wherein DHL will transport the goods.

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