

# DHL Demos RFID-Enabled Delivery Van

The prototype is designed to show how RFID could provide a way for customers, contractors and DHL to track both the movement of vans and the location of packages.

By Claire Swedberg

March 6, 2007—Global courier DHL has unveiled a prototype of an RFID-enabled van using software and hardware provided by SAVR Communications. The company developed the van to show existing and future customers how RFID technology can benefit them, as well as independent contractors and DHL itself in tracking the movement of vehicles and the individual packages they transport. However, the prototype has not been field-tested.

The prototype DHL van, which had been under development for the past few months, comes equipped with an RFID interrogator and antennas for locating an RFID-tagged package within the van, as well as a GPS device for monitoring the location of the van across its delivery route.

The project began a year ago, says Brian Johnson, DHL senior systems business analyst, when he asked representatives of SAVR Communications how they could help him create a "glass pipeline," which would provide better package visibility for shippers. The current system enables shippers to track package locations only when they pass through major terminals, such as stations, hubs and gateways.

As a result, SAVR began work on a Chrysler Plymouth van about six months ago, says Adam Crossno, vice president and general manager at the RFID technology provider. It tested RFID interrogators and various configurations to enable tags to work around metals in the truck.

The current prototype van comes equipped with a SAVR UHF Gen 2 RFID interrogator complying with the ISO 18000-6C standard, and seven antennas installed throughout the interior of the van. They capture the RFID number of each tag on a package as it is loaded into the van and send that number to the reader. Antennas then automatically capture the number again when the package is removed. With SAVR software, DHL's back-end system would be able to determine whether the package is being loaded or removed based on which antenna (such as the antenna in the back of the vehicle or by the door) captures the package's RFID tag number.

With each read, data could be sent to the DHL server via a cellular network connection (GSM or CDMA) using SAVR's associated tracking software. To demonstrate how the system works, DHL is using EPC Gen 2 RFID tags from a variety of suppliers.

Recipients of packages could log onto the DHL Web site and see not only whether the package was loaded onto the van, but confirm whether it was delivered and see where the van is. The van's GPS tracking device pinpoints where the van is at any time in its route, and that van number is linked with each package ID number. "If they see the package is only four blocks away, they know this isn't a good time to leave the house," Johnson says.

The RFID system also provides DHL or its independent contractors with a waybill listing what package inventory remains in the van. The RFID system would be able to provide on-demand in-vehicle inventory polling, meaning that a DHL employee can get a real-time count of packages still in the van at any point, based on reads from the van's interrogator.

The van is only a prototype, and DHL says it has no intention of deploying such a van at this point.

"We want to show that DHL is consistently looking at new and innovative technologies to provide a higher level of service than our competition," Johnson says. "What we're trying to accomplish is to show the value of RFID technology: Clearly, it increases visibility, and that's a real benefit for our customer."

Before DHL begins a field trial of the prototype, "additional feasibility studies, customer analysis and ROI models must be further defined," Johnson explains, adding that his company has set no specific date for such studies. "When bringing new technology and innovations to our industry, it is important to listen to the voice of the customer and make sure you are providing a product or service that is both needed and economically feasible to deliver," he says.

RELATED\_ARTICLES If DHL decides to deploy a fleet of RFID-enabled vans, the courier, as well as independent contractors that manage the DHL van fleet can benefit not only from knowing where their vans have traveled, and what routes were taken, but can also use sensors installed on the van to measure vehicle speed, idle time, driving habits and other vital vehicle safety data.

"We're very excited about the van," says Crossno. "This is a neat piece of technology."

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