

The carrier hopes to use the technology to provide new services and to improve its ability to return checked-in luggage to its passengers.

By Jonathan Collins

Aug. 18, 2006—Air France-KLM is applying RFID tags to checked baggage at two drop-off points at Amsterdam's Schiphol airport and one baggage drop-off area at Paris-Charles de Gaulle. The company is looking to determine if RFID tagging can better track and trace information, and eventually replace the existing bar-code technology.

"To improve our baggage process, we have to better understand where there might be problems," says Franck Lucas, track-and-trace and RFID project manager at Air France-KLM. "To do that, we need better tracking and tracing. That comes from more tracking points, and RFID can help provide that with automated reads and a higher read rate than bar codes."

[IMAGE]Since July 3, [Air France-KLM](#) has been applying RFID-enabled tags to luggage checked in by its business class passenger for flights between Paris and Amsterdam. Readers are set to be deployed next month, to track baggage en route between the two airports. Before the end of the year, the company expects to expand the trial to include more passengers flying between Amsterdam and Paris, and travelers going to Japan and potentially the United States.

The project is using UHF ISO 18000-6C (EPC Gen 2) labels, made with chips from [Impinj](#) and comply with the RP1740C RFID baggage-tag standard issued by [International Air Transport Association](#) (IATA). The labels, which look identical to the bar-code printed labels already in use, are produced and supplied by French RFID specialist [IER](#), which is also supplying the RFID printer-encoders and readers. Each RFID label is encoded with the 10-digit unique ID number and three-digit date created by Air France's departure-control system (DCS). These numbers are also printed as bar codes on the label.

An RFID interrogator will be deployed at the baggage arrival area at each airport and an additional interrogator will be deployed at Schiphol, where the baggage-handling process requires a reader portal to help track and sort baggage checked in at the airport. Air France expects the RFID system will begin tracking bags in October. By the end of the eight-month-long trial, up to 10 check-in desks at each airport will be equipped with RFID label printer-encoders.

At the end of the trial, the company will deliver a report to the IATA. If the technology proves successful, the report could pave the way for wide-scale adoption of RFID by airlines around the world.

Air France estimates that 225 of its business-class passengers fly between Paris and Amsterdam each day. By the end of the summer, the carrier will expand the trial to all classes of passenger flying between Paris and Amsterdam. Air France says it expects to have an RFID system deployed this fall at Tokyo's Narita airport to track tagged baggage arriving on its flights from Paris, and there is also potential for Detroit's airport to join the pilot before the end of the year.

"It is up to each airport to decide if they want to allow us to install RFID within their facilities," says Air France-KLM spokesperson Marina Tymen. "So far, CDG and Schiphol have allowed us to, and Narita as agreed to do so, as well. Detroit could follow in the fall, but nothing has been finalized."

Air France says that it has already tested the RFID-enabled baggage labels to ensure the technology can work at 952 MHz, as required by communications regulations in Japan, and at 869 MHz, as required by European Union rules.

Air France believes that using RFID to track to passenger checked luggage will help the airline know exactly where each item is, as the tags can be read automatically at key points in the baggage-handling process. At present, the company says, 11 out of every 1,000 items of baggage it carries fail to arrive at the final destination together with the passenger. However, an additional 19 per 1,000 arrive late to the baggage-pickup carousel, and that can mean additional cost for the airline.

"We already have a business case for implementing RFID tracking on missed bags," says Lucas, referring to bags that have missed the flight their owner has boarded and therefore have to be sent on a different plane to the same destination as quickly as possible.

Further out, Air France believes that the level of baggage visibility enabled by the introduction of RFID will provide the basis for new services for their passengers." In the long term, we would like to be able to tell a passenger that their luggage has definitely arrived with them at the airport and exactly when it will arrive at the carousel—say, five or 10 minutes more-and, 'So please wait a little while longer,'" says Tymen.

The company envisions a separate video monitor in the arrivals hall that could inform passengers when each item of luggage will arrive in the baggage hall for collection. That would spare Air France from having to arrange to have luggage forwarded to a passenger's final destination at the company's expense. "Sending baggage in taxis late at night or the next day costs us a lot of money," says Tymen.

Air France-KLM has been designated a "pilot airline" by the IATA to test RFID baggage tagging, and its RFID test is part of the IATA's baggage management improvement program.