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United Airlines Tests RFID to Speed Baggage and Passenger Check-In

Topics/Verticals: Operations, Asset Tracking, Aerospace

Working with Star Alliance, United is providing plastic RFID-enabled baggage tags to 1,000 of the company's most frequent flyers departing from Chicago's O'Hare International Airport.

By Claire Swedberg

Feb. 6, 2009—United Airlines—together with Star Alliance, a global association comprising 21 airlines that works to improve the flying experience of its members' passengers, and the Transportation Security Agency (TSA)—has begun testing an RFID system to speed baggage and passenger check-in for frequent flyers at Chicago's O'Hare International Airport. The airline alliance, which counts United as a member, is testing whether using radio frequency identification to identify passengers and their luggage could hasten the check-in process.

The proof-of-concept test was first discussed by the Star Alliance's Technology Innovation Board, which consists of alliance members and technology vendors, explains Aman Khan, the association's VP of information technology. The group agreed to test the use of RFID on baggage as a way to begin a process of eventually tagging airline baggage globally to reduce passenger check-in time, which currently averages three to 10 minutes, down to 30 seconds. At a later phase in the pilot, the group hopes to utilize the tags to track baggage, once it is checked in, to reduce the incidence of lost luggage. United agreed to test the system at O'Hare—one of its hubs—and the TSA is watching over the project to ensure that this speedier check-in process poses no security risk.

Aman Khan

"Our role is one of oversight," says Jon Allen, a TSA spokesperson, "to ensure security is not compromised during the check-in process."

The project includes technology evaluation, developing a concept as well as the establishing interfaces with the airline's back-office applications. United is providing plastic RFID-enabled baggage tags manufactured by Siemens to 1,000 of its most frequent Chicago flyers who have Premier Executives and 1K status (two levels within United's "Mileage Plus" frequent-flyer program). Each baggage tag contains an embedded passive UHF EPC Gen 2 RFID inlay encoded with a unique ID number, as well as the Mileage Plus number of the customer to which that tag has been issued. The Mileage Plus number is linked to the passenger's information and reservation data in the airline's back-end system. Systems integration was provided by Hewlett Packard (HP), with Cisco and Intel also contributing to the project.

During the test period—which began on Wednesday, Feb. 4, and will continue for approximately six weeks—participating customers about to embark on domestic trips departing from O'Hare will first log in to a Web site and print their boarding passes, either at home or at an airport self-service kiosk. When the passengers drop off their luggage at the United terminal, the airline's employees will use handheld RFID interrogators to read the RFID tags attached to the bags. The RFID inlay's ID number and Mileage

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Plus number encoded to each luggage tag are downloaded into the back-end system, and the bags are automatically checked in for the destination airport in the United system. During the check-in process, the passenger—who need not present any ID documents or a boarding pass—receives a receipt for the baggage on his or her mobile phone.

Upon completion of the project, Star Alliance intends to determine whether to deploy the RFID baggage-tracking system at other airports and make it available to more passengers. "Based on customer feedback and our results, we will explore the best way to move forward," says Jeffrey Kovick, United Airlines' public relations manager. "The technology has the ability to decrease the average time it takes [a United passenger] to check a bag from around two minutes to a few seconds."

Star Alliance, Khan says, "has been looking into RFID from a cargo perspective, and an asset-tracking perspective, and we thought, 'Let's implement the technology in this area, to reduce check-in times.' The object is simplifying the process."

However, Khan notes, Star Alliance's longer-term goal is to implement the system globally for baggage tracking, as well as for passenger check-in service. "We all know the technology is there," he says. "Our challenge, as an alliance, is that RFID readers and other infrastructure are not in place at most airports." What's more, he adds, there are still several RFID standards in use in various parts of the world that might result in a tag provided in one country being unreadable in another.

"The approach we're taking," Khan states, "is to start by making the check-in process faster and more efficient." The next step, he says, will be discuss with airports the options involved in deploying RFID in their own terminals. The International Air Transport Association (IATA) estimates that mishandled luggage costs the airline industry almost $4 billion every year.

In late 2008, another Star Alliance member, Air New Zealand, began deploying RFID technology to improve customer service for its own passengers. The airline is issuing permanent, reusable boarding passes containing 13.56 MHz high-frequency passive RFID tags that enable its frequent flyers to check themselves in, enter passenger lounges and board their flight (see Air New Zealand Readies for RFID-enabled Boarding Passes).

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