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San Francisco Airport OKs RFID Bag-Tracking Pilot

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The six-month pilot is being deployed in collaboration with Asiana Airlines, Korean Air and Incheon International Airport in the hope of improving baggage handling.

By Mary Catherine O'Connor

Aug. 31, 2006—Beginning next spring, travelers flying from San Francisco International Airport (SFO) to Seoul, South Korea, on either Asiana Airlines or Korean Air, might have more luck than they do now in reuniting with their checked luggage upon landing at Seoul's Incheon International Airport. On Tuesday, an SFO commission approved plans from the two airlines to test an RFID baggage-tracking system.

By embedding RFID inlays into the tags attached to checked luggage, and by using the tags to sort and track the bags, these airlines and airports are hoping they can improve baggage handling, which is currently based on bar-code technology.

Asiana is already testing RFID-enabled baggage tracking at six Korean airports (see Asiana Deploying RFID at Six Airports). There, it has integrated RFID hardware into the conveyors and other extensively used baggage-handling systems. Still, many airports operate "common-use" baggage handling, wherein a number of airline's bags are run though the same material-handling equipment. Bar-code scanners linked to conveyor systems sort the bags by airline and by flight. Baggage for Asiana and Korean Air flights is handled this way at SFO, as well as at Incheon.

Incheon, Asiana and Korean Air initially approached SFO with a proposal for the tests, says Gerry Alley, who manages SFO's common-use baggage systems. In order to run a thorough test of RFID baggage tracking, the RFID tags need to be read both at the originating and destination airports. Tags might be readable at SFO, but if the tag can't be read and sorted accurately at the receiving airport, it won't improve baggage handling.

"Incheon wanted an end-to-end test, because you need to see both sides of the coin," says Alley, who indicates that the trial could include other airports, as well.

Because RFID does not require a line-of-site read, it captures data from a greater number of the baggage tags than bar-code readers, which can't read a tag if it is bent, dirty or out of alignment with the laser scanner. In pilots conducted by airlines, airports and the Transportation Security Administration (TSA), RFID has increased the read rates of the bag tags by up to more than 90 percent. With bar codes, as little as 85 percent of tags are captured.

Those pieces of baggage whose bar-code tags are missed are likely to join the millions of pieces of luggage lost each year. The Aviation Consumer Protection Division of the Department of Transportation estimates that 3.6 million pieces of luggage were lost by airlines domestically last year (out of more than 3 billion transported).

Alley is quick to point out that RFID will not be a panacea for lost luggage woes because much of the

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baggage-handling process is still manual. "Just because a bag tag is read, that doesn't mean it won't later be mishandled," he says. "I know because I've done it myself."

Still, the International Air Transport Association (IATA) is betting on RFID to improve baggage-handling accuracy. The IATA says it can save airlines and airports, through improved baggage handling and few lost bags, $760 million a year if implemented worldwide.

Alley would not say which RFID hardware and software vendors will deploy and maintain the RFID tracking system for the six-month trial at SFO, but noted that the Bay Area's Alien Technology has provided the airport RFID hardware for past RFID technology trials.

Last year, Alien purchased Quatrotec, a company that installs and integrates systems, including baggage-handling systems. It also hired Robert McKinley, former director of security and airport systems at SFO, as Alien's vice president of business development for transportation markets (see Alien Buys Airport Systems Integrator).

According to Alley, about seven to 10 Asiana and Korean Air flights depart SFO for Incheon daily, carrying between 250 and 400 bags per flight. IATA ratified an RFID baggage-tag standard last year (see IATA Approves UHF for Bag Tags). Baggage tags compliant with this standard will be applied to baggage at SFO and Incheon, and encoded with an EPC containing flight, airline and airport codes, as well as passenger codes. The data will be shared between the two airports and used to reconcile receipt of the tagged baggage.