

China Post Deploys EPC RFID System to Track Mailbags

The technology will track express-service mailbags transported to various postal-collection and sortation centers throughout Shanghai.

By Beth Bacheldor

July 13, 2006—The Chinese postal service [China Post](#) is rolling out an [EPCglobal](#)-compliant radio frequency identification (RFID) system to keep tabs on bags of express mail delivered within the postal district of Shanghai. The technology will track the status of the mailbags en route from individual Shanghai post offices to various collection and sortation centers throughout the city, situated on the banks of the Yangtze River delta.

The passive UHF RFID system includes [Symbol Technologies'](#) ruggedized and reusable EPC Gen 1 0+ dual-dipole RFID tags, XR400 RFID fixed interrogators and MC9000 mobile computers. Shanghai Post hopes this system will help its International Express Mail Service Bureau more efficiently process the more than 10 million express-service mailbags that traverse the city's postal network annually. The bureau is one of China Post's three international exchanges for its express-mail operations, which covers 2,000 cities in China and more than 200 countries worldwide. Beijing-based [Concord Unity International](#), a Symbol partner and RFID solutions provider, is installing the RFID system.

China has been aggressively looking at RFID. Several companies have projects underway, including Bailian Group, the country's largest retail chain (see [Bailian Group Expands RFID Pilot](#)). The Chinese government is also actively pursuing RFID (see [H.K. Launches RFID Supply Chain Project](#)). In fact, the Shanghai Post RFID initiative is part of an ongoing national pilot project cosponsored by [China's Ministry of Science and Technology](#) to validate the benefits of RFID within China Post's operations.

"Asia has taken some significant leaps with RFID," says Alan McNab, Symbol's senior director of product marketing. "China is growing very fast, and companies there are prepared to take some risks."

The Shanghai Express Mail Service Bureau formerly tracked all of its mailbags by means of bar-coded labels. Bar codes require postal employees to perform time-consuming manual scans, but RFID tags can be automatically read by RFID interrogators, cutting the time required to process mail.

Shanghai Post is using RFID to track express mailbags as they come into and leave its central sortation center. Each bag is outfitted with a reusable tag. According to McNab, the tag is encased in a protective plastic housing typically hung around the neck of the canvas or nylon mailbag.

As the bags move along a conveyor belt, the conveyor's built-in RFID interrogator tunnel reads the tags. The interrogator reads the pickup and delivery information encoded on the tag so the postal agency can verify the timeliness and accuracy of express-mail service, McNab says. The bags' tags are also read while being loaded or unloaded from postal trucks and during processing at three Shanghai Post transfer stations that currently

have RFID readers.

By year's end, China Post plans to begin rolling out RFID at the rest of Shanghai Post's facilities, which comprises 570 post offices, two sortation centers and four transfer stations. "The process will be replaced with EPC Gen 2 passive tags," says McNab.

In early 2005, China Post made its decision to carry out the Shanghai Post RFID pilot ; by December of that year, the agency had successfully completed preliminary testing. During the testing period, which lasted about six weeks, the RFID system tracked an average of 6,000 mailbags daily. By March 2006, final testing had been completed and was fully endorsed by the nation's Ministry of Science and Technology.

Throughout testing, the Shanghai Post accurately identified RFID-tagged bags 99.4 percent of the time during the truck loading and unloading processes, and 100 percent of the time during sortation, according to executives at Symbol's China office and Concord Unity. Postal bag processing productivity and efficiencies have increased by 20 percent, and China Post has saved about RMB 320,000 (about \$40,043) from the adoption of reusable RFID tags and a reduction in labor costs. The postal service expects to recoup its costs for deploying the RFID technology within five or six years, according the Symbol and Concord Unity executives.

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