

Singapore Seeks Leading RFID Role

With the goal of becoming Asia's foremost center for RFID technology, the island-republic will invest millions on research and training.

By Assif Shameen

July 12, 2004—Having identified RFID technology as "an engine of growth," Singapore will spend US\$ 5.8 million, mainly on research and training, to promote the development and deployment of RFID by the end of 2006.

The world's second largest port outside the U.S., Southeast Asian city-state is a major Asian trading and transportation hub. Singapore had earlier set itself the goal of becoming the world's most-wired nation and has spent billions on building state-of-the-art telecommunications infrastructure. Early adoption of technology like RFID will give Singapore an edge as a logistics center and global trading center, government officials believe, not only because of increased efficiency gains and lower overall costs achieved by adopting RFID, but also by showing that Singapore is on technology's cutting edge.

"It is vital that Singapore position itself to play a role in developing RFID technology to maintain our global competitiveness as a key trading hub," says Lam Chuan Leong, chairman of the Infocomm Development Authority of Singapore, the top government official in charge of the wired-island strategy. "If we do not, we run the risk of being excluded [from the RFID] market space."

Lam says a local Singapore RFID alliance composed of industry and academic representatives is now being formed to facilitate dialogue and sharing of best practices.

"We hope that this will develop into regional forum that will initiate cross-border projects," says Lam. RFID technology presents new business opportunities for the Singapore info-communications sector, he explains. A key plank of Singapore's RFID strategy will be joint research facilities with institutions at the forefront of RFID development, such as MIT's Auto-ID Labs, which played a key role in developing the Electronic Product Code (EPC). Only by spending on research, the government believes, can Singapore emerge as a first-tier global center in RFID.

Lam says Singapore will also allocate additional resources for training and education to develop a vibrant RFID ecosystem. The two major state-run universities—National University of Singapore and Nanyang Technological University—are developing courses to provide electrical engineering graduates with specialized RFID knowledge. Another local college, Republic Polytechnic, is developing new RFID curricula for students and executive RFID courses for businesses. The local logistics industry is also training executives in RFID technology.

Indeed, Singapore was one of earliest users of RFID technology in the world, says Lam. Singapore Land Transport Authority has been using RFID since 1998 in what was the world's first Electronic Road Pricing (ERP) system, an automated toll-collection system used to control and manage traffic volume in the city. Singapore's National Library Board was one of the first to harness RFID in a library environment back in late

in 1998, when it put RFID tags on books to automate the borrowing and returning of library books as well as speed up the process of sorting books and returning them to shelves. As Asia's leading convention venue, Singapore has long used RFID technology to trace delegates at large conferences and conventions in the city.

More recently, Singapore became the first pilot port in Asia under the U.S. Container Security Initiative. The island-republic is now implementing use of RFID seals for all containers bound for U.S. seaports. Several local research institutions teamed up last year to develop solutions to use RFID for tracing SARS contacts in local hospitals (see [Singapore Fights SARS with RFID](#)).

Lam says Singapore now wants to leverage its existing expertise to undertake RFID research and development. With government help, RFID technology provider [Tunity Technologies](#) is developing EPC-compliant multifrequency RFID tags that operate in three different RF bands.

"We want to be a laboratory for global pilot RFID research projects, and we want to develop innovative RFID products and solutions locally," says Lam. Later this year, the government plans to begin building additional RFID infrastructure such as compliance test centers that will help multinationals and local companies make Singapore a base for RFID research.

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