For Yuen Foong Yu Paper Mfg. Co., being the largest paper producer in Greater China isn’t enough—the larger goal is to maintain and expand that role well into the future. By working with MIT’s Auto-ID Center under the aegis of the MIT Industrial Liaison Program (ILP), the Taiwanese paper and packaging giant established itself as an early leader in the deployment of next-generation Radio Frequency ID (RFID) technology. This not only enabled YFY to establish one of the first major in-house RFID networks, but helped it to win a major packaging contract with Wal-Mart for its operations in Greater China.

In the late ‘90s, YFY management realized that RFID was a key emerging technology that would change the face of its industry. By applying tiny, low-cost, radio-enabled “tags” to products, and then tracking them with “reader” equipment, YFY would be able to better automate and secure inventories and shipments while fine-tuning supply-chain strategies.

YFY management was able to learn more about RFID during an early visit to the MIT Media Lab. The trip was sponsored by the Epoch Foundation, which links Taiwan industry with MIT’s technology resources through membership in the ILP. Known as Epoch / ILP, the program has delivered ILP services in Taiwan for over 10 years, regularly bringing MIT researchers in contact with member companies through seminars, company visits and other programs.

“YFY had been clued into RFID very early, particularly through early visits to the Media Lab,” says Felix Ho, Vice President, YFY Business Integration. “But it wasn’t until our visit to the Auto-ID Center that we realized the critical connection between RFID and our packaging/box business.”

As it happened, when Epoch and the ILP invited Taiwanese business representatives to visit MIT laboratories in October, 2000, the company’s Chairman, S.C. Ho, decided to go along. One of the stops was the Auto-ID Center, a leading research laboratory in RFID technology. Chairman Ho, who has attended half of the bi-annual Epoch visits to MIT over the years, was greatly impressed with the Center. He was especially intrigued with its Electronic Product Code (EPC) technology, a tagging system for RFID designed to coordinate a highly-visible global tracking system. In EPC, Chairman Ho realized he had found the missing link for RFID and his company’s future. In December, 2000, YFY joined the Auto-ID Center as a sponsor and Overseas Board Member.

YFY’s decision to commit early was well-founded. Because EPC and RFID would need to be integrated with many different technologies, YFY wanted to get an early start. “We foresaw that if in the future RFID technology was to be adopted widely, we would have no time to learn about it at that time,” says Fang Shir, YFY’s Executive Director, and the chief Auto-ID Center board member representative. “We knew we had to be well prepared in advance.”

Over the last few years, Epoch/ILP has promoted frequent follow-up meetings with the Auto-ID Center, contributing greatly to YFY’s understanding of RFID. As a result, YFY was one of the first companies in the world to adopt the EPC. “In 2002, after sponsoring and participating in the Auto-ID Center Field-Test along with a select group of members, YFY began planning its in-house trials,” says Felix Ho.

Meanwhile, Epoch/ILP had organized several visits to YFY by some of the Center’s top experts, including the co-founders, Professor Sanjay Sarma and Dr. David Brock. Their discussions went beyond RFID to encompass the latest research in related areas such as logistics systems and IT systems.

“Thanks to the faculty meetings that the ILP organized, YFY benefited very much,” says Shir. The collaboration helped YFY management understand a key lesson about EPC/RFID early on: this was not simply a networking technology for tracking products — the products themselves were in a very real sense the network. “YFY’s paper, box and packaging materials will become basic information carriers,” says Shir, “not only for protecting merchandise, but also to provide enabling functions like automation.”
While benefiting from the Auto-ID Center’s expertise in general, YFY received an additional advantage when EPC quickly emerged as the world’s leading RFID tracking scheme. As EPC gained momentum, in 2003 YFY became a founding member of EPCglobal. This joint non-profit venture between EAN International and the Uniform Code Council (UCC) emerged from the Auto-ID Center (along with the new Auto-ID Lab), and was charged with supporting an international network of EPC devices.

Today, EPC is backed by corporate giants such as Coca-Cola, Procter & Gamble and Wal-Mart, and is well on its way to becoming an established ISO standard. Thanks in part to YFY’s early adoption of EPC, the company recently won the contract to act as Wal-Mart’s packaging supplier for Greater China.

YFY is now moving beyond the trial stage to launch a formal in-house implementation of EPC-related RFID technology. It has also begun working with key partners to form a regional adoption program. Without the head-start provided by its collaboration with MIT, YFY might now be in a position that many companies find themselves in: scrambling to overhaul their systems for EPC and RFID so as not to be left behind. By involving itself at an early stage, and in the process contributing to the development of EPC, YFY has had plenty of time to implement the technology in the most efficient manner.

“The collaborative relationship with MIT gives YFY a real competitive advantage,” says Shir. Already, he adds, it is evident that the Auto-ID Center’s technology will “derive a huge benefit for our business.”

For more information about how we can put the resources of MIT to work for you, call the Industrial Liaison Program at 1-617-253-2691, e-mail us at liaison@ilp.mit.edu, or visit http://ilp-www.mit.edu/.