

RFID Takes Root in Bangladesh

Early adopters include Apollo Hospitals Dhaka and the Bangladesh Army.

By Beth Bachelidor

Jan. 15, 2008—The People's Republic of Bangladesh might be one of the last places you'd expect to see RFID in action. But it actually boasts several implementations, in large part due to a startup RFID hardware provider and systems integrator determined to help modernize the small Southeast Asian country.

Deltech Ltd. was founded in 2005 by Delwar Hossain, a retired Bangladeshi military officer who also spent several years working for a variety of high-tech companies in the United States as a software engineer. Hossain started the company to help spur technology in his native country.

The bulk of Bangladesh's borders are shared with India, except for a small section the country bounded by Myanmar in the far southeast, and by the Bay of Bengal in the south. Bangladesh declared independence from Pakistan in 1971, but the country's development has been slowed by political upheavals, including at least four military coups. With 150 million people living in Bangladesh, it is one of the most densely populated nations in the world, much of its population poor and rural.

"Typically, Bangladesh is always among the last few [countries] to start using any technology that is already in use for several years in other developed countries," Hossain explains. "The primary reason is the lack of know-how and, secondly, there's the risk of investment in a new technology." Hossain, however, was determined to create a leading global RFID solution provider, so he began researching the technology and developing a business plan in 2002. "I believe Deltech can contribute to the development and growth of RFID in the world, and to the national development of Bangladesh," he says. Hossain personally funded the company, which today has a total of 15 employees, 11 of which are engineers.

Deltech has already helped several organizations implement RFID. Apollo Hospitals Dhaka, perhaps the most modern hospital in Bangladesh, has just completed the first phase of an RFID project to track employee attendance. RFID interrogators and antennas cull unique ID numbers from RFID-enabled employee badges as doctors, nurses and other employees enter and exit the hospital grounds. Apollo now plans to integrate the attendance tracking system with the hospital's payroll application, and eventually will use RFID to track, in real time, employees' location within the facility, as well as track assets. Apollo is using passive UHF tags containing NXP Semiconductors' Ucode HSL chips. The tags operate at 902-928 MHz and comply with the ISO 18000-6B standard.

The Bangladesh Army plans to employ RFID technology to track soldiers and visitors entering its Dhaka Cantonment via vehicle or on foot. Deltech has developed and demonstrated a prototype for such a system, Hossain says, and the Bangladesh Army Authority has approved it. Since then, the Bangladesh Army has begun purchasing 20,000 tags consisting of UPM Raflatac DogBone UHF EPC Gen 2 UHF tags, as well as those made with the Ucode HSL chip. The system will also be used to track purchases at the Dhaka Cantonment's retail store.

"This initiative has also [spurred] the [Bangladesh Army's] Special Security Force to implement RFID security systems to control visitors, vehicles and employees in the Presidential Palace and Prime Minister's Office in Bangladesh," says Hossain. "The planning and design part is completed, and now we are waiting to get the final approval to start."

According to Hossain, Deltech is the only company in Bangladesh able to provide organizations in that country with RFID analysis, systems design and integration, deployment and support, as well as RFID hardware and software. He says his company can develop and support any type of RFID system, including those operating at high frequency (HF) or ultra-high frequency (UHF). "Basically," he says, "Deltech's slogan is, 'We can do anything you want.'"

Both the private and public sectors are driving the RFID market in Bangladesh, Hossain says, adding that hands-free access control and employee-tracking systems, as well as asset management, are the most popular applications businesses are asking for. These early adopters now expect a strong return on their investments, Hossain notes, though convincing them to invest in the technology in the first place has been difficult. "Here, people have the will to do well, but they lack the direction and trust," he says. "What we need to do is study the market, meet [with companies] personally and show them the business case with ROI, and support them to grow using RFID."

In addition to working with Bangladeshi businesses and government organizations, Deltech has received requests from potential customers elsewhere in the world, particularly in the Middle East and Asia. "Most of those requests are for electronic toll collection, jewelry store management [and] library management," says Hossain. "Currently, we are working with a company in Bahrain and the United Kingdom to implement RFID projects like electronic toll collection and parking control."

Deltech has just signed an agreement with [iCol Global Holdings Techtel21](#) to become the partner and exclusive distributor of Deltech RFID tags, interrogators and systems in the Middle East and North Africa (MENA) region. "This partnership will drive Deltech's RFID growth to a greater and new dimension in the continuous success of Deltech," Hossain states, "which is going beyond the boundary of Bangladesh, and it symbolize the quality and commitment that Deltech demonstrates globally."

RFID's growth in Bangladesh does face some challenges, however. Few consumers understand the technology, and there is only a moderate understanding among businesses. To help remedy that situation, Deltech hosts seminars to raise awareness about RFID and its potential.

RELATED_ARTICLES RFID may also face legal hurdles as well. "The government's restrictions and laws, or conservativeness in the area of radio frequency, is a subject that we worry about a lot," says Hossain. In fact, he adds, it took some time for Deltech to receive the Bangladesh government's approval to use particular frequency spectrums. Deltech no longer must apply for government approval for each project because a spectrum regulation is now in place for RFID. However, he says, the company still needs to get the type approval for each RFID reader and antenna every time it introduces a new product. "Deltech has had to work hard to get type approval of RFID equipment—things are getting better than when we started," he says.

Still, Hossain says, the technology climate is changing in Bangladesh, and the government's growing interest in RFID is helping to foster that change. "We strongly believe the Bangladesh government will be a key player in the growth of RFID in Bangladesh," he states. In addition to the military's interest in RFID, the government is also looking to use the technology for other applications, including automated toll collection systems. What's more, Hossain says, the government is considering an RFID-based national ID/voter ID card system. Government-driven initiatives such as these, he notes, will help drive the technology's growth and acceptance.

