

# Sunway Lagoon Issues RFID Wristbands for Admission, Purchases

The Malaysian resort's patrons use the wristbands, rather than paper tickets, to access sections of the park and pay for goods and services.

By Mary Catherine O'Connor

July 10, 2007—At the Sunway Lagoon amusement park in Kuala Lumpur, Malaysia, visitors can surf on a simulated beach, explore a wildlife zoo and careen down an African waterfall (a facsimile of an Africa waterfall, that is). But since such activities put wallets and purses in danger of either getting soaked or becoming a reptile's lunch, the resort has deployed an RFID-based payment system based on waterproof wristbands.

RCG, a Hong Kong-based developer and systems integrator of RFID and biometric solutions for payments and security applications, developed and installed the payment system at the resort earlier this year.

As visitors enter Sunway's ticket office, they can select which level of access and amenities they'd prefer. For instance, a family might select to visit only the wildlife park, or both the wildlife and water theme parks, or they could choose an all-access pass to every part of the resort. Each visitor is issued a wristband embedded with a high-frequency RFID inlay containing a Mifare ISO 14443-compliant integrated circuit from NXP Semiconductors.

Encoded to this inlay is an ID number, also stored in a central database. Associated with that identifier in the database is a list of resort areas the visitor has paid to access. To enter an area, a visitor holds the wristband within a few inches of an interrogator mounted on a turnstile at that particular entrance. The reader sends the tag ID to a central database, and if the visitor is authorized to enter, the turnstile opens.

Each visitor can also choose to create a prepaid account linked to that individual's wristband ID. With this feature, a person can purchase food or other goods, as well as rent surfboards or other equipment by presenting the wristband to interrogators attached to payment terminals at various vendor locations. With this feature, visitors need not carry cash or credit cards into the resort areas, or distribute cash to their children.

The resort hosts a million visitors a year, and hopes that issuing bracelets will shorten lines at each entrance, and at vendor locations. What's more, the system will decrease the amount of cash vendors must have on hand to make change for patrons. Sunway Lagoon could also use the data collected from the wristband system to analyze purchasing habits and the amount of time necessary to carry out transactions, with the goal of improving its staffing and services.

RELATED\_ARTICLES All ISO 14443 RFID readers installed in the park are linked by optical fiber to a local area network, which is linked to a central server running RCG-developed software. This software is used to manage the wristband issuance, payment and ticketing database.

Samuel Li, chief solution consultant in RCG's solution sales and projects division, says the company customized the wristbands to be waterproof. He adds that the system employs data encryption, as specified in the ISO 14443 standard, to prevent the tag ID encoded to each wristband from being read surreptitiously.

Copyright ©2005 RFID Journal, Inc. All Rights Reserved