

# Ocean City Plans to RFID-enable Its Beaches

The N.J. municipality hopes to issue RFID wristbands to serve as beach passes, and provide visitors a means of cashless payment for food and parking. RFID would also help keep beaches clean.

By Mary Catherine O'Connor

July 26, 2007—Ocean City, a beach community on the New Jersey shoreline with a population that mushrooms from roughly 15,000 to nearly 115,000 each summer, is hoping RFID will help make a trip to the beach more pleasant and convenient for the many vacationers who spend much of their summer there.

The municipality requires payment for beach and boardwalk access. To that end, it currently issues plastic cards to visitors, who must make the cards visible—by pinning them to swimsuits, for instance—so inspectors roaming the area can see them. By summer 2009, the city plans to replace those cards with waterproof, plastic wristbands containing passive RFID inlays, which will serve as proof of payment while also providing a means of payment for food and parking.

Inspectors will carry handheld RFID interrogators, which they'll use to read the wristbands worn by visitors on the beach and boardwalk. Jonathan Baltuch, principal of Marketing Resources Inc. (MRI), the consultancy helping the city develop the wristband system, says Ocean City wants the wristbands to contain tags with a long read range—10 feet or so—so inspectors won't have to bother visitors whose passes aren't plainly visible. Presently, he notes, inspectors must sometimes wake sleeping beach-goers to inspect their cards. The RFID-based verification process should help reduce the hassle.

According to Baltuch, the city will reap a return from the wristband system by reducing the amount of staff it currently hires for manual inspections. Last summer, he explains, Ocean City spent more than \$282,000 to pay 170 badge checkers. Baltuch thinks it will be able to reduce the staff by half during the summer of 2009, once the system is deployed. How long it will take the city to recoup what it spends on the wristband system, he says, is still unknown, pending the final costs. The city does not plan to change its access fees of \$5 per day, \$10 a week or \$20 for the entire summer.

Baltuch doesn't know which frequency or air-interface protocol the wristband system will use, since the proposal requests that the city has issued to RFID system integrators have not yet been received. He notes that Ocean City also wants to utilize the wristbands to enable payment for parking and food services on the beach. This would be a convenience for visitors, he says, while serving as a means of simplifying transactions for food and parking vendors, by linking a payment account, such as a credit or debit card, to the number encoded to each wristband.

None of the standardized RFID inlays currently available, however, have both the long read range the city desires and the built-in security features—such as data encryption—needed to prevent unauthorized parties from eavesdropping on transactions between tags and readers. It's not yet clear how the city will balance its interest in long-range tags with secure payment processes.

RELATED\_ARTICLES The wristband initiative is part of a larger project the city is undertaking to install Wi-Fi hotspots throughout the municipality, in order to provide free Internet access to residents and a paid service to visitors. Fixed-position RFID interrogators mounted at entrance and exit points throughout the beach and boardwalk will read the visitors' wristbands, then use the Wi-Fi connection to transmit the RFID data over the wireless network to city administrators. The officials will then be able to maintain rough estimates of the number of people on the beach and boardwalk throughout each day, and to determine security and clean-up staffing levels accordingly.

Another application the city is planning to launch as part of the wireless network infrastructure involves the use of solar-powered sensors and active RFID tags mounted on trash cans, which would issue e-mail alerts to the beach sanitation crew whenever a sensor detected that a particular can was nearly full. Using the unique ID number sent along with each alert, the crew would then be able to locate the receptacles and empty them before they overflowed.

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