

Barbados Uses RFID to Secure Cricket World Cup Final

Active RFID technology from AXCESS International will be used to track vehicles and people moving through the main port.

By Claire Swedberg

March 28, 2007—The Port of Bridgetown in Barbados is installing a radio frequency identification (RFID) system to provide security as it prepares for the Cricket World Cup 2007 final games in April. The system includes AXCESS International's ActiveTag technology and infrastructure for tracking of vehicles and personnel around the port, in addition to wireless sensors and underwater cameras.

The ActiveTag system will enable the port to capture data about those who enter the port and where they travel within its gates. Using RFID, the port can monitor whether an individual has entered a secure portion of the port, or an area where they are not permitted. In that event, the ActiveTag system sends an alert to security personnel by the electronic means they choose (e-mail, pager or visual alert on a PC).

The Port of Bridgetown, managed and operated by Barbados Port, is a general services port used by both cargo ships and cruise ships. With those cruise ships come large numbers of passengers traveling through the port's four main zones: cruise ship handling, cargo handling, bulk handling and leisure craft accommodation. The Cricket World Cup will bring more passengers and cargo than usual—and greater security concerns.

The AXCESS ActiveTag technology will provide greater security for the port, says Allan Griebenow, AXCESS president and CEO. Trucks, taxis and other vehicles that enter the port are being tagged with dual active-passive read-write RFID tags that can be attached to the car body or placed on the dashboard or visor. The vehicle tags store only a unique ID number that can be linked to the vehicle and the authorized drivers. The port security management system can monitor when a vehicle enters an area of the port that is off limits to that vehicle.

Some personnel who enter the port also wear RFID badges. Badge ID numbers link to an employee or contractor's name, as well as other details Griebenow and the port have declined to describe, citing security. This allows personnel to be tracked if they enter an area that is off limits, or to be located in the event of an incident.

RFID readers are deployed at choke points around the port so that as a person or vehicle travels from one zone at the port to another, the interrogators wake up the tag using a passive 132 KHz signal, at which time the activated tag transmits its ID number at UHF 315 MHz. That number, as well as its location, is sent wirelessly to the port security system using AXCESS's Online Supervisor software.

AXCESS is also providing wireless sensing for detection of toxic chemicals or radiation. These plug into the active tags using an input-output port on the tag's circuit board. The wireless network makes it possible to recognize a weapon of mass destruction. That system is integrated with the RFID system.

"Our middleware receives the data from a custom-written adaptor from the sensor system," says Griebenow. If a sensor trigger is tripped, he says, "a wireless message is sent to first responders and others depending on the level of alert. The integration (with the RFID ActiveTags) will let security know who is in the area for both investigative and safety purposes."

The third part of the system does not use RFID. Underwater cameras capture images of the ships as they enter the port to detect divers or "parasites" attached to the hulls of ships. The images are sent to the same integrated security system. "The underwater camera information can be transmitted back to the central site, or it can be viewed via mobile terminal," says Griebenow. The method of communications is confidential, he adds.

RELATED_ARTICLES "This is coming at a time when the island is a showcase for the world," says Griebenow. "This is a substantial port that is expanding, and its ability to obtain visibility is quite good. We are adding an additional layer of security."

The port has been undergoing expansion and renovation to its existing facilities for several years. That includes construction of a new pier to accommodate two large cruise ships simultaneously. The two berths will boost the port's daily passenger handling capacity by about 8,000. This will also allow the port to continue to separate its cruise and cargo-handling operations in the interests of passenger safety.

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