



Dragon Boat Race Organizers Use RFID to Track and Analyze Attendee Movement, Maximize Lead Generation, and Optimize Event Layout

Each year, the city of Chicago hosts the Dragon Boat Race for Literacy, drawing about 10,000 spectators in support of promoting local literacy, cultural, and diversity programs. Held at the picturesque Ping Tom Memorial Park, the 2009 event was comprised of 24 teams representing the Chicago Police and Fire Departments, local businesses and professional organizations, and sponsor American Family Insurance. In addition to the colorful boat races, a main stage featured Asian cultural performances, music from local bands, Cirque Shanghai, and celebrity guest appearances. Attendees also had access to a reception area, playground, food venues, exhibitor booths, rest rooms, and sitting areas.

While prior events were very successful, the hosts and sponsors of the 2009 Dragon Boat Race were looking for improved methods of collecting data to assist with their planning and operation. Gaining greater insight into visitor movements throughout the event, for example, could help planners and exhibitors maximize foot traffic and revenues, drive activity participation, and optimize layouts for future events. To assist with this process, the organizers worked with Wheeling, IL based Lygase RFID Solutions, a business intelligence solutions company that leverages RFID, Wi-Fi, mobile and GPS technologies to help organizations transform their operational strategies and performance.

“Community events, industry conferences, and trade shows generally rely on registration information, bar coded badge swipes, and personal observations for foot traffic analysis and improved lead generation. Our web-based SmartEvents RFID system captures more information, faster, and generates more detailed and accurate reports for organizers, exhibitors, and planners.” - **Ketrus Collins**, Lygase founder and CEO.

For the Dragon Boat Race, Lygase deployed SmartEvents – a solution designed to help customers take advantage of the data generated at public events, trade shows and conferences. By aggregating data for real-time and future use, SmartEvents helps organizers provide value-added services to exhibitors through analyses of traffic patterns at their booths and elsewhere at the event. For exhibitors, leads can be captured automatically, without requiring staffers to scan badges. Visitors can benefit by registering their areas of interest and be guided to booths containing the products and services they want.

SmartEvents can also be used to control show access for attendees, exhibitors, and venue personnel, lowering costs for security personnel.

The Solution

On the day of the 2009 Dragon Boat Race event, Lygase offered a chance of winning cash prizes to attendees who wore UHF RFID-tagged lanyards. Over 4,000 people participated, and anonymous data was collected throughout the day, tracking:

- How many people visited each area and booth
- Average time spent in different areas and booths
- Visits by time of day
- Visits by five demographics (boat racers, seniors, adult men, adult women, and children)



Lygase turned to partner ThingMagic, and selected the company's Astra integrated reader/antennas, due to their overall reputation for performance, processing power, and ease of setup. The ThingMagic UHF RFID readers were deployed on standalone tripods in several zones, reading multiple tags at one time and during set intervals, over a range of about 30 feet for each reader. The tagged lanyards were produced by WS Packaging before the event and handed out at a reception area, where visitors registering for the cash prizes could opt to wear a lanyard during their time at the races.

Throughout the day, the readers collected tags' locations and fed the data into the SmartEvents system, which was accessed through a web browser for real time reports on foot traffic and demographic information across each zone. The system also stored the data in a remote MySQL database for post-event reporting and analysis, helping the event planners and exhibitors understand which times of the day

were the busiest, which areas of the venue attracted the most attention, which attendees and attendee types visited exhibitor booths, and when they did so.

The Results

Not surprisingly, at the Dragon Boat Races, SmartEvents reported that early in the day, visitors spent time

Solution Components

Lygase SmartEvents application

ThingMagic Astra integrated RFID reader/antennas

WS Packaging RFID-tagged lanyards

Sun Microsystems MySQL database

Benefits

Decreased costs related to unobtrusive, automated information collection

Real-time and historic reporting and analysis

Customized visual information display

High scalability

looking for areas with good views of the races. Among other things, the system also revealed:

- Second to the reception booth, the playground area had the most visitors, more women than men were with children there, and it was busiest just before, during and after lunchtime
- More men than women congregated at the river's edge for the closest views of the race and near the bands' stage area
- The playground area was the most visited area by seniors

One of the attendees at the event was Ernest Wong, President and Design Principal at Site Design Group, Ltd., which designed the Ping Tom Memorial Park. "I was fascinated by the SmartEvents technology," he said. "Understanding how people move within public spaces, where they go, and why, is very important to a landscape architect such as myself. The City of Chicago puts on many events each summer. A product like SmartEvents can help many public agencies organize and manage special events."

In this instance, the data collected is helping Dragon Boat event organizers make informed decisions about the amount of space needed, better advise exhibitors about what drives booth visits, and design an optimum layout for next year's event.

The SmartEvents RFID system also has beneficial applications for trade shows and industry conferences. "By integrating SmartEvents and ThingMagic RFID readers, we can collect and mine an extremely rich data set. For example, with RFID enabled booths, visitor information can be captured whenever visitors enter, eliminating the need to manually scan badges. At a time when companies are working with smaller events' budgets, this automated RFID data collection system adds value by maximizing lead generation," noted Collins.

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