# RFID JOURNAL

# San Diego International Airport Deploys Beacons for IT Efficiency, Passenger App

**The Bluetooth Low Energy system, from Spark Compass, brings location-based data to passengers using an airport app, and location-targeted service calls to IT personnel on a Samsung smart watch.**

**By Claire Swedberg**

**Tags:** Aerospace, Operations, Internet of Things, BLE

Apr 02, 2017—San Diego International Airport (SAN) has deployed an enterprise-wide system using Bluetooth Low Energy (BLE) technology to serve its own IT and airport-management system, as well as the passengers who travel through its facility. The solution, powered by Total Communicator Solutions (TCS)'s Spark Compass platform and Samsung SDS Enterprise Mobility Management, brings location-based content to the public via an app on their smartphones, and to airport employees on a Samsung Gear S3 or S2 smart watch.

The airport initially pursued a system to provide information to passengers, supplying them with location-based content in the airport terminals themselves, as well as in parking lots and on shuttle buses. With hundreds of Gimbal beacons installed throughout its terminals, the airport also wanted to use the technology to manage employees, thereby ensuring the fast and efficient dispatch and response of service personnel.

Although the solution uses Gimbal beacons, it is hardware-agnostic, says Erik Bjontegard, TCS's president and founder. Other beacons can be supported by Spark Compass, as well as Near Field Communication (NFC), AR and Internet of Things (IoT) devices, he says. In the case of the airport, Spark Compass also integrates with existing management systems across the enterprise.

In the case of the workforce-management solution, says Rick Belliotti, SAN's director of innovation and small business development, "The primary challenge that we were trying to address with this technology was how to identify the closest IT technician and reduce response times to technology incidents."

Erik Bjontegard

The airport selected Spark Compass for its multitenant architecture, the ability of the airport and its tenants to communicate with passengers, and the ability of Spark Compass to integrate with existing management systems across operations. The smart watches were part of the solution provided by TCS. "We really wanted to see if we could make better use of a wearable versus a traditional smartphone or tablet device," Belliotti states. "The reality of using the wearable, in this use case, allows our technicians to keep their hands free so that they can perform the work while receiving notifications or updates."

The most important function for airports and airlines is to ensure that flights depart safely and on schedule. That means getting planes boarded and emptied in a timely manner. The airports and airlines consider keeping efficiency at the terminals a critical operation.

When something goes wrong—such as a scanning terminal at the gate failing to operate—the airport's IT staff must resolve the problem as quickly as possible.

Without the Spark Compass solution, Bjontegard says, airport agents call the IT dispatch staff, who must send an e-mail or open a help ticket in the airport's ticketing system. In either case, the technicians receive e-mails. As an alternative, the airline agent can call an emergency IT number and the technicians will receive a voicemail and text message. In either case, the locations of these technicians is not typically known, which can cause delays in response to a call.

With the Spark Compass solution in place, dispatchers (once contacted by the airline agent regarding a problem) access the software and view the location of IT personnel, based on the transmissions of beacon data by the wristwatch. The Gear S2 and S3 smart watches are powered by Spark Company software integrated with Samsung's SDS software—an enterprise mobility management (EMM) solution that enables the secure management (such as remote app installation and deletion) of the devices.

Dispatchers can view each individual, represented as a dot on a map of the airport. By checking the software, they know who is within close vicinity of the malfunctioning equipment, and the system automatically sends a request order to a staff member via his or her Samsung smart watch. The worker selects the prompt indicating he or she is responding, and can then view the problem's location and proceed directly to the necessary gate.

Since November 2016, the airport has been offering beacon-based technology to its passengers. Upon scheduling a flight, a traveler can also download the airport's AwayYouGo app, developed and built by TCS, integrating the Spark Compass platform. The app will enable the phone to capture beacon transmissions as a user approaches airport parking, shuttles or actual terminal areas. Provided that Bluetooth is enabled, the phone will then respond by offering location-specific content to the user. While standing in front of a piece of art, for instance, a person can view information about it.

Regular passengers can also use a GoTag—a Spark Compass BLE beacon provided by the airport—to better locate bags when they arrive at their destination. When an individual's app-using smartphone comes within range of the luggage tag, the phone, which is paired to that bag, will alert the user that his or her luggage is near. That information helps that person understand when the bag is in the luggage carousel, or is approaching it.



Rick Belliotti

Since the system was taken live during the trial phase, the airport has been reviewing the results to evaluate IT efficiency. To date, Belliotti says, "The initial benefit is that we will have a better understanding of our response times, and our ability to meet our service-level agreements when it comes to delivering IT services." He adds, "In the larger solution, we wanted to provide a method that streamlined reporting of needs—repairs, maintenance, or delivery of goods and services—and responding to those needs."



Mingu Lee

In the long term, Belliotti says, the airport plans to provide more employees with smart watches and allow them to report maintenance needs within the terminals. "Since we can geo-locate them indoors," he states, "we can present them with a limited number of possible choices, such as 'escalator needs attention,' 'trash needs to be emptied,' etc."

Samsung's Gear S2 and S3 smart watches, managed by Samsung SDS Enterprise Mobility Management, can be used to manage employees in a variety of applications, with the inclusion of Spark Compass' mobile proximity platform. "Spark Compass was selected as a partner given their strengths in applying IoT capabilities to deliver solutions to real business problems," says Mingu Lee, Samsung SDS America's VP of enterprise solutions. "Their Mobile Proximity Platform, combined with Samsung smart watches and Samsung SDS EMM for wearables, provides IoT-based solutions that use beacon technology to automate work flows, tracking and communication."

Samsung and TCS are teaming up in multiple industries to leverage IoT sensor data and bidirectional communication. "Together, we hope not only to leverage IoT capabilities, but also create business benefits for customers like the San Diego International Airport," Bjontegard says. TCS is currently in discussions with numerous airports that plan to pilot or deploy similar systems. "We have a platform that's modular," he states. Numerous components, such as the passenger-facing app, the IT-based system and various functions within that system, can be included as needed. "We can add features as needed to ensure value add for travelers and airport operators alike."