9 Ways Bluetooth Beacons Are Transforming Your Industry

In 2013, Apple released iBeacon. A simple yet powerful protocol that allows a golf ball-sized sensor to send outbound Bluetooth Low Energy (BLE) signals to nearby connected devices. A couple years later, Google followed suit with their own protocol called Eddystone. Since their debuts, forward thinking developers and industries have designed and integrated these technologies into their workflows in many unique and innovative ways. From manufacturing to retail, industries are replacing outdated, expensive and cumbersome technologies like RFID, NFC and barcodes in favor of more flexible, affordable and scalable BLE solutions. BLE's long-range, passive and active monitoring, low installation and lifetime costs and cloud-driven data connectivity provides companies with a multitude of possibilities for generating vital insights that may have previously gone unidentified.

Is it time for you to ask yourself the question, "What are beacons and how can my company benefit from them?" Thought you'd never ask. Have a look at some of the ways industries are utilizing beacons and sensors to gather data, track assets in real-time, send and receive alerts and much more. Read on to find out how your company can gain valuable insights by putting these tiny devices to work for you.

Manufacturing

By retro-fitting legacy motors, pumps conveyors or other machinery, you can cost-effectively monitor their condition through vibration or temperature and receive predictive failure alerts that will minimize down-time and loss of productivity. You can also track on-site personnel to assure they are qualified to use specific machinery or be in a specified area (OSHA standards) to maintain a safe work environment.

Healthcare

Hospitals spend tens of thousands of dollars annually on lost equipment replacement. The ability to find beds, equipment and staff in real-time creates massive budget savings, increases staff efficiency and improves standard of care.

Museums & Education

Automatically trigger in-app content for museum visitors to take a deeper dive into an artist's background. Classrooms can create custom, interactive learning experiences while teachers can seamlessly send coursework to student devices when they enter their room.

Anatomy of a Beacon

Outer Case   Chipset   Backing   Battery

Retail

As one of the initial industries to adopt beacons, retailers have evolved from a pure marketing play to data-driven and consumer engagement scenarios. Interactive user experiences and unprecedented in-store shopper intent and location analytics abound.

Conferences & Tradeshows

Exhibitors can seamlessly engage nearby visitors through mobile and digital displays. Visitors can engage with exhibitors' products and "Favorite" for a digital takeaway. Bluetooth RFID badges can replace traditional staff, vendor and/or visitor IDs to provide indoor location data or to track equipment within the large venue—yielding heat map data for improved space planning.

Cold-chain Transportation

Monitor the temperature of perishable items (food, medicines, blood, etc.) and stay compliant with FDA Food Safety Modernization Act (FSMA) and Sanitary Food Transportation Act (SFTA). Receive alerts if temperatures go outside of a specified "safe" range.

Airports

Provide turn-by-turn "blue dot" wayfinding navigation & personalized app-based flight info for your travelers. Track equipment across the entire property to increase efficiency. Find and send alerts to staff nearest to an incident to reduce response times.

YOUR COMPANY

Name: Anne Smith
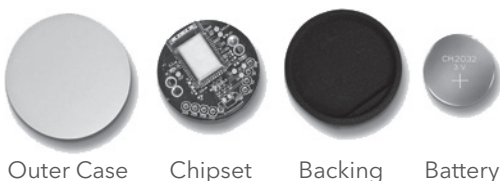Employee #: 0001
Expiration: 12/16

BLE + NFC + RFID

Workplace Optimization

Real-time insights for desk, room or parking availability. Monitor occupancy and receive real-time space availability reports or alerts. Log telemetry data like ambient temperature, lighting and door motion. Gain insights into workspace usage through historical data and heat mapping. Get real-time (RTLS) head counts of staff in emergency egress situations. Real-time employee location systems can even yield reductions in insurance premiums for commercial real estate property owners.

Smart Cities

Transformations are happening across the country for towns and cities of all sizes. Beacons and WiFi combine to offer a multitude of anonymous data collection channels that provide insights into how to better meet the needs of your municipality, better serve your residents and better welcome your visitors. Have an app? Send contextual location-based messages.

Brett Sutch is Founder of iDevise, a Pittsburgh-based consulting firm specializing in research, design and integration of custom Bluetooth beacon solutions for; RTLS (real-time asset/employee tracking), mobile and WiFi proximity marketing and IoT-based data analytics.

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