



NEXT-GEN LOCATION-BASED SERVICES AT A LOWER COST WITH BLE + WI-FI

Unified BLE/Wi-Fi technology blends accuracy, simplicity, and flexibility

Increase Efficiency and Lower Cost

Healthcare organizations use real-time locating systems (RTLS) to increase efficiency and lower costs. Awarepoint has developed a patent-pending technology that takes RTLS to the next level, so healthcare organizations can do more, including enhance patient and visitor experiences, improve health outcomes, reduce costs, and leverage the full potential of their existing infrastructure to improve business results.

Awarepoint's superior RTLS technology addresses a number of use cases, including mobile wayfinding, asset management, caregiver enablement, and proactive workflow improvements. This generates benefits throughout the organization, enabling greater caregiver efficiency, increased patient and clinician satisfaction, and more visible, more streamlined patient flows. Using this approach, one healthcare system offset \$675,000 in capital purchases and eliminated \$148,000 in annual rental, while another was able to quantify more than \$150 million in equipment savings opportunity.

Awarepoint's RTLS technology is based on the Bluetooth Low Energy (BLE) and Wi-Fi standards. Transferring data over the existing Wi-Fi infrastructure and using 100% battery-powered BLE beacons and BLE/Wi-Fi tags, the technology delivers unsurpassed location accuracy and responsiveness with low implementation and maintenance costs. The approach delivers the high accuracy and low latency needed for advanced applications.

The Awarepoint Approach

Battery-powered BLE beacons, installed throughout the facility, are configured and managed via Wi-Fi. Bluetooth-enabled mobile devices (smartphones, wristbands, equipment tags) detect BLE beacon signals and transmit them, via Wi-Fi, to an onsite location engine that calculates position. Location processing and database updates happen in the cloud. Locations can also be processed directly on a smartphone or tablet, for low-latency mobile applications.

• Accuracy

Working seamlessly with the onsite Wi-Fi network, the infrastructure yields more accurate locations at a lower cost, and supports fuller mobile experiences. Wi-Fi compatibility also reduces deployment time while leveraging the existing investment.

• Simplicity

To avoid network downtime and simplify maintenance, the infrastructure uses a central management system to monitor operation and send alerts if a beacon's battery is low or the device is malfunctioning. Firmware and configuration updates can also be sent over the air.

• Flexibility

With Awarepoint's BLE/Wi-Fi infrastructure, healthcare organizations can support all types of use cases on a single platform, and can evolve the system over time. They can start with mobile wayfinding and asset management, for example, and then add applications that support more complex workflows.

IMPROVE OUTCOMES

- Sound an alarm when tagged patient leaves psych ward
- Trace interactions to stop the spread of infectious disease

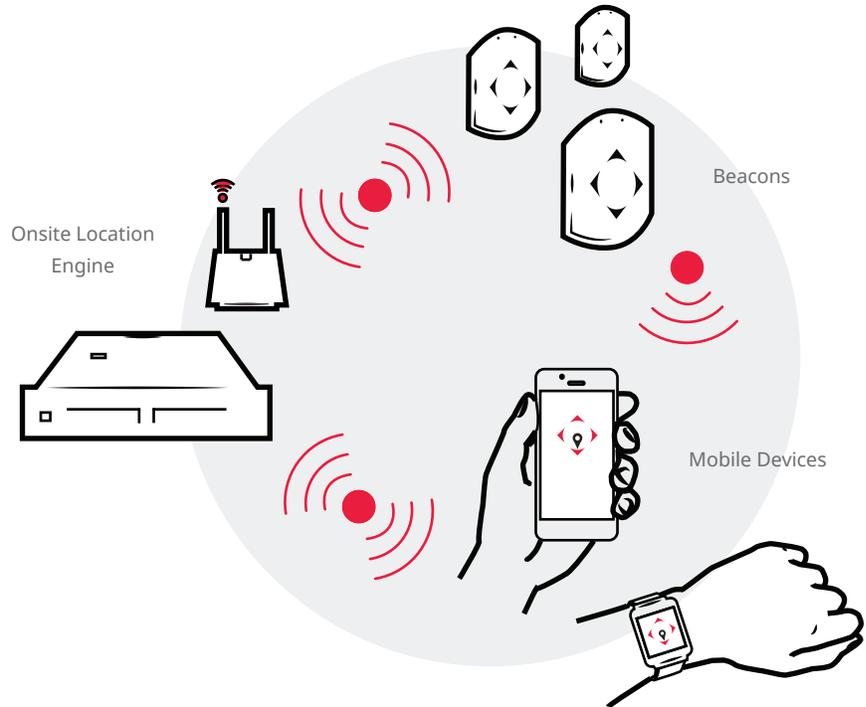
ENHANCE PATIENT/VISITOR EXPERIENCES

- Use mobile apps to let people self-navigate the facility
- Automate display of caregiver info when entering the room

LOWER COST

- Reduce rental expense with more efficient use of equipment
- Avoid vaccine spoilage due to fridge temperature excursions

THE AWAREPOINT BLE/WI-FI INFRASTRUCTURE



Optimized Infrastructure

Awarepoint's BLE/Wi-Fi infrastructure delivers highly accurate positioning but at a much lower cost than comparable approaches. The solution leverages the existing onsite Wi-Fi network, deploys rapidly, and delivers higher precision and speed. Tags and mobile devices can be monitored with greater than 99% accuracy, and with latency rates under two seconds.

• BLE Intelligent Beacons

Enterprise Beacons are accurate to within 1 to 3 meters and provide mobile wayfinding, asset management, and other location services, at a minimum cost, throughout large facilities. High Accuracy Beacons provide greater precision, tracking the location of a tag or mobile device as it enters or exits a room. The combination of Enterprise and High Accuracy Beacons provides the flexibility to support a variety of location use cases with a single platform.

• BLE/Wi-Fi tags

Designed for use in healthcare environments, Awarepoint's BLE/Wi-Fi tags come in several varieties. Asset tags make it easier to find equipment across the organization, while wearable tags, with or without push buttons, combine location accuracy with interaction-detection, to capture staff and caregiver-patient interactions, and can be configured for workflow triggers and alarm generation. Environment tags monitor the temperature of refrigerators, freezers, and warmers, or monitor ambient room humidity in surgeries, pharmacies, and labs. There are also hermetically sealed tags that withstand the rigors of autoclave sterilization.

• Software Development Kit (SDK)

To simplify integration of the BLE RTLS platform with third-party applications, Awarepoint supplies an SDK, based on open APIs, that enables everything from mobile wayfinding to staff workflow and communication.

Location as a Service

The BLE/Wi-Fi infrastructure is part of Awarepoint's Location as a Service (LaaS), which also includes a cloud-hosted software application and managed services. Integration with third-party applications enables location services within existing hospital services, such as EMRs, alarm management, and computerized maintenance management systems. Managed services offload staff by providing all the necessary hardware and software support to keep the system running, from battery replacement to system monitoring, while professional services ensure high-quality delivery and maintenance of the Awarepoint solution, to continually improve the customer experience and maximize investment value.

The Awarepoint Advantage

Awarepoint combines superior RTLS technology with software that drives proactive workflow improvements, backed by professional services including up-front impact analysis, outcomes-based implementation, and ongoing managed services to drive significant benefits across the organization.

Next Steps

To learn more about the BLE/Wi-Fi infrastructure and Awarepoint's vision for the future of healthcare, visit www.awarepoint.com.

The BLE/Wi-Fi infrastructure leverages Awarepoint's expertise in high-accuracy location systems and clinical workflows.