

# BLE, NFC, iSIGN Match Up The Future Of Mobile Consumer Engagement Is Now!

BLE-enabled smartphones listen from wireless transmitters (BLE) the size of large match boxes.

BLE Beacons continually transmit a discovery signal to be received by BLE-enabled smartphones.



- Wireless transmitter's (BLE Beacons) coverage radius varies according to signal strength Measured in feet (typically up to 300 feet open air but subject to interference related to multiple wireless paths which impact accuracy and signal strength changes (as measured by apps)
- Supported smartphones: iOS, Android, Windows Phone 8 and Blackberry
- Supported Operating System via Wi-Fi: None
- Based on technology dating back to 2006

NFC-enabled smartphones communicate with wireless transmitters (NFC Tags) the size of postage stamps. NFC Tags communicate when close to an NFC-enabled smartphone.



- Wireless transmitter's (NFC Tags) coverage radius is very small Measures in centimeters
- Supported smartphones: Android 4.0, Windows Phone 8 and Blackberry X
- Supported Operating System via Wi-Fi: None
- Based on RFID technology dating back to 1940's

Bluetooth OPP-enabled smartphone listen for signals from wireless transmitters (Smart Antennas) the size of a small Kindle. iSIGN Smart Antenna continually transmit a discovery signal to be received by Bluetooth OPP enabled smartphones.



- Wireless Transmitter (Smart Antenna) coverage is programmable from 30 - 300 feet
- Supported smartphones via Bluetooth: All versions of Android, Windows Phone 8, and Blackberry \* iOS7 not supported via Bluetooth as iPhones do not support Bluetooth OPP.
- Supported Smartphones via WiFi open access point: All
- Based on Bluetooth 2.1 enhanced technology released in 2007, Bluetooth was first developed in 1994

## USER EXPERIENCE

User Experience-ONE TO MANY: BLE beacons repeatedly transmit a discovery packet. When a consumer's BLE-enabled (Bluetooth 4.0) smartphone is within range of the transmission, it receives the packet and measure the signal strength to determine an approximate distance from the beacon. The OS then extracts the beacon ID from packet and makes the ID available to the appropriate app. The app uses IDs to identify the location of the beacon and therefore the location of the phone/tablet user.

User Experience-ONE-TO-ONE: The consumer observes an NFC Tag affixed to an object with which they wish to engage. The place their NFC-equipped smartphone within 4 centimeters of the NFC Tag. Radio waves from the smartphone cause the NFC Tag to power-up its internal microprocessor. Once powered-up, it executes a stored program. The program typically transmits the contents of the Tag's internal memory to the smartphone. The smartphone executes an action based upon the received content.

User Experience-ONE TO MANY: Smart Antennas transmit a discovery packet. When a consumer's Bluetooth OPP supported smartphone is within range, it is discovered by the Smart Antenna which then determines which ad to send by reviewing time since last transmission to the smartphone (if any) and previously sent ads. It then sends a prompt asking users if they would like to view a message or ad. The Smart Antenna leverages the Bluetooth capabilities available in most mobile devices by using Bluetooth object exchange (OBEX) protocol and its Object Push Protocol (OPP) to push files to phones. Bluetooth must be in discoverable mode.

## EASE OF USE

Ease of Use: Consumer responds to notification that are generated from being in the presence of a BLE Beacon.

Ease of Use: Consumer controls the timing and engagement with an NFC Tag.

Ease of Use: **PUSH SOLUTION.** Consumer responds to notifications that are generated from being in proximity to a Smart Antenna. Permission based. Respects consumers' privacy. Consumer may opt in or out of the ads and messages sent via Bluetooth prompt, and determines whether to connect via WIFI. **NO APP REQUIRED. CONSUMER DOES NOT HAVE TO DOWNLOAD ANYTHING.** Smart Antenna owner/operator does not have to develop apps or interfaces. Ready to go out of the box. Includes server support and remote content management.

## LOCATION SERVICES

Location Services: Measured by signal strength of BLE Beacon as received by BLE-enabled smartphone. Measures are close, near and far.

Location Services: A consumer's location can be ascertained if they engage with a unique tag that is affixed to a stationary object.

Location Services: Discovers mobile devices that are in range. Can be mounted indoor or outdoor and does not rely on an app for discovery. Attracts consumers into stores and venues, as it "discovers" smartphones inside and out.

## ENERGY EFFICIENCY

Energy Efficiency: Each BLE Beacon contains a battery that can last up to two years before it will need replacing.

Energy Efficiency: Each NFC Tag creates its own power when in the presence of an NFC-enabled smartphone. No batteries to replace.

Energy Efficient: Hard wired, no battery while draws less than 5 watts of power.

## PRIVACY

More intrusive- a smartphone app can be configured to continuously monitor a consumer's movements as they move among BLE Beacons - regardless of who deployed the beacons.

Less intrusive- a consumer's movements can only be monitored based upon the NFC Tags with which they have engaged. No third party can monitor engagements unless they supplied the tag contents.

Privacy: Non Intrusive- Does not store the consumer's phone number, only the MAC address of the device. Monitors consumers movements as they move along the Smart Antennas. Measures number of Bluetooth prompts sent out, accepted, dwell time, number of connections via WIFI, page views and phone types.

## SECURITY

Security: BLE Beacons broadcast outbound signals. There is no inherent security risk embodied in these transmissions. Any risk will lie within the app that uses these signals.

Security: NFC supports both secured and unsecured data communication sessions. Secured sessions are designed to emulate contactless card, e.g. credit cards, ID cards, etc.

Security: Bluetooth 2.1 is very secure. Bluetooth BLE used by Beacons has been subject to security breaches. Security tested and approved by the Herjavec Group who confirmed iSIGN software did not pose a threat to clients' IT systems. No apps (apps can be hacked with potential breach personal information breached)

## COUPONS, OFFERS & PRODUCT INFO

Coupons, Offers & Product Info: Upon entering a store, the consumer's shopping app senses a BLE Beacon. Their app checks for the availability of an offer. If one is exists, it sends the consumer a notification. The consumer acknowledges the notification and then either saves the offer to their mobile wallet or disregards it.

Coupons, Offers & Product Info: A consumer observes a marketing oriented call-to-action presented on a static or digital sign. The consumer places their NFC-enabled smartphone on a NFC Tag that is either affixed to or placed near signage. The offer is presented to the consumer, which they may optionally save to their mobile wallet.

Coupons, Offers & Product Info: Because consumers do not have to install an app to use iSIGN tech, they can be discovered without their taking any action. Additionally, they can receive unsolicited Bluetooth offers and coupons from iSIGN platforms and impulsively connect via WIFI to iSIGN platforms in seconds to get interactive content.

BLE promises to ENHANCE THE IN-STORE EXPERIENCE.

NFC promises to ENHANCE THE IN-STORE EXPERIENCE.

iSIGN Smart Antennas promise to ENHANCE THE IN-STORE EXPERIENCE. May also increase foot fall from outside the store.