Bleu SDK

Bleu Stations are short-range bluetooth devices that can be used for proximity detection and are compatible with Apple's iBeacon. In addition to standard iBeacon broadcasts, Bleu Stations offer additional fields and functionality. Developers can access these features using the Bleu SDK. This document will cover differences between what the SDK provides and what you can do using the standard iBeacon support in iOS 7.

iBeacon Features

iBeacons broadcast three pieces of information that allows iOS devices to monitor their proximity: a UUID, a major number, and a minor number. If you know these three pieces of information, you can program iOS to notify your app when it comes within range of a beacon. One way to think about these is that a UUID represents an organization, a major number represents a store, and a minor number represents a department within that store.

For example, imagine you are deploying beacons for the retail outlets of the chain Worldwide Widgets and Contraptions (WW&C). You claim a single UUID for all your stores. A UUID is a universally unique value. The idea is that the chances of another organization accidentally choosing the same UUID as you is virtually zero. Then, you assign a major number to each of your 162 stores. Finally, for each of your stores, you define minor numbers: 1 as the cash register, 2 as the widgets department, and 3 as the contraptions department.

Setting up your beacons as above allows any of the following features in iOS 7:

- *Notify my app when the device is in range of any of the WW&C stores*. You do this by telling iOS to listen for your UUID, any major number, and any minor number.
- *Notify my app when the device is in range of the WW&C store in Buda, Texas*. You do this by telling iOS to listen for your UUID and major number 23, which is the number you assigned to that store.
- *Notify my app me when the device is near the register in the WW&C Store in Buda, Texas*. You do this by telling iOS to listen to your UUID, your major number 23, and minor number 1.

In addition to getting information about when you enter the range of a beacon, you can also get information about how far the beacon is from the device. Keep in mind that it's extremely difficult to get exact position information, but you can get relative position information (for example, this device is closer to the Contraptions Department than it is to the register).

All of this is available with the standard location services available in iOS 7, but Bleu Stations offer more.

Bleu Features

By now it's obvious that iBeacon is pretty simple: it's a low-energy bluetooth broadcast of three pieces of information. You can use this information to infer location. Even though this simplicity

is an advantage in easily and efficiently monitoring proximity, it doesn't cover the tools necessary for configuring and deploying beacons.

Configuration

The UUID, major number, and minor number are broadcast by the beacon. iOS 7 will monitor those broadcasts, but iBeacon provides no way to configure those numbers on a beacon. The Bleu SDK allows you to write these values.

Twocanoes provides a tool called Bleu Setup, and if you have a small number of Bleu Stations, this tool may be all you need. However if you have a large number of beacons, configuring them one at a time would be cumbersome. Bleu SDK allows you to write your own configuration tools, possibly integrating them into your existing systems. You could, for example, keep a database of configuration information. Every time your configuration app encounters a Bleu Station, it queries the database for configuration info, and automatically writes all the settings to the beacon.

Bleu Stations and Your App

The Bleu SDK is provided as a static library. You or your developer can quickly get started by copying the SDK files into your Xcode project. Comprehensive documentation is included, and there is even a sample project that you can compile right out of the box. See how easy it is to configure and manage Bleu Stations now by downloading the SDK.

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