



**adaptTo()**

APACHE SLING & FRIENDS TECH MEETUP  
BERLIN, 22-24 SEPTEMBER 2014

Getting Started with iBeacons and AEM  
Bartek Soin, Adobe Global Shared Services

GRAHAM CHAPMAN · JOHN CLEESE · TERRY GILLIAM · ERIC IDLE · TERRY JONES · MICHAEL PALIN

**MONTY PYTHON'S**

**AND NOW FOR  
SOMETHING FOR  
COMPLETELY  
DIFFERENT**

モンティ・パイソン  
アンド・ナウ

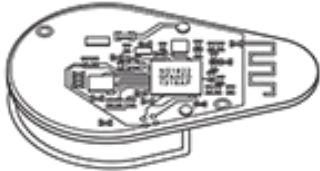
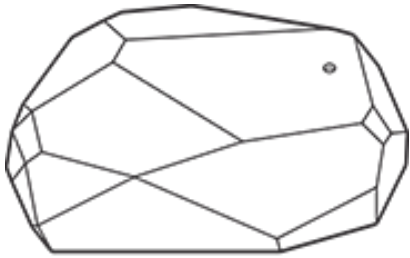


- What is this iBeacon thing?
- How do I use it with AEM?

DVD  
VIDEO

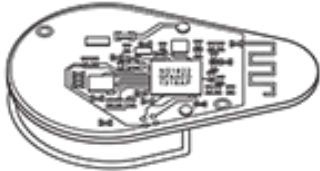
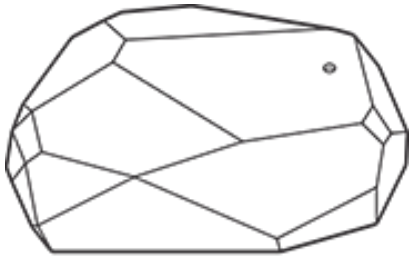
THE BEST OF MONTY PYTHON'S FLYING CIRCUS

# What is this iBeacon thing?



© Estimote

- iBeacon is a tiny computer
- Uses Bluetooth Smart (BLE) to broadcast its ID
  - No pairing required
- Signal is picked up by different receivers
  - Smartphone, Tablet, Google Glass...



© Estimote

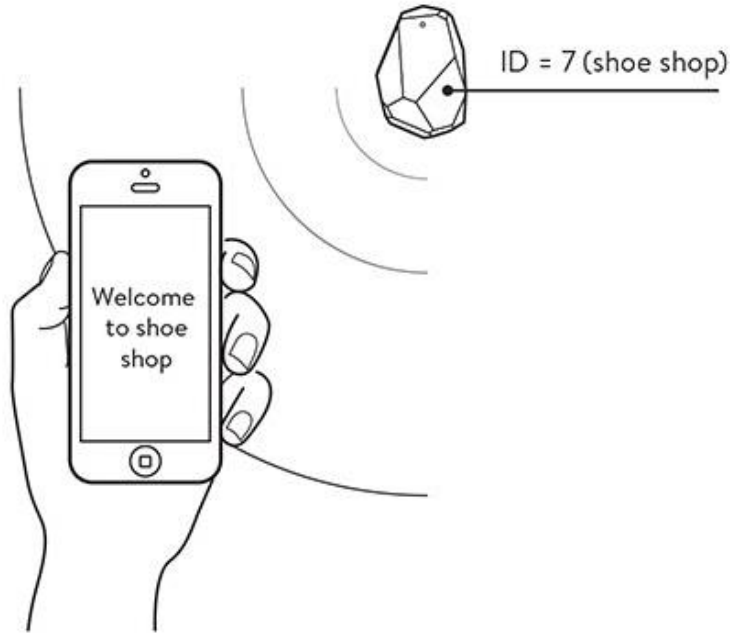
- Application handles events
- Even in the background and when the device is locked
- Dedicated app allows you to configure your beacons



© Estimote

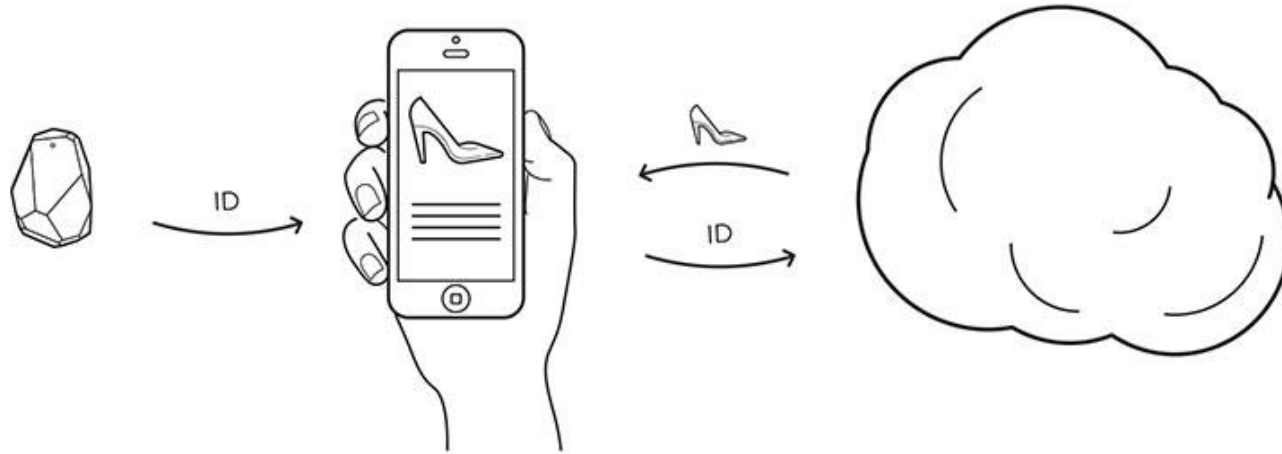


Source: Wikipedia



© Estimote

- iBeacon broadcasts its UUID + major + minor
- RSSI used to calculate distance
- 3 major zones:
  - Far
  - Near
  - Immediate





## **Promotions & automatic payment**

Retail stores, cafes...

## **Location-based information**

Airports, stadiums, museums, city guides...

## **Automatic check-in**

Airports, hotels, hospitals...

## **Home automation**

Lights, locks, garage doors...

# Pitfalls and shortcomings

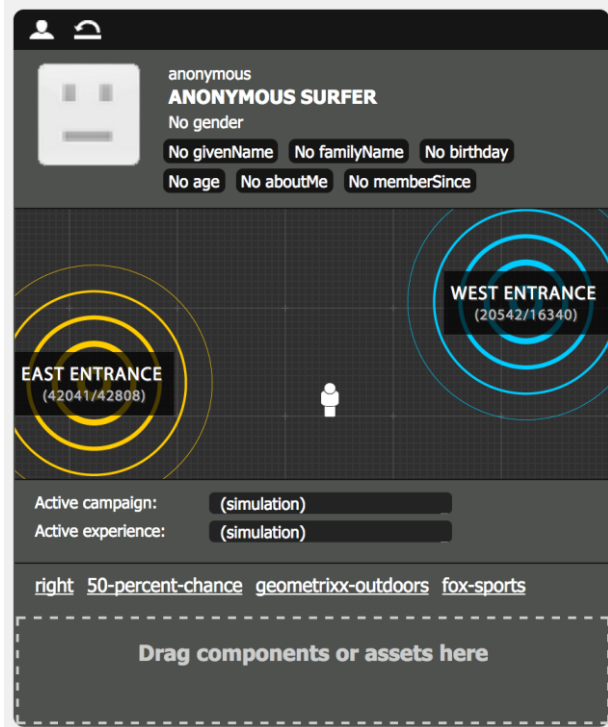
- Bluetooth and location services have to be enabled
- Bluetooth waves are easily blocked
- Low accuracy and not very stable
- Rather unusable for positioning (trilateration)
- Battery drain in older phones
- Can be spoofed, applications need to handle security

# How do I use it in AEM?

- Mostly with Mobile Apps in AEM 6.0
- Ideas based on our POC-s for customers in hotel and media industry

- Custom Client Context store
- Segments based on beacon proximity
- Components to use in targeted experiences

- Necessary PhoneGap plugins
- Extension to Target component – support for targeted experiences in mobile apps
  - Adobe Mobile Services
  - AEM Targeting (in progress)



- Similar to geolocation
- Configurable beacons:  
`east-entrance, -`  
`30, 40, orange, 42041/42808`
- Stores the distances in *microlocation/distance-\** properties

- microlocation.jsp

```
<div class="cq-cc-store">
  <div class="cq-cc-content">
    <c:forEach var="beacon" items="${properties.beacons}">
      <!-- output beacon divs -->
    </c:forEach>
    <span class="user drag"></span>
  </div>
  <div class="cq-cc-clear"></div>
</div>
```

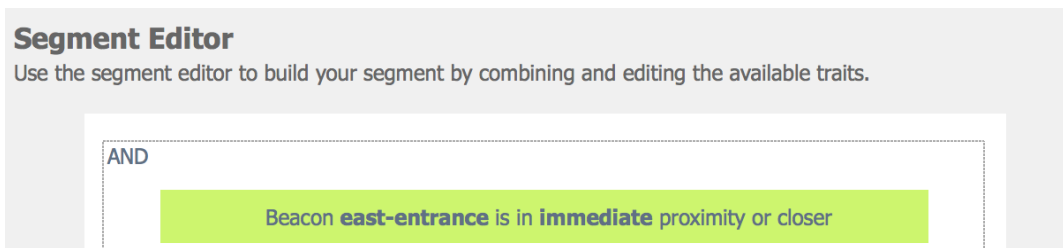


- script. js

```
user.drag(function(ev, dd) {  
    $('.microlocation .beacon').each(function(index, element) {  
        store.setProperty('distance-' + beaconLabel,  
            t.getDistance(user, beacon));  
    });  
});
```

```
getDistance: function(user, beacon) {  
    return Math.round(Math.sqrt(x * x + y * y));  
}
```

- Use the Beacon Proximity component:



**Segment Editor**  
Use the segment editor to build your segment by combining and editing the available traits.

AND

Beacon **east-entrance** is in **immediate** proximity or closer

- ... or a script:

```
parseInt(ClientContext.get('microlocation/distance-east-entrance')) < 85
```

# Additional components – local notification

## Content

The paragraph system below will be shown in teaser or target components:



Local notification

*Hello World!*

Drag components or assets here

PhoneGap Local Notification plugin wrapped in AEM component

```
localNotifier.addNotification({  
    alertBody: 'Hello World!'  
});
```

# Demo

# Summary

- iBeacons are all the hype now, don't miss it
- AEM package:
  - Still in development
  - Relies on the Estimote SDK
  - Let me know if you'd like to use it



# Thanks!

[bsoin@adobe.com](mailto:bsoin@adobe.com)