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# Indoor localization with BLE

## Documentation

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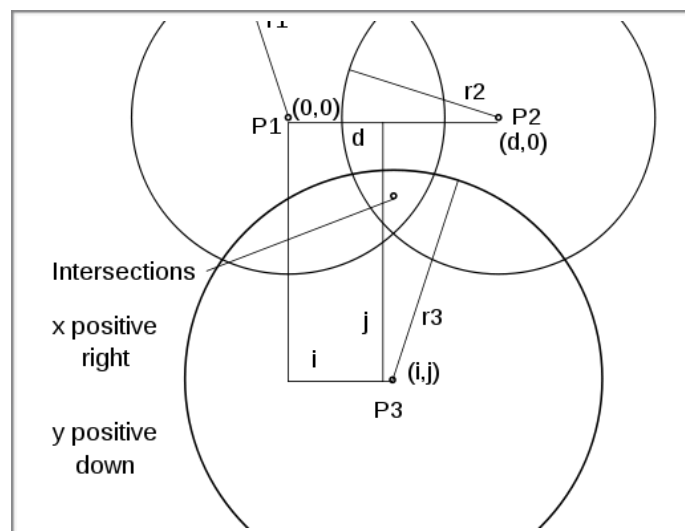
### Beacon placement

Place beacon as high as possible to avoid interference.

- 1 - Place beacon with minor 1 in the north west corner
- 2 - Place beacon with minor 2 in the north east corner
- 3 - Place beacon with minor 3 on the south wall

### Measurement

Measure  $d$ ,  $i$  and  $j$  according to the following image (P1 is beacon with minor 1, etc ...)



## Configure your environment

Edit the following part of the source code according to your environment :

- d, i and j are the distances measured previously in meters.
- STEP is the estimated size of one step according to the way users are walking in your environment.

```
/* CONFIGURE THIS PART */  
#DEFINE STEP 0.5  
#DEFINE _D 7.26  
#DEFINE _I 3.71856  
#DEFINE _J 3.9
```

## Run the program

Run the program on an iOS 7 device (at least) and watch your position.

## Indicators

-  Bluetooth logo : beacons
- Big grey dot : trilateration positions
- Small red dot : last position
- Small dot : previous positions
- Red flash : new step