BeaconBone

An Indoor Positioning System

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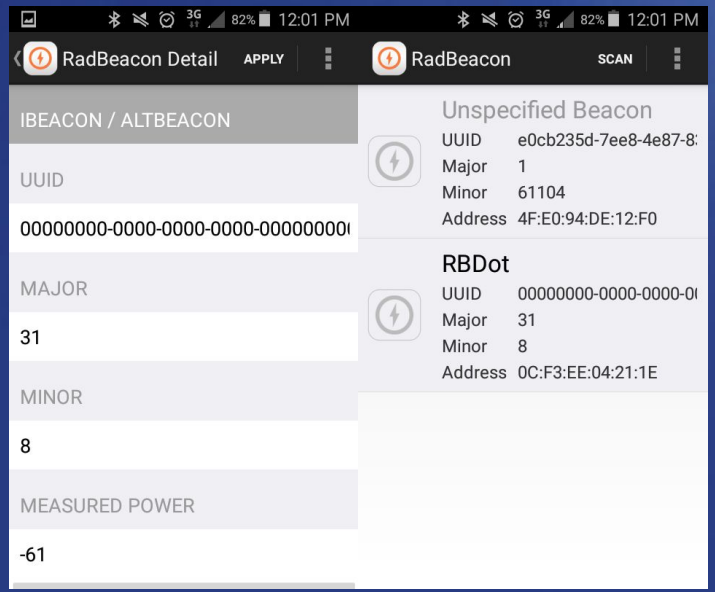
System Overview - Configuration

- Configure advertised RSSI

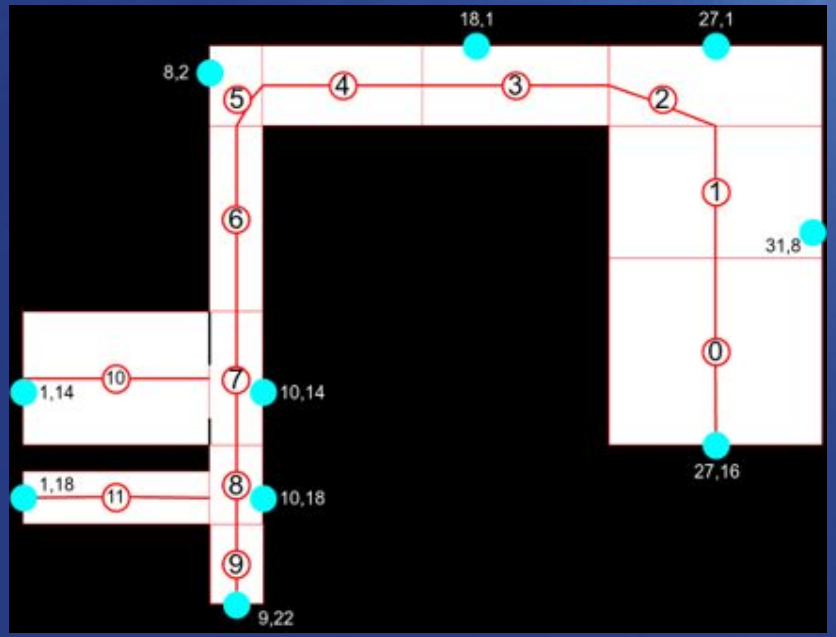


- Adjust UUID to match position

System Overview - Positioning

1. Detect two closest beacons
2. Find point in between using proportion of RSSI
3. Find closest point on predetermined path

System Overview - Mapping

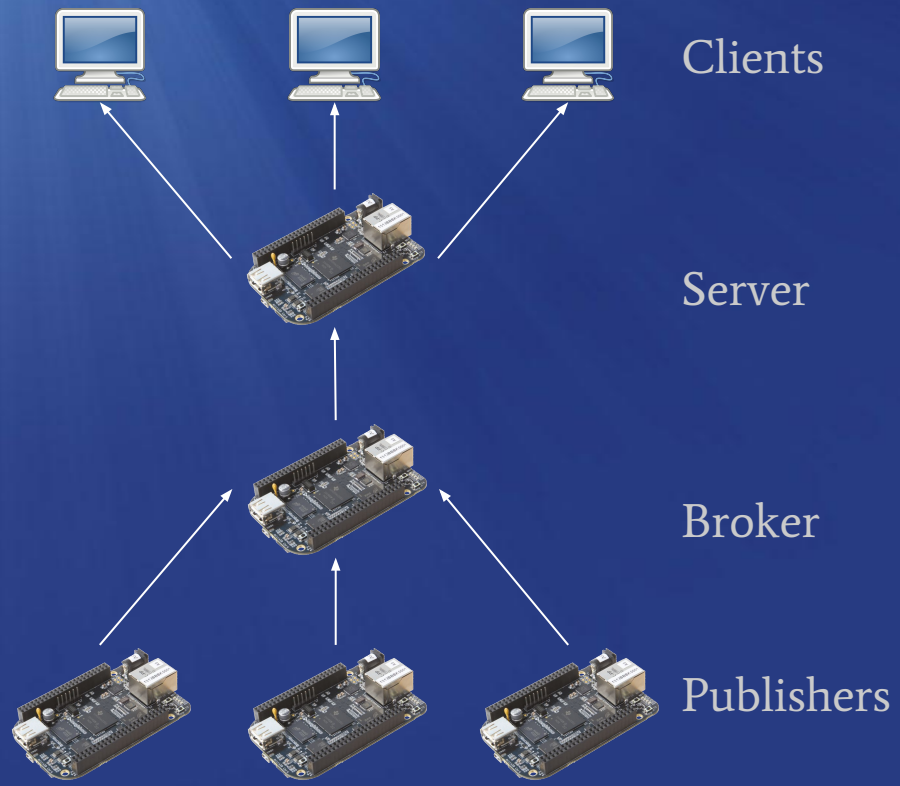


- Create graphical and spatial representations of the EB II

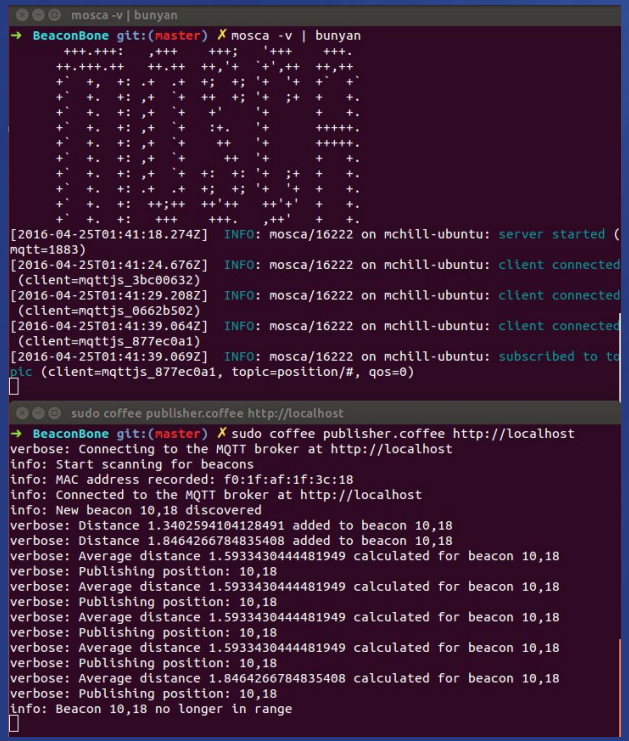
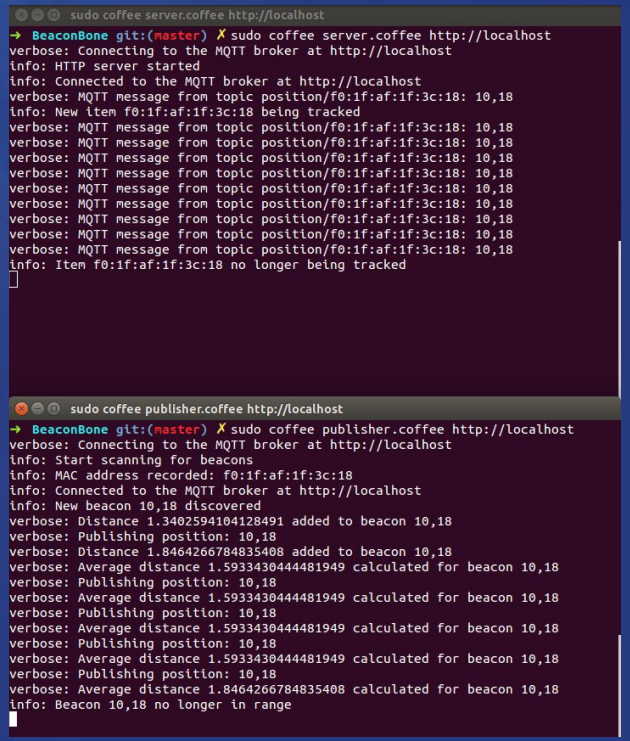
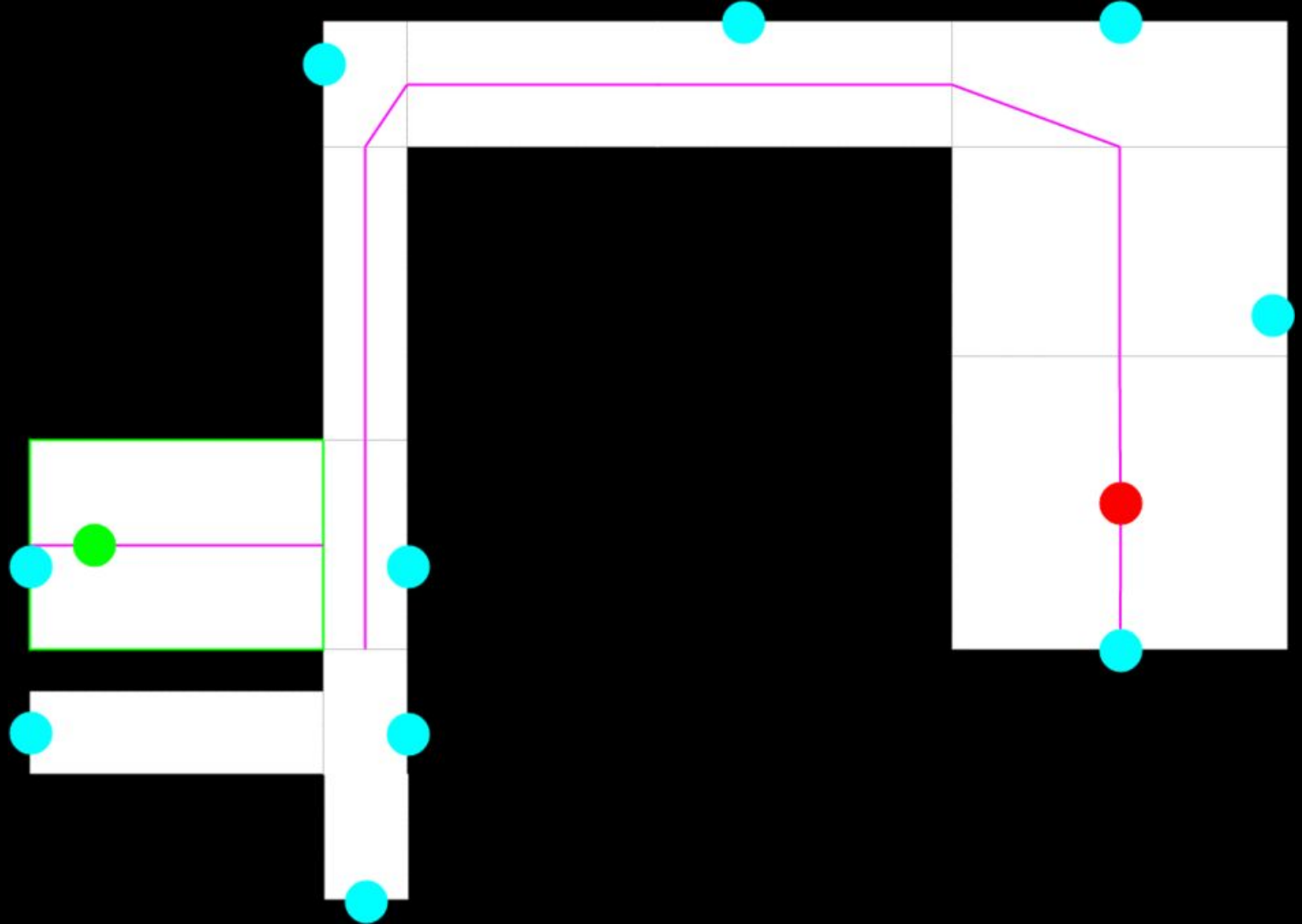
- Place beacons strategically

System Overview - Networking

1. MQTT broker as “middleman”
2. Publishers publish their positions to the broker
3. HTTP server subscribes to all positions published to the broker
4. Clients connect to the server over HTTP to display map of area



Scenario Walkthrough



1. On first BeagleBone:
   a. Run the MQTT broker
   b. Run the publisher
2. On second BeagleBone:
   a. Run the HTTP server
   b. Run the publisher
3. Navigate to the IP address of the second BeagleBone
4. ?
5. Profit