**Project Goal**

To develop an Indoor Positioning System with an emphasis on:

- accuracy
- simplicity
- weight
- cost
- energy

**Approach**

1) A transmitter in a room transmits a unique ID + timestamp via infrared to a body-worn receiver.

2) The receiver acts as a relay using Bluetooth Low Energy to a nearby gateway—an iPhone (4S/5).

3) The iPhone sends the unique ID to the cloud, where the ID will be translated to a room number. In this manner, an individual is able to be located and tracked from the web or iPhone.

**Implementation** (as of 2-12-2013)

- Narrow beam infrared LEDs
- Wide angle infrared LEDs
- Memory storage (1KB EEPROM)
- ATMega 328P microcontroller
- Infrared receiver
- Bluetooth Low Energy Module