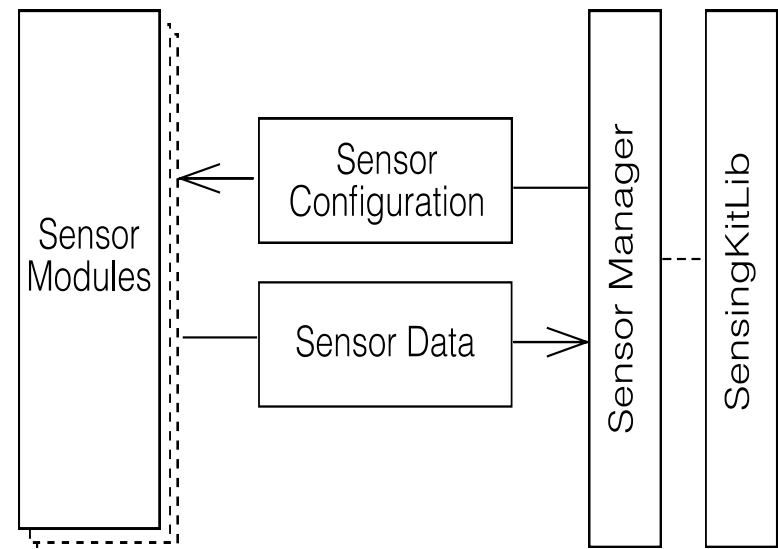


SensingKit: Evaluating the Sensor Power Consumption in iOS devices

Kleomenis Katevas

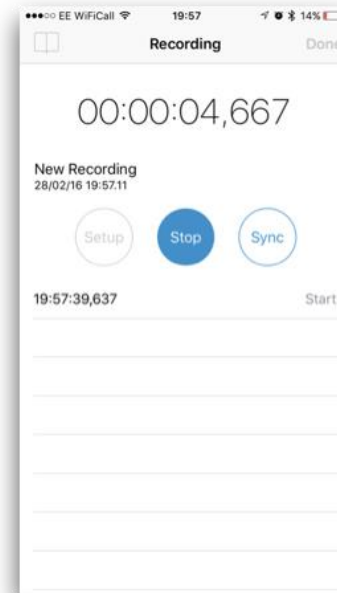
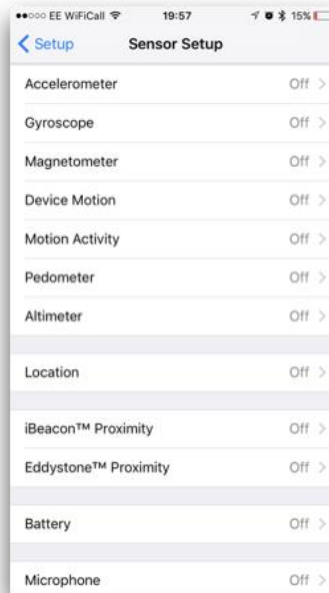
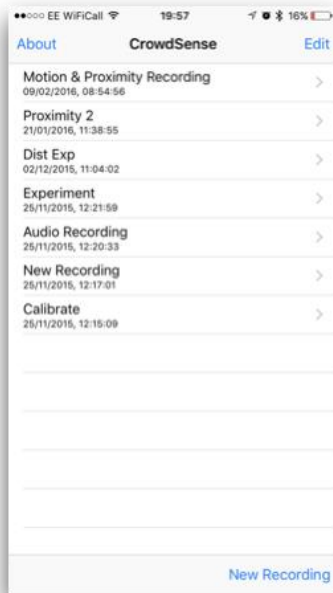


- A continuous sensing framework for Android and iOS platforms.
- Supports most sensors available in a mobile device.
- Power efficient proximity tracking using Bluetooth Smart (BLE).
- Easily extensible using a modular design.
- Available in open-source under the GNU LGPL v3.0.
- For more info, check www.sensingkit.org.



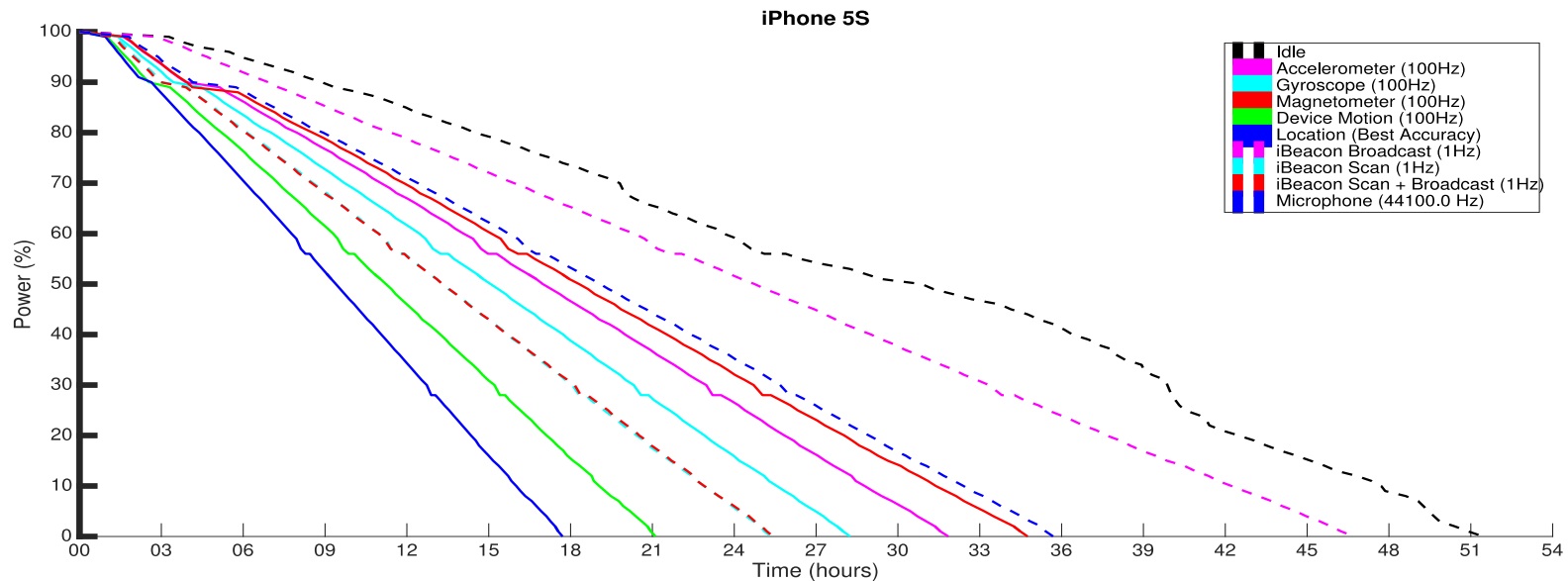
Sensor power consumption evaluation

- Evaluated seven sensors separately using CrowdSense App.
- Motion and Orientation sensors at 100Hz.
- Location sensor using 'Best Accuracy' configuration.
- Microphone sensor at 44100.0Hz.
- iBeacon™ sensor in 'Broadcast', 'Scan', and 'Scan & Broadcast' mode (1Hz).



Results and conclusion

- iBeacon™ Broadcast recording was close to the 'idle' configuration, while modes 'Scan' vs. 'Scan & Broadcast' performed equally.
- Results suggest that power consumption of iBeacon™ sensor in broadcasting mode has almost no effect on the device's battery.
- Location sensor is very expensive, close to the Device Motion sensor.



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