Project Type: Master thesis

Android based Generic Bluetooth Low Energy sensor readout App

Low power has become a major issue when speaking of embedded systems. One of the communication protocols winners when reducing the power consumption is being the Bluetooth Low Energy. On the other hand, sensor devices development has been one of the main research lines at CNM.

The main goal of this project is to develop an Android app able to read a generic sensor through the Bluetooth Low Energy communications protocol. An embedded BLE device from Texas Instruments (CC2650) with an electrochemical sensor developed at CNM will serve as main demonstrator hardware. The candidate will start defining the specification for the BLE operation mode. Once the specifications will be fixed an Android app development has to be carried out.

Background & skills required
- Android software development
- C++ microcontroller firmware development

Tasks
- BLE mode specifications definition
- Android APP development
- CC2650 Microcontroller firmware development
- Write final report

Contact
Group ICAS GRUP @ IMB-CNМ (CSIC)  
Ricardo Martínez Ricardo.Martinez@imb-cnм.csic.es  
Lluís Terés Lluis.Teres@imb-cnм.csic.es