



Communication and logging hub for rapid prototyping of environmental sensors: presenting the Smartphone.

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When designing prototype sensors for environmental variables a critical step is a comparison campaign where the new sensor is compared to current state of the art sensors. In this step one of the headaches for researchers can be connecting their sensor to a logging or communication device.

I present a simple solution: to use smartphone that scans for Bluetooth Low Energy transmissions and uploads any measurement to a data server. In this way the prototype sensor only has to transmit its measurement values over BLE, which can be done using off-the-shelf components. The sensors don't have to be physically connected to the phone, allowing for very rapid deployment of sensors in locations that have a communication hub (ie. phone) installed.

The communication and logging hub consists of nothing more than a low cost Android smartphone running a dedicated app. I will demonstrate this live at the General Assembly.

By installing these phones along permanent WMO certified station locations, comparisons campaigns can use the "golden standard" from the WMO without much problems