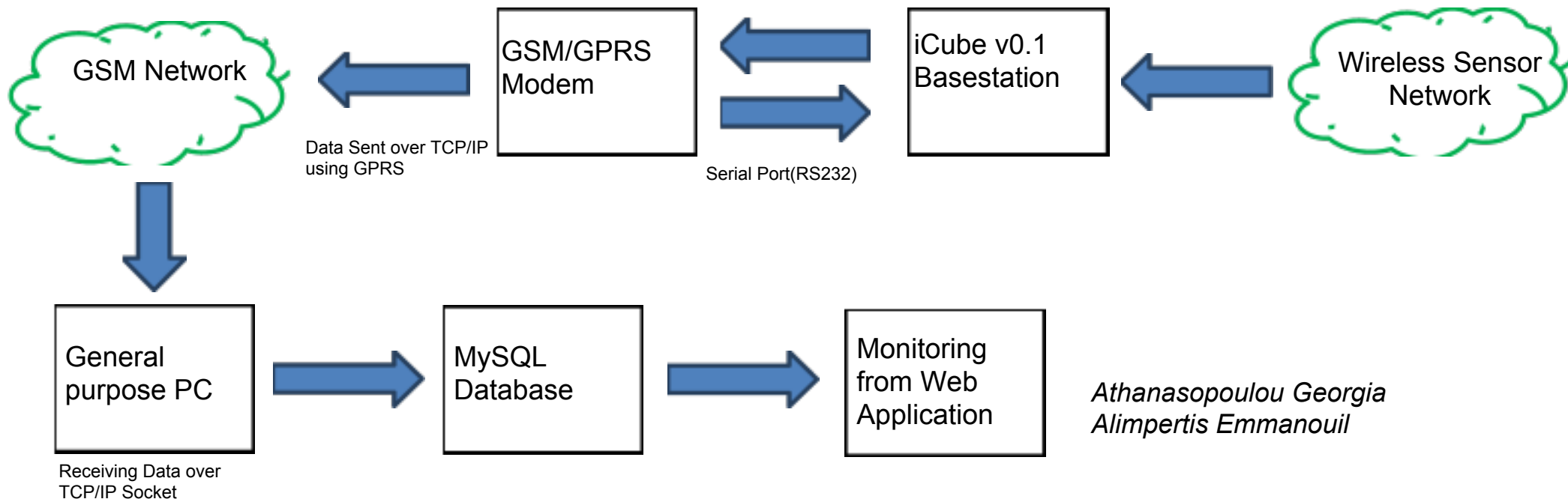
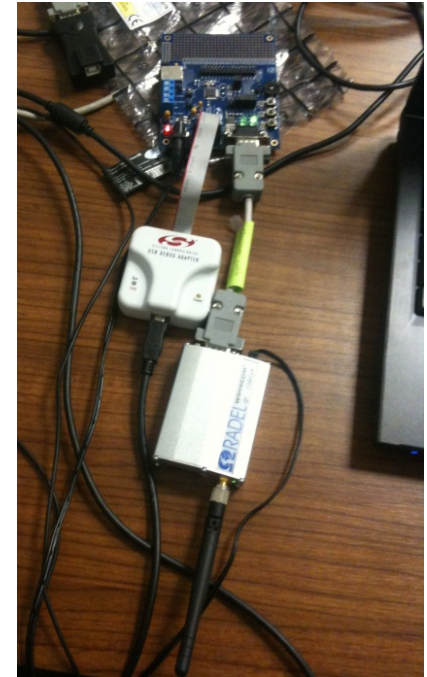


# Remote Sensor Network via GPRS

- How can we remotely monitor measurements from our farm to our office? Using GSM/GPRS modem!
- Modem sends data to a general purpose PC using TCP/IP over GPRS.
- TCP/IP over GPRS and MySQL database allows wireless sensor network's **scalability**.



# Abstract

## **Remote Sensor Network via GPRS**

Wireless sensor networks (WSNs) will be widely adopted only if they are low energy and they can be deployed remotely from wired internet infrastructure, i.e remotely collect measurements. Especially the latter, is very important because a WSN is very likely to be installed on a farm (or general in faraway place) where there isn't any infrastructure of internet connection, therefore, forward data to our home is impossible. In order to gather remotely WSN's data we utilize a GSM/GPRS modem. GPRS Modem has embedded application stack to provide TCP/IP connectivity over GPRS. We construct an appropriate interface between iCube gateway node (MCU 8051 development kit) and GPRS modem using RS232. MCU sends commands and data to the modem. GPRS Modem sends data over TCP/IP socket using mobile network so the receiver can be any general purpose PC connected to the Internet. Measurements are being processed on web server, in order to acquire the appropriate interpretations. Thence, measurements are written in MySQL database so can be accessed from anywhere in world. The combination of TCP/IP over GPRS and the usage of databases allows the wireless sensor network's scalability: collect measurements from thousands of nodes wherever and send them anywhere we want.