EE 491 Weekly Report MAY1633 Week 3 (9/15/15-9/22/15)

Advisors: Dr. Daji Qiao, Dr. Long Que **Client:**

Members (roles): **Schilling, Anthony (Team Leader)**

Bennett, Tyler (Concept Keeper)

Li, Liuchang (Web Master)

Lin, Haisong

Tian, Yang(Communication Leader)

Time: Sept 22th 2015

Project Title: Portable Nutrient Data Collection System Based on MEMS Sensors and Smartphone technologies

Summary and Accomplishments

The main goal of this week is to improve the functional and nonfunctional require list, finish the design sketch up and start to find more details about the project. Group members started to build parts assigned to them.

WHO	WHAT	HOURS
Anthony	▪ Contact advisors to set up the meeting ▪ Research the interface of microcontroller to cell phone ▪ Test the microcontroller ▪ Design the subsystem of the interface	4
LiuChang	▪ Research the background of the interface of optical signal to voltage signal from spectrometer to external microcontroller ▪ Design the subsystem of the interface ▪ Star to design the website	3.5
Haisong	▪ Research the background of the voltage boost circuit and plasma trigger device. ▪ Collect the results and design of group member and made slices ▪ Design the subsystem of the circuit and trigger device	4
Tyler	▪ Working on the background of the GPS module on cell phone ▪ Design the subsystem of the App	3.5
Yang	▪ Research background of the interface of optical signal to voltage signal from spectrometer to external microcontroller ▪ Prepare the ports and connectors ▪ Design the subsystem of the interface	3.5

Meeting notes:

1. Improve the functional and nonfunctional requirement
2. Discussion about if the cell phone can trigger the device to test the concentration level of the water sample, the conclusion it is possible.
3. The interface between spectrometer and external microcontroller, and the interface between external microcontroller and cell phone might be an issue in the future.
4. More details need to be added: storage alarm, storage format, connection alarm, method of connection between microcontroller to cell phone, etc.
5. Name of the sensor should be declared.

Pending issues

1. Make an appointment with PhD student to demonstrate the spectrometer
2. Make the project plan for each subsystem and discus about it on group meeting.
3. Design the website for the group

Plans for next week

1. Website design should be continued
2. Finish the draft of the project plan
3. Fill more details to the project design
4. Start to work on each subsystem