EE 492 Weekly Report **MAY1633 Week 11(3/31/16-4/6/16)**

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)
Wang, Wentai

Time: April 6th 2016

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

Summary and Accomplishments

This week we have a meeting with George, present our results, work we have done and challenges we met and solved or unsolved. Some feedback about the system is given about the time and content organization.

WHO	WHAT	HOURS
Anthony	▪ Sam L21 Bluetooth testing ▪ Data transmission between spectrometer and microcontroller	13
LiuChang	▪ PCB design complete ▪ Searching the components that needed for the soldering	8
Haisong	▪ Testing of the voltage booster and micro discharger device ▪ Improvement of the circuits	6
Tyler	▪ Program coding for the cell phone app ▪ Building the database for the data reference	12
Yang	▪ Contact the technician from the company which made the spectrometer ▪ Using the oscilloscope to test the respond of the spectrometer and respond from it	13
Wentai	▪ Data transmission method testing and consider other alternatives	10

Meeting notes:

1. Meeting with George:
    - The content organization is a little bit confusing because the slice order is not proper.
    - Presentation time is too long, need to be shorten
    - Some slices need to be cut to short the time.
2. PCB board components need to be ordered to catch up the time.
3. The data format including the “pixel” information, which are x and y axis and resolution, which could be used to plot a spectrum.
4. To make the voltage booster controlled by the microcontroller so that the system can gathering data at proper time, simple switch to control the charging time is discussed during the meeting.

Pending issues

1. Anthony is working on Sam L21 Bluetooth code testing and apply some information to the data transmission.
2. Tyler is working on the cell phone app programming and data plotting.
3. Haisong is working on testing the micro discharger device and some improvements.
4. Liuchang is working on the PCB design of the board and ordering the components need for the PCB board.
5. Yang is working on data transmission from spectrometer to SAM L21 MCU and contacting the technician from OceanOptics and debug of the data transmission.
6. Wentai is working on switch design and calculation to make sure it will work.