EE 492 Weekly Report **MAY1633** **Week 6(2/18/16-2/24/16)**

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: Feb 24th 2016

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

Summary and Accomplishments

This week the basic prototype of subsystems are made. More details are discussed to meet out design requirement.

WHO	WHAT	HOURS
Anthony	▪ Bluetooth module chip program testing	5.5
LiuChang	▪ PCB design	6
Haisong	▪ Voltage booster and micro discharger fabrication ▪ Size estimation	4
Tyler	▪ Make a simple prototype for the cell phone app	4.5
Yang	▪ Bluetooth chip ability identification ▪ Data transmission research	7

Meeting notes:

1. Bluetooth chip BTLC chip cannot work along without SAM L21. The ability was misunderstood by group members.
2. Datasheet of the BTLC1000 said this could be a used as a “Bluetooth Low Energy link controller or data pump with external host MCU or as a standalone applications processor with embedded BLE connectivity and external memory”. The external memory is not soldered on the module, it may need an extra order for the memory.
3. Data transmission between SAM L21 and spectrometer require rs232 communication. The first step can be establishment of the communication between spectrometer and computer. Then the data format could be observed and we can determine how should be control the data flow.
4. Case design with 3d printing may be too expensive. An alternative easy method, such as wood case could be built.

Pending issues

1. Anthony is working on re considering the BTLC1000 function and how should we use it.
2. Tyler is working on the cell phone app programming.
3. Haisong is working on testing the micro discharger device.
4. Liuchang is working on the PCB design of the board and reevaluate possible arrangements for external MCU.
5. Yang is working on data transmission from spectrometer to SAM L21 MCU and Bluetooth chip testing.
6. Wentai is working on the case design for the device and Bluetooth testing.