

# EE 492 Weekly Report    **MAY1633**    **Week 9(3/17/16-3/23/16)**

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**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: Mar 23rd 2016**

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

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## **Summary and Accomplishments**

This week we put more attention on testing Sam b11, and Rs232 communication.

<b>WHO</b>	<b>WHAT</b>	<b>HOURS</b>
Anthony	<ul style="list-style-type: none"><li>▪ Bluetooth module chip program testing</li><li>▪ Sam b11 testing</li></ul>	10
LiuChang	<ul style="list-style-type: none"><li>▪ PCB design</li><li>▪ Evaluation of replacing original chip to Sam b11</li></ul>	12
Haisong	<ul style="list-style-type: none"><li>▪ Testing of for the voltage booster and micro discharger device</li><li>▪ Improvement of the circuits</li></ul>	6
Tyler	<ul style="list-style-type: none"><li>▪ Program design for the cell phone app</li><li>▪ Building the database for the data reference</li></ul>	11
Yang	<ul style="list-style-type: none"><li>▪ Data transmission method research and testing: RS232 mode</li><li>▪ USART handshaking communication</li></ul>	10
Wentai	<ul style="list-style-type: none"><li>▪ Case construction</li><li>▪ Data transmission method testing</li></ul>	10

## **Meeting notes:**

1. Sam b11 will save a lot of work from programming perspective, but rearrangement for PCB design might cost a lot of time.
2. Temporary box for testing has been made by wood boxes and drawer.
3. Database has been working on for saving data from spectrometer some real data may need to be obtained from the system.
4. Voltage booster circuits is working well. Haisong is working on combining the voltage booster with the microcontroller.

## **Pending issues**

1. Anthony is working on Sam B11 Bluetooth code testing
2. Tyler is working on the cell phone app programming and database building.
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 reevaluate possible arrangements for external MCU.
5. Yang is working on data transmission from spectrometer to SAM L21 MCU.
6. Wentai is working on building the box and make sure the box can include all the parts.