

EE491 Weekly Report 10

Date: 11/08/16-11/14/16

Group number: May 1717

Project title: 19 - Wireless Solar Temperature/Humidity Sensor

Client: Dan Stieler

Team Members/Role:

Yi Qiu - General Member

Xiang Li - Webmaster

Kebei Wang - Team Leader

Trevor Brown - Key Concept Holder

Kukjin Chung - Communication Leader

Weekly Summary

- Test the power consumption of a new sensor.
- Figured out how to get the data from the sensor to computer, and from the computer to phone.

Past week accomplishments (please describe as what was done, by whom, when)

- Kebei Wang -work on design document and discover another way to approach the project.
- Trevor Brown - Made a block diagram of the hardware, ordered samples from TI of the power management IC
- Yi Qiu - meet with group members and test power consumption for new temperature sensor and energy harvest circuit.
- KukJin Chung - I joined the advisor and client meeting and participated Monday, Friday, and Sunday group meeting. I worked on the design document.
- Xiang Li — participated the meeting with client and professor Tuttle, study the bluetooth interface for transmitting data , and tried to create an ios app.

Pending Issues

- Power harvesting test is postponed to next week.
- Figure out how to use BLE module.

Individual contributions

<u>NAME</u>	<u>Individual Contributions</u>	<u>Hours</u> <u>this</u> <u>week</u>	<u>HOURS</u> <u>cumulative</u>
Yi Qiu	meet with group members and test power consumption for new temperature sensor and energy harvest circuit.	4	25.5
Xiang Li	participated the meeting with client and professor Tuttle, study the bluetooth interface for transmitting data , and tried to create an ios app.	4	27
Kebei Wang	Read data sheet for harvest chip and do some research for BLE. Participated the group meeting. Circuit debug help.	6	29.5
Trevor Brown	Tested multiple sensors and measured the power consumption. Tested the energy harvesting circuit with a battery.	8	23
Kukjin Chung	I have studied how the energy harvesting circuit works.	1	25.5

Comments and extended discussion

- We still need to figure out measure the power consumption, and order some batteries to try on.

- We need to think about how to transmit the data by bluetooth without arduino for next semester.

Plan for coming week (please describe as what, who, when)

- Kebei W. test the property of new chips we will get and check to see if we can find new BLE and compare it with which we are using.
- Yi Q. prepare for presentation, work with new sensor and try to make the data accurate.
- Kukjin C. will work on coding to make up the connection between BLE module and arduino system.
- Trevor B. Continue research on TI chips and compare power consumption.
- Xiang L. figuring out how to use BLE module, and bluetooth interface.