

Senior Design 492 Weekly Report 18

Week 18 (2/1/16 – 2/8/16)

May1624 -- Programmable Wireless Sensor Package for CprE Education

Advisor/Client: Dr. Thomas Daniels

Team Members -- Roles:

Yidong Liu – Team Leader

Xinian Bo – Team Webmaster

Niklas Jorve – Team Communication Leader

Branden Sammons – Key Concept Holder, Secretary

Jonathan Krueger – Key Concept Holder, Manager

Weekly Summary:

During this week we kept working on integrating all of the components together. We also worked on a more detailed timeline for completing the first PCB as well as time to submit a second PCB with any necessary corrections. We have been working on the design of the PCB in ModelSim and we have developed most of the power connections. The step that we are working on heavily now is figuring out all of the data pin connections. We are simultaneously designing the data pin circuit and designing software to test the components.

Weekly Accomplishments:

1. Tested and confirmed connections for buttons
2. Tested and worked on connections for LEDs
3. Continued work on SPI connection for 9DOF chip

Advisor Meeting (2/2/16):

Duration: 1 Hour

Members Attending: Niklas Jorve, Yidong Liu, Jonathan Krueger, Branden Sammons, Xinian Bo

Notes: During our advisor meeting we worked on developing a more specific timeline for our PCB design. Based on our projection of 3 weeks between getting the PCB checked off by Lee in the Electronics shop and getting the PCB fabricated, we will need to complete our first design by week 7.

After we get the first PCB back and test the connections, we will get a couple weeks to make any changes necessary and submit the second PCB design. This will allow us to get our PCB back the week before dead week so we can install any necessary software and present our project.

Group Lab Meeting (2/3/16):

Duration: 3 Hours

Members Attending: Niklas Jorve, Yidong Liu, Jonathan Krueger, Branden Sammons, Xinian Bo

Notes: Niklas and Branden worked on the SPI with the 9DOF, testing the buttons, and testing the LEDs. Jonathan worked on the bluetooth communication as well as working on upgrading the firmware on the Edisons. Lidong and Xinian worked on the PCB design.

Plans for Next Week:

1. Work on completing the SPI connection and testing
2. Construct wrappers for bluetooth communication
3. Work on finishing first draft of PCB design

Individual Contributions:

Niklas Jorve	Attended group meetings, worked on group report, worked on SPI
Yidong Liu	attended group meetings, test on battery charging circuit, worked on pcb design
Branden Sammons	Attended Meetings, worked on SPI communication with ADC
Jonathan Krueger	Attended group meetings, worked on bluetooth connections
Xinian Bo	attended group meetings, test on battery charging circuit, calculate the power consumption

Project Contributions:

Member	Project Time this week (hours)	Total Project Time (hours)
Niklas Jorve	10	93

Yidong Liu	9	89
Branden Sammons	7	73
Jonathan Krueger	10	102
Xinian Bo	9	72