EE 491 Weekly Report 10

Date: 11-8-16 -- 11-14-16

Group Number: May1735

Project Title: Cy-Mote

Advisor: Dr. Daniels

Team Members:

Kyle Fischer - Team Lead

Michael Linthicum - Communications Lead

Daniel Shauger - Concept Holder Lead

Sam Neff - Webmaster

Nick Juelsgaard - Schedule and Planning Lead

Summary of the Week:

Work continues on each piece of the board. We had our weekly planning meeting and our weekly group meetings. We all worked individually on the tasks we assigned ourselves.

Past Week Accomplishments

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| --- | --- | --- | --- |
| Name | Accomplishments | Time worked | Cumulative Time |
| Kyle Fischer | Worked on BLE. I was able to change the data that was sent at runtime in a test project but when I moved my work to the main BLE project the on board programmer for into a bad state and wouldn't let me load any new code. | 4 | 36 |
| Michael Linthicum | Verified through a arduino project provided by Adafruit that the LSM9DS0 chip is functioning correctly.  Bit Banged my own version of an SPI read and write on the Arduino Uno and then ported it to the B11. I am now able to read and write with a homemade software simulation of SPI. | 8 | 49 |
| Daniel Shauger | Got ADC to work on multiple channels. This means the joystick is completely functional with our board.  Researched how to program the chip (related to finding a programmer). Still in progress. | 5 | 38 |
| Sam Neff | Met with Lee. Discussed breakout board for our power regulation chip. Requested large breadboard for our alpha model. Researched/selected power regulation chip. | 4 | 35 |
| Nick Juelsgaard | Started working on the CAD file for the PCB. | 2 | 36.5 |

Pending Issues:

* Kyle Fischer - the on board programmers don't like my computer. In keep not being able to load new code.
* Michael Linthicum - Need to get data output from the LSM9DS0. Right now I am reading status registers.
* Daniel Shauger - Kyle’s board doesn’t seem to have functioning ADC inputs and PWM outputs, along with being kind of fussy with connecting to our computers. Probably a faulty board
* Sam Neff - Our regulator is a VQFN package; no breakout board exists for this package. We will need to design our own. This means we will not be able to use our own power regulation for the alpha model.
* Nick Juelsgaard - Need to put together the alpha bread board asap. Need to get a version of the PCB to Lee before christmas

Comments and extended discussion

Plan for coming week

* Kyle Fischer - make the boards like my computer again.
* Michael Linthicum - Get data output from the LSM9DS0 sensors using the bit banged SPI interface. Show the data nicely and make it easy to run on the alpha breadboard. Also define what pins I would like to use for the alpha model.
* Daniel Shauger - Research programmers / how that works. Help other CprE team members with their stuff
* Sam Neff - Work with Nick to start building our alpha model. At request of Dr. D, look into other regulation methods.
* Nick Juelsgaard - Get my head back above water and get the breadboard for the alpha model laid out

Summary of weekly advisor meeting:

Talked about power regulator circuits and ordering parts for them. Also talked about ordering another board for the EE team.