EE 491 Weekly Report 3

Date: 9-20-16 -- 9-26-16

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:

This week we ordered the microcontrollers we will be developing on, the ATSAMB11. We continued work on a parts list and made progress on SPI communication between the nine degrees of freedom chip and the Arduino Uno. We can successfully talk to and receive data from the nine degrees of freedom chip.

Past Week Accomplishments

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| --- | --- | --- | --- |
| Name | Accomplishments | Time worked | Cumulative Time |
| Kyle Fischer | Talked with Dr. Daniels to order microcontrollers. Showed Michael what I came up with for getting data. | 3 | 10 |
| Michael Linthicum | Got x-axis accelerometer data from 9 degrees of freedom sensor to arduino uno. | 6 | 10 |
| Daniel Shauger | Research and familiarization with ATSAMB11 | 2 | 6 |
| Sam Neff | Familiarization with MP, identified required voltage rails, started creating ICD | 2.5 | 6 |
| Nick Juelsgaard | Prepared for meeting with group, began hardware spreadsheet, researched BLE requirements | 2 | 10.5 |

Pending Issues:

* Kyle Fischer - Need to confirm that MCUs were ordered with Dr. D
* Michael Linthicum - Need to expand 9 degrees of freedom program to other axis and to the other measurement devices.
* Daniel Shauger - MCU research and SPI testing
* Sam Neff - Need to assign pin locations for peripherals
* Nick Juelsgaard - N/A

Comments and extended discussion

The MCUs are ordered, which is a big step in our project. Once they arrive, we can move from testing on the arduino uno to developing on the chip. We expect a bit of a lull in productivity while we learn to program on the board, but once the learning curve has been met we will continue to accomplish our goals.

Plan for coming week

* Kyle Fischer - Confirm MCU order. Might play with audio codec.
* Michael Linthicum - Expand 9 degrees of freedom program.
* Daniel Shauger -
* Sam Neff - Work on ICD
* Nick Juelsgaard - Taking week for interviews

Summary of weekly advisor meeting:

Told D that we got SPI to work on the arduino. Tried to gets parts ordered. Atmel uses DigiKey as their distributor. Atmel has a discount for university partners (ISU is one of them) but we had trouble getting the discount through DigiKey. Called DigiKey and we are expecting an email with a quote.