

Smart Vibes Project Log

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Starting on January 23, 2017

1 Monday, January 23, 2017

- Worked on first presentation and report on Google Drive.
- Converted the Google Doc into a Latex doc

2 Tuesday, January 24, 2017

- I was chosen as team leader by Joshua due to his busy schedule impeding him from leading.
- Performed presentation 1.
- Jordan bought a Feather for about \$40 in order to start programming it. The reason he bought it on his own is because we don't know when the parts will get ordered.
- Submitted first presentation and report to Git repo. Also submitted two peer assessments of Positive Resonance and Intellisense teams.

To do list:

- ~~Fix system level design overview.~~ (Completed on 1/27/2017)
- ~~Create a Github private repo to host Design 2 group work.~~ (Completed on 1/27/2017)

3 Thursday, January 26, 2017

- Submitted peer assessments for Poly Builders, Team Concrete, and Phoenix Designs.

4 Friday, January 27, 2017

- Created a private Github repo named Design 2 for our group to host code and other work.
- Begin working with Adafruit Feather that Jordan ordered and received
- Learning objectives for Adafruit Feather:
 - Write up a simple LED program
 - Use SPI
 - Connect using the built-in Wifi module
- Setup procedure for Adafruit Feather:
 1. Insert the header pins on a breadboard and place the Feather on top of the pins. No soldering required.

2. Went to the following website: <https://learn.adafruit.com/adafruit-feather-m0-wifi-atwinc1500/>.
3. Download and install Arduino IDE v1.6.4+.
4. Go to File → Preferences. Type in https://adafruit.github.io/arduino-board-index/package_adafruit_index.json into the **Additional Boards Manager URLs** box.
5. Navigate to Tools → Boards → Boards Manager. Install **Arduino SAMD Boards** version 1.6.8
6. Install the **Adafruit SAMD** package.
7. Quit and reopen Arduino IDE. After restart, new boards will be listed on Tools → Boards. Select the appropriate board.
8. Install drivers (Windows only). Link: https://github.com/adafruit/Adafruit_Windows_Drivers/releases/download/1.0.0.0/adafruit_drivers.exe.

5 Friday, February 3, 2017

Revised the functional diagram and bill of materials.

6 Monday, February 6, 2017

- Worked on presentation 2.
- Worked on report 2.

7 Thursday, February 9, 2017

- Met together with team during class time, even though it was cancelled, to work on programming.
- Josh began designing the casing in SolidWorks.
- Marc was given the task of learning the cloud access aspect of this project.
- Jordan and I will program the sensor.
- Can SPI communicate with parallel devices at the same time like I2C? SPI devices communicate in full duplex mode using a master-slave architecture with a single master. The master device originates the frame for reading and writing. Multiple slave devices are supported through selection with individual slave select (SS) lines.
- Does the wifi chip not allow other communication to happen simultaneously? .

8 Friday, February 17, 2017

- Go together with Marc and Jordan. Jordan and I looked how to get the wifi working. Marc took charge of learning how to push stuff to Azure cloud.
- I managed to scan for networks and connect to an access point set up by Marc with the Feather microcontroller.
- We are left with the question of how to connect the Feather to MS Azure and push data to it.