# **Sensor Platform**

# PSU Capstone Project

# WPR

Last Week: 4/17 - 4/24

Next Week: 4/25 - 5/1

# Colten Nye

## Last week:

* GUI
  + Now reliably lists available devices, connects and disconnects.
  + If the program detects existing chrome connections upon opening (i.e. the GUI didn’t properly disconnect before closing previously), it attempts to disconnect them automatically.
  + Can manipulate send data at a byte level (tested with unix timestamp).
* Laid out a proposed serial message format in an easy to read spreadsheet.

## Next week:

* Write and test the serial message encoding in Javascript.
* Write and test the serial message decoding in C.

## Issues:

* I have much to do in order to be ready to be out of town for a week in May.

# Golriz Sedaghat

## Last week:

* Did some research about initializing SD card HAL driver, although still haven’t figured it out what is the issue with our code that doesn’t work
* Started testing the board and found out about some issues; first was that the footprint for one of the components was totally messed up, the reason was that there was no EAGLE symbol for that part and I had to use another symbol with the same footprint, and when I changed the names of the pins of the symbol to match our part, it had totally screwed the pads of the footprint (something that never happened to me before and because of that unfortunately I didn’t double check the footprint on the board), second problem is that the microcontroller has been soldered wrongly so have desoldered the chip and soldered it correctly
* Started designing the second revision of the board, and corrected the footprint of that specific chip, added the USB to UART bridge chip and made the board smaller

## Next week:

* Continue on testing the board
* Meet with Andrew to review our design and send the board to fab
* Start on the poster

## Issues:

* Test the boards
* Find out any other possible issues with the board
* Get the SD card to work

# Steve Peirce

## Last week:

* Forgot to submit WPR as was swamped with working on project
* Met with team and Dr. Zurk to discuss next steps, test plan, etc.
* Populated 2 boards
* Tested new board functionality
* Debugged new board
* Attempted to connect to new board
* Discovered incorrect IC in place of V switch, desoldered, replaced
* Discovered issue with layout on V switch IC, correct footprint, wrong connections
* Connected replacement IC with “Mod-wire”
* Discovered main STM32F205 was rotated 180 degrees, desoldered, replaced
* Met with Golriz about next board revision, USB to UART IC selection, etc.

## Next week:

* Continue debugging hardware
* Meet with Andrew and Golriz about board rev 2
* Port existing code to new board
* Implement working SDIO
* Return to remainder of firmware programming for new board
* Disperse software/firmware testing jobs
* Begin poster layout

## Issues:

* Board not yet functional
* New board layout but be sent to fab immediately
* Incorrect IC placement/layout
* Processor was rotated 180 degrees
* SDIO not fully functional
* Serial comm protocol not fully functional
* Team schedule not fully revised/submitted
* Decision Matrices not submitted
* ….Time is running out!