# **Sensor Platform**

# PSU Capstone Project

# WPR

Last Week: 3/27 - 4/3

Next Week: 4/4 - 4/11

# Colten Nye

## Last week:

* Composed use cases, had them reviewed.
* Composed GUI platform selection criteria table.
* Implemented serial functionality in GUI.
* Updated my items in the schedule.
* Met with team:
  + Decided that device will enter programming mode by pressing button while plugging into USB
  + Confirmed that we need USB-serial bridge on main board.
    - Will go into final design, we can use FTDI cable for testing.
  + Strongly considering using a single sample rate for all sensors.
  + Decided upon data output format for best readability when loaded into a spreadsheet program.

## Next week:

* Get schedule updated and confirmed with all team members.
* Get full bidirectional serial functionality with a logging window.
* Complete configuration save to / load from local disk.
* Define the sensor definition file elements/syntax/format.

## Issues:

* How much complexity should we implement to describe I2C functions? Do we just support reads and writes, or do we support more complex (math, conditional) functions that would enable, for example, self-tests?

# Steve Peirce

## Last week:

* Continued research/testing on FatFS and SDIO libraries.
* Successfully implemented TX (To PC) Serial protocol
* Solidified Serial comm protocol for GUI with Colten
* Received parts for boards
* Received boards from FAB, (main and daughter/sensor boards)
* Discussed timer resolution issues for sub-second resolution
* Met with team to discuss next steps, test plan, etc.
* Team seems to be working much better together finally!

## Next week:

* Populate boards
* Test boards
* Submit processor and peripheral selection decision matrices
* Implement Serial RX (programming) protocol
* Implement SDIO
* Integrate full firmware
* Migrate firmware to populated boards, (once ready, assuming functionality)
* Disperse software/firmware testing jobs
* Begin poster layout

## Issues:

* SDIO not fully functional
* Serial comm protocol not fully functional
* Team schedule not fully revised/submitted
* Decision Matrices not submitted