

Team Instrumentation

CDR Presentation

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April 2, 2016**

Overview

1. Overall Block Diagram
2. Hardware Block Diagram
3. Software Block Diagram
4. Problems and Issues
5. Team's Progress
6. What's next?

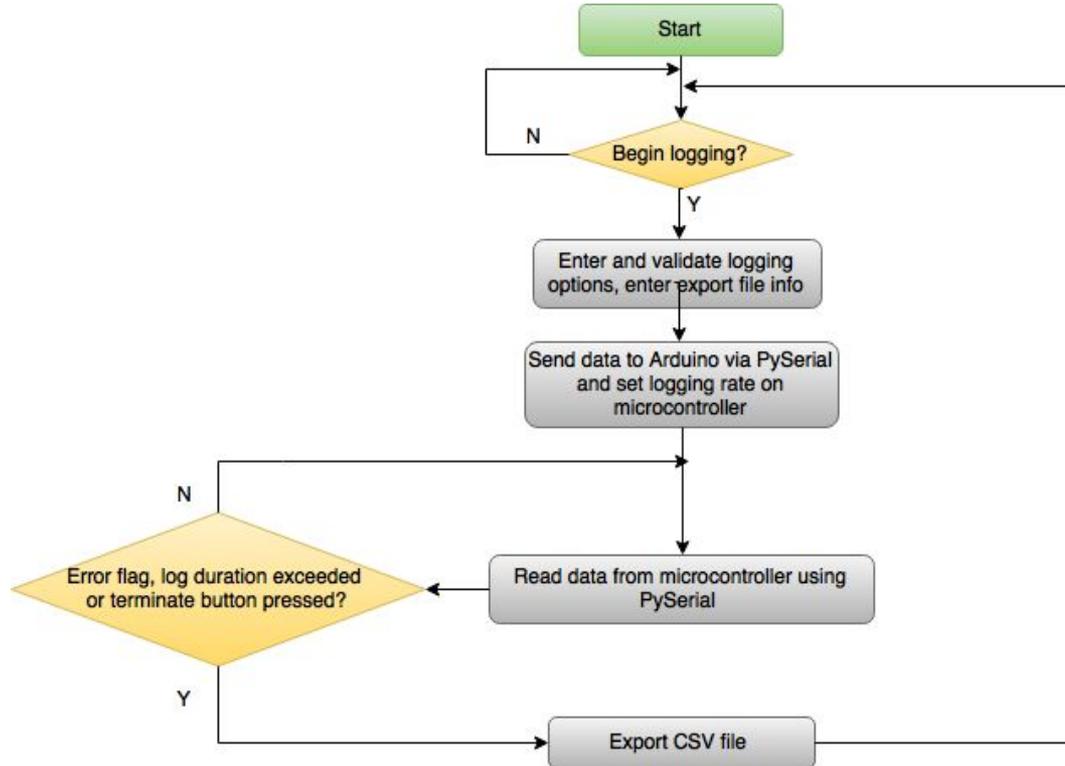
Overall Block Diagram of System



Hardware Block Diagram



User Interface State Diagram



Problems and Issues

- Hardware:
 - Integration of both current and voltage sensor
 - Calibration of sensors
- Software:
 - Live plotting (matplotlib)

Team's Progress

Hardware:

- Successful integration of sensors
- PCB Design
- Final device design

Software:

- Integrated plotting tool into GUI
- Widget to display value being read

Firmware:

- Combined current and voltage reading
- Sending data through serial communication

Review of GANTT Chart

Week	9	10	11	12	13	14	15
Date	3/28/2016	4/4/2016	4/11/2016	4/18/2016	4/25/2016	5/2/2016	5/9/2016
Proposal							
Design Review							
Critical Design Review							
Demonstration/Final Presentation							
Training							
Git/GitHub							
Arduino/Bare Arduino							
Eagle							
Hardware							
Research Options							
Access to FabLab/Project Room							
Block Diagram							
Prototyping with just the Arduino							
Design PCB							
Print Out PCB							
Test PCB/Verification							
Refine hardware design							
Software							
Research GUI building tools							
GUI (Glade)							
Firmware							
Optimize and debug							
System Integration							
Test							
Software Verification							
Hardware Verification							
Debug entire system							
Reports							
Final Report							

What's next?

Hardware

- PCB design and fabrication
- Final device design

Software

- Downloading, saving and writing to CSV files
- Integrating with serial communications

Firmware

- Receive user input through serial

Thank you! Any questions?