Team Instrumentation PDR Presentation

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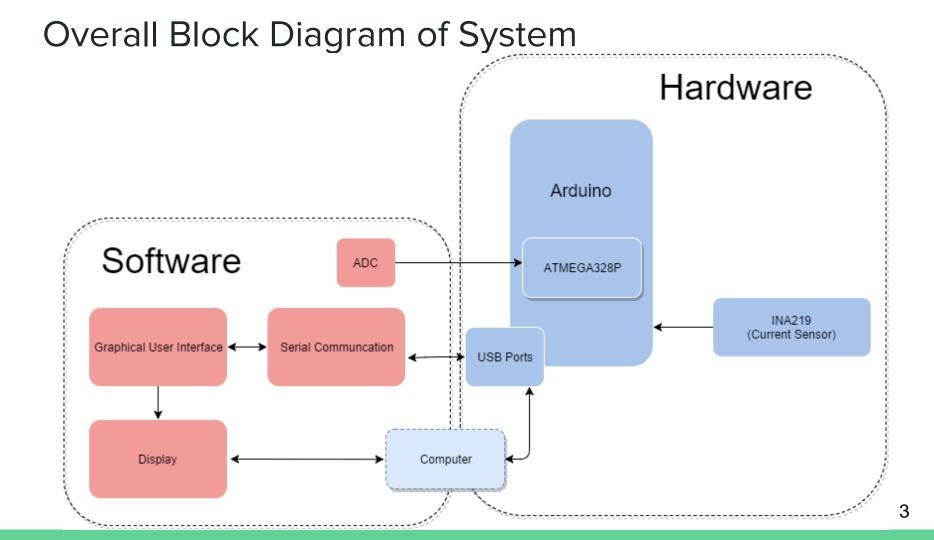
Overview

Overall Block Diagram

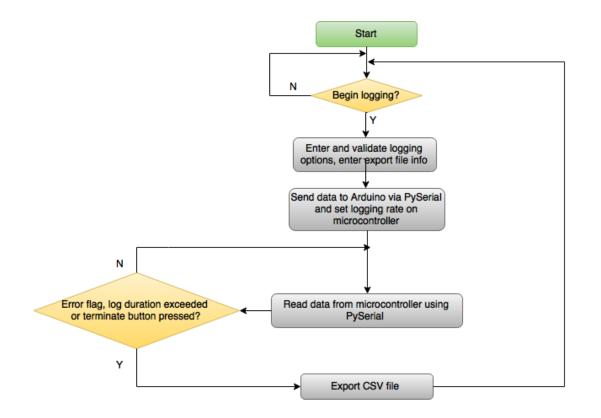
Problems and Issues

Team's Progress

What's next?



User Interface State Diagram



Problems and Issues

Hardware:

Testing with current sensor Verification of values

Software:

Data entries using XML file PyQT

Firmware

PySerial Library Formatting output data

Team's Progress

Hardware:

Tutorials completed

Sensor testing/verification

Specifications of our device finalized

Software:

Specifications for GUI

Basic GUI using Python script/XML

Researched other GUI building tools

Firmware:

- Send/Receive data through serial
- Writing serial data to file

Review of GANTT Chart

| | | Project | | | | | | | | | | | | | | |
|-----------------------------------|---------------|----------|----------|-----------|-----------|-----------|----------|-----------|--------------|-----------|----------|-----------|-----------|-----------|----------|----------|
| | (Gantt Chart) | | | | | | | | | | | | | | | |
| Week | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | Spring Break | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| Date | 1/25/2016 | 2/1/2016 | 2/8/2016 | 2/15/2016 | 2/22/2016 | 2/29/2016 | 3/7/2016 | 3/14/2016 | 3/21/2016 | 3/28/2016 | 4/4/2016 | 4/11/2016 | 4/18/2016 | 4/25/2016 | 5/2/2016 | 5/9/2016 |
| Presentations | | | | | | | | | | | | | | | | |
| Proposal | | | | | | | | | | | | | | | | |
| Design Review | | | | | | | | | | | | | | | | |
| Critical Design Review | | | | | | | | | | | | | | | | |
| Demonstration/Final Presentatio | | | | | | | | | | | | | | | | |
| 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/Verfication | | | | | | | | | | | | | | | | |
| Refine hardware design | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| Software | | | | | | | | | | | | | | | | |
| Research GUI building tools | | | | | | | | | | | | | | | | |
| GUI (Glade) | | | | | | | | | | | | | | | | |
| Firmware | | | | | | | | | | | | | | | | |
| Optimize and debug | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| System Integration | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| Test | | | | | | | | | | | | | | | | |
| Software Verification | | | | | | | | | | | | | | | | |
| Hardware Verfication | | | | | | | | | | | | | | | | |
| Debug entire system | | | | | | | | | | | | | | | | |
| Percente | | | | | | | | | | | | | | | | |
| Reports | | | | | | | | | | | | | | | | |
| Final Report | | | | | | | | | | | | | | | | |

What's next?

PCB Design

Creating a functional GUI using PyQT

Real-time data display

Data export settings

Integrating serial communications into GUI

Thank you! Any questions?