

SENIOR DESIGN WEEKLY REPORT 10/10 – 10/16

Group number: DEC1620

Project title: Miniature Tracking FOB

Client & Advisor: Flagger Pros USA, Advisor Nathan Neihart

Team Members/Role: Tristan Walters – Team Leader

David (DC) Carlson – Team Communication Leader

Brandon Trent – Secondary Team Lead

David Dalo – Key Concept Holder

Alex (Sunny) Sundholm – Secondary Communication Lead

Tyler Dahle – Team Webmaster

Weekly Summary

As a group, we met on Thursday for our regular advisor meeting with Dr. Neihart. For hardware, the main accomplishment was the successful attempt at saving data in a char array for the cellular chip to send. Tristan has met with an Industrial Design (Michael) student to go through the design and format of the website and web app. Software will also be meeting with the client in the coming weeks, once the busy season for them is done. A fair amount of work was done individually on the database, server, and the website.

Past week accomplishments

- Spreadsheet containing current and power draw calculations (updated)
- Database communication verified
- Website updated
- GPS data saved in variable

Pending issues

- Managing component power consumption
 - Theoretical power consumption calculated, need prototype to measure actual output
- Waking a microcontroller from a low power sleep mode
- Keeping microcontroller clock running
 - Only want to update location once or twice a week
- Web Application and Design
- Saving GPS Data to a usable char array
- Cutting power to GPS and turning on cellular chip

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Individual contributions

| Name | Individual Contributions | Hours this week | Cumulative hours |
|-----------------|--|-----------------|------------------|
| Tristan Walters | Attended advisor meeting, developed website. | 9 | 62 |
| David Carlson | Attended advisor meeting, attended hardware meeting, worked on GPS data acquisition. | 6 | 57 |
| Alex Sundholm | Worked on database. | 1 | 44 |
| Brandon Trent | Attended advisor meeting, attended hardware meeting, worked on device ID plan. | 6 | 70 |
| Tyler Dahle | Attended advisor meeting, researched web application development, developed website. | 8 | 63 |
| David Dalo | Attended advisor meeting, developed MCU code. | 3 | 41 |

Comments and extended discussion

A lot of progress has been made and a foundation has been laid for the rest of the semester. Now that GPS data has been saved, now it just needs to be parsed and made usable to the MCU. We have made it standard to make plans to meet during the coming week after we finish our advisor meeting.

Plan for coming week

- Hardware Group:
 - Hardware group meeting Sunday afternoon
 - Brandon, DC, and David meeting Tuesday afternoon
 - DC: Parse GPS data and store to char arrays to be sent
 - Brandon: take data from GPS and send to database
- Software Group:
 - Tyler and Tristan meet to develop website
 - Sunny will develop database
- Continue development of MCU Code