

**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

We had no meetings with the client, due to his being away. We had our regularly scheduled advisor meeting this Friday, February 12. Meeting as a group on Monday, we finished HW1 and started our project plan. Individually, we researched our respective areas. We had a very productive meeting with Dr. Neihart this week.

### Past week accomplishments

- Found low power mode for Arduino Uno (Alex)
  - 7 microamp draw while asleep
- Got Sponsor Acknowledgement form back

### Pending issues

- SIM Cards
  - Cost (\$4/card)
  - Microcontroller integration
- Microcontrollers
  - “Waking it up” from low power mode to conserve power
  - chipset power draw
  - Arduino/TI
  - Just have to find a candidate
- Cell network connection
  - Verizon (client’s cell provider) does not use GSM
  - Find alternative with CDMA

### Individual contributions

Name	Individual Contributions	Hours this week	Cumulative hours
Tristan Walters	Attended group and advisor meetings, completed homework	4	10
David Carlson	Attended group and advisor meetings, researched GPS chipsets	3	8
Alex Sundholm	Researched how to wake up microcontroller	2	8
Brandon Trent	Attended group and advisor meetings, looked into CDMA cellular card, made rough outline of project plan	4	11
Tyler Dahle	Attended group and advisor meetings, began work on website	3	9
David Dalo	Attended group and advisor meetings, researched potential network chips	3	9

### Comments and extended discussion

We've started to hit the point where research will only get us so far and we need to start narrowing down what hardware we actually want to use. Neihart has pushed us to have a candidate microcontroller, GPS chipset, and Cell network chipset. More defined roles were established as far as research goes as well.

### Plan for coming week

- Meet Wednesday to put together hardware recommendations
- Continue individual research

### Summary of weekly advisor meeting

Talked about sim cards, whether or not they're one size fits all or what. Depends on the carrier. Differentiation between LTE and CDMA. More beneficial to just grab a sim card and start playing with it rather than waiting for Steve to get back from his holiday. Looked at low power microcontrollers? Arduino pro mini power draw discussed. Brandon summarized his research about microcontroller integration with the cell network. Gave us advice for running ideas past the client, as our choices may limit options (carrier, etc). Assigned roles for the upcoming week: Brandon will split his time between connecting to the cell network and finding the actual chip to do so. David will monitor integration of all parts and help out where necessary. Tyler and Tristan will start designing the database/web app. Alex will focus on the microcontroller issues, and DC will focus on finding a GPS chip. We should have candidate gps chips and candidate microcontrollers next week.