

Group number: DEC1620

Project title: Miniature Tracking FOB

Client & Advisor: Flagger Pros USA, Advisor Nathan Neihart

Team Members/Role: Tristan Walters – Team Leader

David Carlson – Team Communication Leader

Brandon Trent – Secondary Team Lead

David Dalo – Key Concept Holder

Alex Sundholm – Secondary Communication Lead

Tyler Dahle – Team Webmaster

Weekly Summary

This week, we had our first meeting with our client Steve Risius at the Flagger Pros USA office. The meeting went very well and was beneficial in discussing paths for the project to take. We also met with Dr. Neihart again to discuss what was said at the client meeting. Individual research took place by the members of our group.

Past week accomplishments

- Met with Steve and David, our contacts at Flagger Pros
 - Showed examples of signs needing to be tracked
 - Discussed rough draft ideas of implementation of tracking
- SIM card cost and data plan found
- Satellite communication further explored

Pending issues

- SIM Cards
 - Cost (\$4/card)
 - Microcontroller integration
- Batteries
 - Reliability in all weather conditions
 - Longevity
 - Frequency of replacement
- Data collection
 - Cell network?
 - Satellite?

Individual contributions

<u>Name</u>	<u>Individual Contributions</u>	<u>Hours this week</u>	<u>Cumulative hours</u>
Tristan Walters	Attended client and advisor meetings	2	3
David Carlson	Attended client and advisor meetings, compiled group research	3	4
Alex Sundholm	Attended client and advisor meetings, and researched application of SIM Cards and microcontroller integration	4	5
Brandon Trent	Attended client and advisor meetings, and researched satellite methods of communication	3	4
Tyler Dahle	Attended client and advisor meetings	2	3
David Dalo	Attended client and advisor meetings, as well as researched methods of connecting to gsm	3	4

Comments and extended discussion

A lot of ideas were brought up at the client meeting, such as using the same technology as a dog-tracking collar or a bear-tracking project that Steve said Dr. Mina worked on. If we were to simply use that technology, the cost would be much more than would be feasible for this many individual trackers on each sign. Steve also expressed interest in having trackers on the paddle stop/slow signs. This threw a wrench into our planning, as we were going to have the tracker communicate only when it was moved to save battery power (like a car fob). We have also toyed with the idea of only pinging with the GPS location at set intervals to save battery power.

Plan for coming week

- Meet with Steve and David to fill out NDA paperwork (Wednesday?)
- Research and purchase basic GPS tracking chip and experiment with integration with microcontroller.
- Plan meeting for next weekend

Summary of weekly advisor meeting

Short meeting, recapped client meeting for Dr. Neihart.