EE 491 WEEKLY REPORT 10 4/4/16

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 Wednesday to look through our hardware. We had our regularly scheduled meeting with Dr. Neihart on Friday. Brandon has put in time dealing with the cellular chip and we've begun to put together an idea of how much power our tracker will consume.

Past week accomplishments

- Ordered parts have come in
  - 2 microcontroller development kits/launchpads
  - 2 GPS breakouts
  - 2 cellular development kits
- Set up cellular account through client using 3rd party system
- Spreadsheet containing current and power draw calculations

Pending issues

- Managing component power consumption
  - Will be addressed when we have working prototype
    - Will be higher than final product because the microcontroller Launchpad and cellular chipset both have parts that will not ultimately be used.
- Waking a microcontroller from a low power sleep mode
  - Have GPS trigger different events?
- Cellular Communication
- We have a 3rd party GSM chip that charges for activation and amount of data used per month
- Keeping microcontroller clock running?
  - Only want to update location once or twice a week

EE 491 WEEKLY REPORT 10 4/4/16

Individual contributions

Name	Individual Contributions	Hours this week	Cumulative hours
Tristan Walters	Attended group and advisor meetings	2	28
David Carlson	Attended group meeting	1	25
Alex Sundholm	Attended group and advisor meetings	2	26
Brandon Trent	Attended group and advisor meetings, tested cellular chips	3	40
Tyler Dahle	Attended group and advisor meetings, built basic server to place markers on a Google Maps interface	4	32
David Dalo	Attended advisor meeting	1	17

Comments and extended discussion

Now that we have parts, tasks are going to be divided amongst the group more. Brandon has a good handle on the cellular chipset functions, DC will be working on the GPS, Alex can focus on the microcontroller, and David Dalo will be working on integration of parts and such. Tristan and Tyler have begun work on the website and server which will host our location data, as well as the mobile application.

Plan for coming week

- Meet on Monday (4/4) to revise Project plan
- Try and meet with client on Wednesday to talk about web application
- Advisor meeting on Friday (TBD)

Summary of weekly advisor meeting

Topics Covered:

We will transfer once a week for starting
For the Microcontroller - what is the milliamp hours while idle with just the clock counting
How long will things take to acquire and how long the devices need to be on?
Will do three tries if the packet does not get received.
What is the milliamp hours consumption for that period.
Then what is the power consumption of this on a weekly basis.
Talk to the client about the user interface that he is expecting.
How to clean up the database.
Have two or three ways to organize things.
Does he want them always on or can they turn them on or off?
For next week
Have a detailed discussion about the power consumption and ui interface.