EE 491 WEEKLY REPORT 12 4/18/16

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 Friday for our regular advisor meeting with Dr. Neihart. Power consumption calculations have been done and are very much within acceptable limits. A fair amount of work was done individually on the database, server, and the website. We also (officially) split the team into two groups, hardware and software, with overlap for firmware and general design work.

Past week accomplishments

- Spreadsheet containing current and power draw calculations (updated)
- Database cleaned up
- Website updated

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
- Keeping microcontroller clock running?
    - Only want to update location once or twice a week
- Communication with database

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Individual contributions

Name	Individual Contributions	Hours this week	Cumulative hours
Tristan Walters	Attended group meeting	1	30.5
David Carlson	Attended group meeting, researched UART communication between GPS and MCU	2	30
Alex Sundholm	Attended group meeting and worked on database naming conventions	3	30.5
Brandon Trent	Attended group meeting and worked on cellular communications	3	45
Tyler Dahle	Attended group meeting	1	35
David Dalo	Attended group meeting and update MCU power consumption	1.5	19.5

Comments and extended discussion

As the semester begins to come to a close, our main priorities are to polish what we have and prepare for our final presentation next Tuesday at 9:00 AM.

Plan for coming week

- Meet Tuesday in/after class and plan meetings
- Install and set up Code Composer 6 on multiple computers so we can begin development of firmware
- Start building prototype

Summary of weekly advisor meeting

- Discussed specifics of client meeting, details about database
- Keep in mind that we could use their barcode system and database in order to ID and associate the device in order to pick out which battery is dead in a stack of signs.
- Discussed the power consumption of the microcontroller
- Discussed how to get the battery power to send it to the database.
    - The protoboard on the cellular chip could work
    - Look into if the MSP430 can as well
- Look into finding a solid state switch to turn on and off the modules
- Put the switches in the project report.
- Try and get database login issues fixed before end of semester
- Figure out a way to keep the jobsites moving for the traveling sights.
- Database will need to figure out how to associate things.
- Need some sort of visual identifications on the devices.
- How to write to the non-volatile memory on the microcontroller.
- Draw up good sketch of the web interface.
- Have an outline for presentation
- Next week go through the presentation.

- Use lots of figures for the slides.
- Invite the client to presentation if he can't come set up a time to present to him.