Senior Design Weekly Report

Weekly Report 14

Group: May-06

Group member: Chongli Cai, Qiaoya Cui, David Hoffman, Andrew Kom, Ailing Mei

Client: Garmin International

Advisor: Dr. Colin Christy

Period: 1/21/2013-1/27/2013

Date: 1/27/2013

Goals to Meet

This week, we wanted to get in contact with our advisor, Dr. Christy, and get him caught up. We also wanted to make a list of our required tasks, and determine what need to be done still. Additionally, we wanted to continue to work on our MSP430 communication and programming.

Weekly Progress

We were able to accomplish a number of things this week. Firstly, we met with Dr. Christy and got him up-to-date on where we were with the project. This included our decision to focus on getting the MSP430 running for all the purposes. This includes, measuring the voltage, current, temperature, time, and displaying the data through the serial UART communication. This week, we were focusing on getting the UART communication working. After much trial and error, we found that the 3.3V of the UART on the MSP430 board was insufficient to use with the Putty terminal, and thus required a special IC. The IC would take care of this problem. We were successful and our next step will be to get an LCD screen connected. On the other side, we determined what we needed to do for the Voltage measurement circuit, and have designated group members to design and test the circuit. Finally, we have a team member working on determining what the ADC needs to read the temperature sensor.

Future Planning

We plan on getting the LCD screen displaying information, as well as the ADC input reading a simple voltage produced by a power supply. We also want to get our Voltage measuring circuit built and tested to make sure it will work. The same goes for the temperature sensor. Finally, we will try to connect all these components together and display all the readings on the LCD. We need to start discussing the UI as well, in the coming weeks.

Pending Issues

We may run into problems where the MSP430 does not have enough functionality to run everything we want it to. This could include number of timers, or simply number of inputs. This remains to be determined, and in the case that it does not, we have the PIC controller as a backup.

Individual Contributions

Andrew:
Weekly Report 14	1 hour
Planned the needs for the future of the project	1 hour
Helped debug the RS232 connection of the MSP430	2 hours

Chongli:
Revise the voltage measurement circuit and test it again	4 hours

Ailing:
Revise the PCB schematic according to the change of the circuit	5hours

Qiaoya:

Determined what is needed for using the Temperature Sensor   3 hours

David:

Debugged MSP430 RS232 Communication   5 hours