Senior Design Weekly Report

Weekly Report 12 & 13

Group: May-06

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

Client: Garmin International

Advisor: Dr. Colin Christy

Period: 11/12/2012-11/25/2012

Date: 11/25/2012

Goals to Meet

Having received one of the two LCD screens we wanted to implement, we set the goal for these two weeks to accomplish communication between the UART and the ADC readings of the MSP430. We set another goal to rule out any possibility that the PIC evaluation board could be fixed using software. We also wanted to update our Project plan and Design Document to reflect our ability to accurately measure voltage and current, as well as fix errors, pointed out by Garmin, within the documents. In addition to these goals, we set out to get our slides made for the presentation of our progress.

Weekly Progress

First, we ran some tests on the PIC evaluation board and have come to the conclusion that it was accidentally killed while a team member was trying to probe the pins. We need to decide this week if we should continue to pursue the PIC chip, or combine our efforts into getting the MSP430 MCU system running. Given the time left in the semester, it will most likely end up being the later.

We were able to create our slides for the presentation, but they could use some polishing up to remove unnecessary clutter that may distract, or put-off, our audience. Both our design document and project plan have been updated to correct spelling/grammatical errors, as well as represent our progress in getting the current, voltage, and temperature reading circuits measuring

For the MSP430 MCU, we are attempting to get communication between the LCD screen and the UART of the MSP. We have found this to be made more difficult, due to the fact that this particular LCD screen (ACM2004d LCD) can only be run in parallel mode, which makes connection from the MSP430 board more complicated.

We also began to develop a schematic that will detail the whole system, except for the SD card slot. This will be added in at a later point.

Future Plans

For this week, we plan on determining the pin assignment that will allow the MSP430 board to communicate with the LCD screen. If we receive the other LCD screen, we will also attempt to communicate with that one.

For the PIC MCU, we will get some feedback from Dr. Christy regarding continued pursuit of this controller.

We will also continue to develop the system schematic, as well as develop a way to connect the SD card to our system.

Obstacles

As stated above, we have to determine how to connect the parallel mode LCD screen with the MSP430 launch pad board. Specifically, determine the pin assignment that will allow the system to communicate.

Individual Contributions

Andrew:
Wrote the Weekly Progress Report 12 & 13
Attempted to determine the problem with the PIC chip

Chongli, Ailing, and Qiaoya:
Made corrections to the project plan and design document as specified by Garmin
Updated our documents to reflect the most up-to-date details on our project status
Finalized work on the current and voltage measuring circuits
Began work on the system schematic design

David:
Attempted to determine the problem with the PIC chip