

D009 – 5

To: Senior Management
From: Senior Design Class
Date: February 25, 2008
Subject: Weekly Status Letter

This past week we presented a status letter with a number of tasks we planned to complete by the end of the week. We managed to complete most of these tasks, with a few carrying over into the start of next week, as well as deal with some new unexpected obstacles. The low-level group designed and tested the sensor circuit, designed the switching circuit, and is finishing up the design of the overall power circuits. The rail power circuits were designed and some testing was done, but some changes will need to be made.

The networking group finished the sensor/interrupt system and PIC to PIC communication, and managed to successfully integrate the two subsystems. The PWM system and packet parsing are about 75% finished, and are the first task for this coming week. The pin outs of the networking system were finalized, and the interface control document is nearly done.

The UI/PC group finished the top level block diagram and created GUIs for both the maintenance interface and the demo application. The XML structure and API were prototyped but some changes will need to be made to both.

For this coming week, we have some outstanding tasks that need to be finished, and we will start working on many new tasks. The main goal for the week is to finish all the work we will need to do for CDR, so that we can spend next week preparing for the review. The primary task for the low-level group will be to finish the design of the rail power, switching, and overall power circuits. They will also work on simulating and testing the circuits. Finally, they will work on creating parts and board layouts based on these circuits so that we can be prepared to order all necessary parts and boards shortly after CDR.

The primary task for the networking group for the coming week will be to finalize the PWM system that they have been working on. Also, they plan on finishing the layout of the PIC board, as well as finishing the interface control document. Finally, they will move on to thinking about how to test all the subsystems so we can be sure everything will work.

The UI/PC group will work on adding detail to the block diagram from last week, most likely creating a UML diagram of the software systems. Because the XML structure and API needed to be modified, the task of finishing them will be carried over into the coming week. Once this is finalized, they will create a simple XML document to be used in conjunction with testing, as well as working on an XML document for the system we will be using. They will start working on the maintenance interface as well as the demo application, which includes starting implementation as well as working on the

control logic. Finally, the group will start working on test benches for the API to make sure it will behave the way we expect.

This past week we managed to complete our only outstanding action item, which was to get the discussion board back up and running. However, there were a few things we planned on doing last week that we were either not able to accomplish, or decided to push back. We had originally planned to start working on automatic control logic for the demo application, but that got pushed back into next week. We had also planned on starting an implementation of the packet builder and packet decoder. We instead chose to put that on hold in favor of finishing the API and writing test benches before we work on any implementation.

Please see attached for the Labor Hour Report spreadsheet and the meeting minutes from this past week.

Meeting Minutes

February 18, 2008 – 11 AM

Attendees: ECE 492 students and professors

Missing: Serdar

Prepared by: Emily

Note about Status Letters:

- each letter should have 3 sections: did, will do, didn't do (behind schedule)
- keeping track of hours should have tasks as the rows and names (or initials) as the columns, also keep track of overall hours spent

Hierarchical design

- should be tree oriented; or top down design
- make diagrams for top level (index), then system block diagram is one step down, then step through each section of the block diagram down to individual components and wires.
- make sure each diagram has names on it, the title, and a number then refer to diagrams based on their diagram number
- create a BOM (bill of materials) columns include: ref des, part #, description, manufacturer, and price.
- Also need to do a hierarchical software design

Tasks:

- For Wednesday February 20
 - o Top level block diagram
 - o How big will boards be? (estimate it, estimate using through hole)
- For Friday February 22
 - o Design of API
 - o Communication (between PC and PIC) demo
 - o Schematic prototype of station cards and low level boards
 - o Testing that the PIC will be able to do what we want
- For next week
 - o Design of maintenance mode / demo mode
 - o BOM and diagrams