

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 finished the circuit designs for the sensor circuits, power supplies circuits, switch circuits, switching circuits, and H-bridge circuits. They have built the physical circuits for all the circuits; however, they have only simulated the H-bridge circuits and power supply circuits. The networking decided to abandon their interrupt system for handling sensors and adopted a polling system instead. They worked on a revised worst case timing analysis, integration of subsystems, and the PWM system. They also revised and finalized corrections of naming scheme of rails, and finalized the packets structure of the system. The UI/PC group finished the UML diagram and revised the GUIs for both the maintenance interface and the demo application. The XML structure has been modified by the UI/PC group and the networking group and is essentially finalized. The API was revised this week and is reflected in the UML diagram. Also, the logic for the demo mode has been compiled in pseudo code. Lastly, the test benches for the API have been completed. Other general tasks that were completed were a preliminary interface control document, preparing a complete CDR requirements checklist as well as incorporating the GPR's into the overall analysis necessary for CDR.

All of the groups' main priorities for this week will be preparing for CDR next week. Some specific tasks we must complete for CDR are: a finalized system design; "Build to Print" fabrication specifications for all subsystems; test procedures and test-benches for all subsystems; a requirements analysis (traceability matrix); a revised risk assessment; a revised cost analysis and detailed program budget (BOM); a revised program schedule that documents progress to date and identifies system and software critical path drivers to meet schedule constraints. Once a group finishes their tasks for CDR, then they can go back to implementing their design. The primary task for the low level group for the coming week will be to work on integration with the networking group and vice-versa. This integration will include testing the PWM signal with the H-bridge and testing the sensor input and outputs. The UI/PC group will continue to work on coding the API. They will also begin to finish designing the underlying control block and graphical user interface in regard to the fact that the GUI will be generated dynamically by the XML file. Once the control block has been finalized for the GUI, then test benches for this control block can be written to ensure accuracy.

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. The low-level group intended on finishing the switching design, but did not have time this week. They also did not manage to complete their test-plans. The low level group intended on having all their circuits simulated by weeks end, but they too ran out of time and only simulated two out of their five circuits.

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