Expert Anesthesia Monitoring System

Timothy Morin, Nathan White & Kane Killelea

Client Contact: Dr. McIsaac @ Hartford Hospital
Advisor: Dr. John Enderle @ University of Connecticut (860) 486-5521
Week One Objectives

- Timothy worked on data transmission through a Ethernet connection on a network using LabView.
- Nathan worked on data transformation, which will be used for parsing the data packets into a usable form in LabView for later manipulation.
- Kane examined the inner workings of Blackfin and the necessary parts that will be needed for the motherboard.
Work Accomplished

- Since last semester a few things have changed in the overall design of the project.
  - The data will be transferred through the Hartford Hospital network via Ethernet to a device in a convenient location.
  - The data will then be processed and sent via Bluetooth technology to a PDA using a class one antenna.
Work Accomplished

- LabView was studied and sample programs were found that seem to have network transfer capabilities. These programs will be tested next week.
- Budget was determined to be as need by Dr. McIsaac. He has given the go ahead on a LCD screen, Blackfin chip and electrical components, and he may supply a PDA with Bluetooth.
- Sample program was found to load onto programs onto the Blackfin for data transfer testing.
Sample Programs Found

Instructions:
1. Open the Simple Data Client.vi.
2. Run this VI first.
3. Run the Simple Data Client.vi second.
4. Adjust the Function and # of Points controls to see the plot on the front panel of the Simple Data Client.vi change.

Note: This VI will time out after 60 seconds if no connection is detected.
Sample Programs Found

Instructions:
1. Open the UDP Sender.vi
2. Make sure the Port in this VI and the Remote Port in the UDP Sender.vi are the same.
3. Adjust the Max Bytes/Read in this VI.
4. Run this VI first.
5. Run the UDP Sender second.
6. Look at the data received and the number of bytes received.

Notes: This VI is built to work with the UDP Sender.vi.
A test program was experimented with to see if we could talk to the board.
The embedded version was installed and the board was registered.
Meeting with Dr. McIsaac

- The budget was discussed.
- Weekly meetings have been set up.
- The project requirements of the client have been discussed and are being pursued.
- We have gained volunteer access to the Hospital and the devices that are being worked with.
A possible LCD screen was found in the parts room that seems to fit our design needs.

- It is a Toshiba 10.4” display.
Future Work

- Timothy is going to continue working on the data acquisition program in LabView and test them at Hartford Hospital.
- Nathan is going to continue working on the parsing of the data. This will be much easier once a sample set of data can be obtained via Timothy’s program.
- Kane will continue working with Blackfin and determining how the data can be transferred and processed within.
Project Review

- So far the project has proceeded better than expected.
- The budget was established.
- Meetings were set up.
- Parts of the project were assigned.
- LabView was obtained.
- We are waiting on the license from the LabView representative.
Hours Worked

- Timothy - 22 hours
- Nathan - 14.5 hours
- Kane - 13
Questions???