Project Identity

Expert Anesthesia Monitoring System
Week 5 (October 1, 2007- October 8, 2007)
Timothy R. Morin Jr.

Work Completed

This week focused on research and programming. We spoke with a GE sales representative who we thought could give us insight into the direction at which we needed to proceed into gaining sample code or how we could retrieve information from the vital signs monitor manually. Nathan found a packet sniffer for Labview that may make it possible to determine if the GE-Marquette supports a silent network. We found out that the new devices that Hartford hospital purchased are on a silent network. We think that we still may have a chance to have a broadcasted signal on the old devices to give us a sample set of data. The Labview program that Nathan found has been tested and examined to determine its degree of usefulness.

I focused on rebuilding our old program using query techniques to retrieve information from the GE-Marquette. This was relatively easy seeing as I had built a program like this earlier in the semester. It had to be rebuilt because the client assured us that this was not a possible approach for obtaining data. It has become evident that this is the only way to produce data with the new devices. This program is displayed in figure one below.

Figure 1: Block diagram of the query code.

The next step for me was to develop a query code that will hopefully be recognized by the GE-Marquette vital signs monitor. I found a codec that I believe I have interpreted and translated into a data request string. There are a few codes that I have been working with that should fit into each of the parts of the request string by using the information in figure one. The first part of the string, the destination dst_addr consists of the IP address and the port of the GE-Marquette device being contacted. The port is suspected to be
7000 as it was with the old device that we were using as stated in the manual. Next the source src_addr is used for the IP address of the computer sending the request. Next the function fun_code is used as a command for the request packet, such as a read request. Next is the subfunction sub_code which is used to specify what information exactly is to be sent back. We are requesting the SC_DATE_TIME function as a test specimen. The rest of the string consists of zeros and a one and are nearly irrelevant for our purposes.

![Sample Request Packet for ASYNC COMM](image)

Figure 1: Request packet for Ethernet connection.

**Future Work**

This coming week we need to find a sample set of data that would be outputted by the GE-Marquette. This needs to be done so that we can start working on the actual program and displaying parts. We need to progress past our current road block with the connection factor with the GE-Marquette. We are also planning to make the final decisions about the LCD screen needed for compatibility with the Blackfin chip. We need to go to Hartford hospital to test the network with the sniffer to determine if there is any data on the network. We will also have to try our query program so that we can see if we can pull the data if we request it.

**Project Review**

In the past few weeks we have been severely halted by our incapability to find a sample set of data from the GE-Marquette. We are working hard and I believe it is getting hard to continue at this level with little to no success. I am learning that it becomes difficult to work if one can not see progress. The frustration is piling and making the project more difficult by the day. I think we need to work on something new so that we can see some progress and maybe get a fresh sense of the project.

**Hours Worked**

Hours spent on project between (10/1-10/8), Week 5: 16