Project Progress Report

Accessible Infusion Pump User-Interface
Week 8
March 20, 2007
Hassam Sultan

Work Completed

To our demise the ADSP-BF561 Blackfin Processor and LabVIEW front panels is not supported by LabVIEW Embedded to display onto a colored LCD display since it’s a limitation of the software, not the hardware. Much of this discovery was through the email assistance with National Instrument’s embedded applications engineer, Michael Phillips. He suggested writing to a LCD device would need to be done in our LabVIEW code by importing C drivers that communicate to our LCD device.

Mr. Phillips explained how LabVIEW Embedded can write to a character LCD. He wrote how the upcoming release of LabVIEW Embedded for Blackfin 2.0 will display to the Orbital Matrix LK204-25 LCD display (see Fig. 1). This example uses TWI to communicate with the LCD, and it reads from the UART and prints the characters received to the LCD.

Mr. Phillips suggested the GPIO (see Fig. 2) will provide the best application for using the I/O of our project for our joystick and buttons.
Figure 2: GPIO Flow Chart
Future Work:

As of now, we are under the guidance of Michael Phillips since he knows the most about the true current capabilities of the blackfin embedded application evaluation boards. We will need to order a character LCD that will work in C code with LabVIEW. We will also need to order the buttons needed and incorporate those and the joystick to the GPIO buttons on the ADSP-BF537 to start developing the finished product. Mr. Phillips also gave us the link to the “Device Drivers and System Services Manual for Blackfin Processors”, which will help us using the pins/ports available on the BF-537 evaluation board.

Project Review:

Considering how close the project deadline is and how much theoretical work we have completed, it is about time we start the final physical product needed for this design competition. All of our theoretical work have shown to be not true since the information on the Blackfin from various websites are too pretentious and will not be available until in the near future. Due to this downfall, our project has been limited down to a character LCD than a colored graphical LCD, and our LabVIEW front panel will not be shown; however, its C-code operations can still be used in displaying the needed information for our final project.

Hours Worked:

7 hours