Project Identity
Modified Communication System for Client with Disabilities
Week 3: 9/10/06 – 9/16/06
Philip Licitra

Work Completed
This week I addressed many problems and suggestions with our design. A couple of points were brought up to us about the manner in which the LCD screen was connected to the DynaVox. Telemetry was considered to be unnecessary and a waste of space for the situation we are dealing with. Our screen is only being placed a matter of inches from the DynaVox and using a transmitter and receiver would only add to the minimal space we have to deal with. Also, through the use of the VGA card, which is necessary to collect the binary signal and create an image from it, there would be no room or use for a telemetric transmission if the signal.

According to our client, the 7 inch screen is a perfect size for the application we are using it for. It is not too big where it takes up a lot of room and it is not too small where people cannot see the image clearly. Figure 1 shows a schematic of the proposed casing for the LCD screen, rechargeable battery pack, and PCB of the LCD screen. The casing must be custom due to the space limitations and the need to make the case as small as possible with an access panel and proper mounting capabilities.
Figure 2 shows the electrical connections for the battery, monitor, and charger. This schematic does not allow any signals to cross and will not fry any portion of the LCD or battery pack if the charger was connected and the monitor was turned on. The only power the monitor can get is from the battery pack. The battery pack will only either receive a charge from the charger or it will power the screen at one time. A four-way selector switch will be used to control the connections of the system.
Work was completed on preliminary designs for the mounting for the joystick. A seminar was attended where the makers and sellers of the product 80/20 presented their products and its capabilities. We will be mounting a shot section of 1 inch 80/20 to our client’s wheelchair’s left arm and we will be mounting a Double Flange Linear Bearing to the joystick casing. A ratcheting L-Handle will be implemented to secure the joystick to the 80/20, which is also removable when not in use.

**Future Work**

During the next week work will continue on the mounting of the monitor to the DynaVox pipe, depending on what the client want to see and where the client wants it to be mounted. E-mail contact will continue with the client to be sure that the project meets their expectations and their needs. According to our client, everything being currently implemented is exactly what they wanted and goes beyond what they expected.
As none of our parts have actually been ordered, we can only work on more planning and minor adjustments to the design while we wait for our client’s suggestions on the mounting of the LCD screen.

**Project Review**

I feel that our project is going well and certain suggestions that were brought up to us have been dealt with and every aspect has been weighed and taken into account. But, our time line has been shifted back a little due to the lack of parts to work with. Everything should be finished by late November.

**Hours worked:** 7.5