Project Identity
Modified Communication System for Client with Disabilities
Week 6: 10/8/06 – 10/14/06
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Work Completed

This week I spent some time in the Engineering Machine Shop and bored out the five holes in the cover of the aluminum casing for the joystick. I also got four screws and nuts that are of size 8-32. These screws and bolts hold the joystick to the cover of the casing. There is a decorative plastic cover that was provided with the joystick to make the bolting of the joystick to the cover aesthetically pleasing. The black plastic cover makes the holes drilled in the aluminum cover nicer to look at. After the joystick was secured onto the cover and the cover was screwed to the base, everything became secure and easy to use. Figure 1 shows the holes that were drilled in the casing cover and figure 2 shows the screws and bolts that are used in securing the joystick to the cover. Figure 3 shows the completed joystick in its casing. Eventually once all of the mounting parts arrive, we can drill the other holes for the mounting brackets, the mono jack, and the USB cord.

Figure 1: Holes Drilled In Joystick Enclosure Cover
This week I also began to test the wiring schematics that we previously designed for the monitor. The color LCD screen shows the image of the DynaVox that the user would see. The battery pack does provide sufficient power to the LCD screen and has not needed a recharge since the week of testing has begun, showing us that the battery pack will last the proper length of time the client needs it for. Figure 4 shows the testing of the LCD screen and the image that it projects. The images that show on the LCD are a scaled-down version of what is on the DynaVox screen, with the “dialog” box centered in the LCD screen.
In addition, this week I placed orders for the 80/20 mounting of the joystick. After waiting one week for the prices via e-mail, I called the 80/20 company to get the prices of the various pieces. We decided that we should revise the mounting system for the LCD screen due to the extravagant costs of some of the mounting brackets, but we placed the order for the joystick mounting pieces. I also placed the order for the black ABS and glue, so that construction of the LCD casing can begin as soon as these parts arrive from TAP Plastics.

In testing the LCD screen I found a control that can flip the image in the LCD, eliminating the need to add 0.5 inches to the top of the LCD and battery enclosure dimensions. We can now make this enclosure the smaller size or keep it larger, in the event that we need extra space that was not taken into account.

**Future Work**

We will continue testing the joystick and the LCD screen so we can make any changes before finalizing the placement of the holes in the joystick enclosure. We will eventually construct the LCD screen and battery enclosure and order or fabricate the parts for the mounting of this enclosure. The deciding factor for whether we purchase mounting brackets or fabricate them depends on if we can find something that we
like and that is within our budget. The LCD screen could be a little clearer, so we have to make some adjustments or decide if that color distortion is due to the many signal conversions of the video signal.

**Project Review**

Currently, we have $88.09 remaining in our budget for the LCD screen mounting cost and any additional unforeseen costs. We have used approximately, $661.91 on all of the part orders. Our timeline is on track to finish the construction of the project by the end of October/beginning of November as long as our remaining parts are shipped in a timely fashion.

**Hours worked:** 10