Week 9
Stephen Heussler

Project Identity

Freely Adjustable and Accessible Keyboard and Arrow Pad for Client with Cerebral Palsy

Work Completed

This week Nolan and I finished the PCB and we placed our order to PCB Express. The total cost came to $169.00, which falls within our budget. Now that the PCB was finalized and we had the exact dimensions, we began designing the external casing for the keyboard. Figure 1 below is an image that was made in MS Visio, which shows the layout of the PCB, the control board, and the external casing.

Figure One. Transparent Top View

After modeling the layout of the keyboard, we were able to start making measurements for the hole cutouts on the top PVC piece of the keyboard. Below in Figure 2 is an excel file of all the positions, and an image for reference.
After modeling all the hole positions, we had to decide on what the holes would look like. We settled on choosing a hole radius of .075" when cutting out the holes. Figure 3 on the next page shows the hole outline around two example keys.
This was then modeled using Visio onto an image of the top PVC layer, and given below in Fig. 4 is what the final result will look like.

**Future Work**

This week Nolan and I plan to head to the machine shop and cut out the external casing for the PVC. We also plan to order screws for the external casing and the PCB. On top of this, we plan to go to Mansfield Supply to buy the rubber bottom and hinges for the external casing.

When the PCB comes in, we will solder the components into their places and hook it up to our control board.
Project Review

Now that we have ordered our PCB, we only have to solder our components in, hook it up to our control board, and get it running. After this, the electrical part of our project will be done. We are a little behind, but with a lot of work we will be able to complete our external casing very quickly.

Hours Worked:

~12