WORK COMPLETED

This past week has been filled with lots of different tasks in the machine shop and various testing and designing. Sirisha and I made a trip to Mansfield supply to pick up some brackets, screws, and nylon nuts in order to attach our gooseneck to the headpiece. We felt this is the most secure way to attach the gooseneck to the head. In the midst of attaching the gooseneck to the headpiece, my group and I realized that the headpiece we had would not allow us to attach the gooseneck in the back as we had planned, since the tightening mechanism is located there. Rich from the machine shop was kind enough to donate to us a hard hat to use instead, that has is easily adjustable to different head sizes and will hold the gooseneck better. I was able to remove several small pieces from the speedometer cable so that it may fit through the head gooseneck piece. The team determined that we do not need a longer speedometer cable for the 36-inch length gooseneck. Sirisha and I shaved down some of the helmet so that the gooseneck tubing can remain flush to the head.

Figure 1: Piece Removed off Speedometer Cable

Figure 2: Piece before Removed off Speedometer Cable
I devised a new way to attach different utensils to the end of the speedometer cable, while allowing some precision to the spinning motion. I figured we could attach a geometry compass to the end of the gooseneck so that it may have a better way of touching the paper medium without flopping over everywhere. My group and I discussed this option with Bill, and he loved the idea so we plan on going forward with that. We will either devise a middle device to attach the compass to the speedometer cable or directly setscrew it to the cable to directly turn.

My group and I did a test to see how comfortable the gooseneck would be on the client’s head by placing it in different locations on the helmet for different amounts of time. We came to the conclusion that the gooseneck we
currently have may cause neck discomfort to our client. We approximately weighed the piece to be 2.5 pounds, so we need to find something lighter than this. I called the manufacturer we received the original gooseneck from to see if they had the same length gooseneck, but weighed less. We discovered that the new piece would only weigh a half a pound less. My team and I are now researching a new piece to buy.

FUTURE WORK

By the end of this week, I will like to have found a new place to buy a 36-inch gooseneck from, since the one we currently have is too heavy. Also, since we may run a little behind on the head-mounted portion of the project, I will try to attach the arm-mounted pieces together. This means I also have to enlarge the hole for which the speedometer cable to go through. Also, I am waiting to hear back from Dr. Hallowell to see if it would be better for Stacey to have the arm piece main mounts on the top or underside of her arm. Also, we are going to order the compasses and setscrew attach those as soon as they come in.

PROJECT REVIEW

As of right now, our team would have been on time according to the schedule we set last semester if our head gooseneck had been lighter. It would have been attached according to plan. However, since we need to find a new gooseneck for the head, we are going to proceed with the arm-mounted system portion that we originally scheduled to do later, so that we may be kept on our timeline in the long run.

HOURS WORKED

In Lab: 10
Outside of Lab: 3