Patient Positioning Aid

Week 7
Date: March 14, 2006
Bhavin Patel

Work Completed:

The week before spring break I was able to finish cutting the leg bar stabilizers. I had Surge at the machine shop help me make the arc in both bars. First I taped the two pieces together in order to be able to get the same shape on both. Then I made an arc with a marker on the bar to trace when cutting. Using the band saw Surge helped me make the cut to the HDPE bar. The leg stabilizer can be seen in figure 1.

Figure 1: Leg Stabilizer Bar Set Up
I was going to make and tap the holes needed for attachment of the leg stabilizer bar to the linear bearings on the extrusions. On Thursday March 2 the machine shop closed early, and on Friday we are unable to use it due to a class. Figure 2 displays how the attachment will look. The holes will be made on the center horizontally, and toward the bottom vertically. This will provide a little bit of extra room underneath the leg stabilizer bar.

![Figure 2: Side View Leg Stabilizer Attachment](image)

Christen checked the adhesion of the plastic components of the linear bearings which were good. We continued to glue the rest of the plastic components and plan on having them all complete by the end of this week. This method is good since we do not need to search for small non ferrous screws and spend money on them for this
application. We will continue to use the steel screws and bolts until we receive our silicon bronze.

Future Work:

I plan to complete the leg stabilizer by drilling and tapping the necessary holes on the HDPE bar for attachment with the linear bearing. I will also finish gluing the plastic components to the linear bearings to make them completely non ferrous. In addition I plan to start changing the bolts with silicon bronze ones. The aluminum side members will be attached to the transfer board and so will the PVC cross members.

Project Overview:

We are currently meeting all our goals, and have not fallen behind at all. We will be finished with all of the major components by the end of this week and can start testing soon. This will leave plenty of time for changes if any are needed.

Hours Completed:

BME lab: 3 hours
Machine Shop: 2 hour
Outside lab: 2 hour

Total : 7 hours