Progress Report: Week 4

The computer mount was initially finished this week. Blaine put the finishing touches on the headrest mount by painting it a bright blue to match the folding Deassy release on the front. On Friday, the team went to the Stenglein’s home. We put the mount in the vehicle and attached the Dynavox computer to the mount. Everything, including the mounting frame and the computer, held well in the vehicle. The size of the mounting plates fits perfectly along the seat and does not interfere with a passenger sitting in the front seat.

However, the L bars of the mount put the computer too far down the seat. In this location, Sean would potentially be able to kick the computer against the seat. To fix this, the bars will be cut again shorter to bring the computer higher up on the passenger seat. This could potentially be a problem since the tops of the L bars are welded to the mounting plates. With the plates a permanent part of the frame, the bars may not lay flat to position the saw cut. So in the end, the mount is completed, but in order to improve the position of the computer in the car, we will cut the bars for a better viewing angle.

The family was extremely excited to see the finished mount and cannot wait to utilize the travel computer mount. Dr. Enderle was not in for the latter portion of the week and therefore the team was not able to obtain the release form to give the mount to the family. This week, the team will cut the bars and get the release form ready. Hopefully, the team will be able to give the mount to the family by the end of the week.

There was also a lot done with the assistive jumping device this week. My goal this week was to research and contact companies about the use of bungee cords on the AJD. I wanted to get in touch with the companies that manufacture and sell the bungee cords to ask them their opinion on the usage. I wanted to purchase the type and size of bungee that would best hold the chair vertically and support the weight of the user in the proper location. Some companies had
responded questioning the usage of the bungee. I had to tell several companies
again that it was to hold the weight vertically suspended and that the bungee was
not being used as a “tie-down.” I am still waiting adequate responses from the
companies to inform me about the types of bungee cords to purchase. If this
does not work out, I will go to a hardware store such as The Home Depot or
possible Eastern Mountain Sports again to purchase a bungee cord that seems
to best fit our needs.

Throughout the week, Caitlin worked on the vertical rail attachment to the
seat. She devised a sheet metal type backing that wraps around the back of the
chair and bolts to the chair along the side bolting. Caitlin and I went to the shop
to find a piece of metal to level the vertical rail along the back of the chair. We
also bent the sheet metal along the edges to wrap the metal around the chair.
Following this, we went to the local hardware store to purchase bolts and
washers (the ones previously purchased did not fit properly). Caitlin then bolted
the sheet metal wrap, leveling block, and the rail together. The top of the rail
attachment was screwed into the metal bar of the seat along the top. After a few
minor adjustments to get the rail moving smoothly, this was secured to the chair.
Caitlin and Blaine also assembled the horizontal trolley from the pieces they were
shipped as.

Also, after contacting several of my friends in the construction and home
improvement business, they were able to recommend a possible company to
cement the foundation for us. I will contact this company to see if they will pour
the cement for us. If not, a friend’s company may possibly be able to work as the
“middle man” to get the job done.

During the Friday night meeting with the Stenglein’s, we brought the mini
trampoline to test Sean’s jumping abilities. We used Sean’s lite gait (his bungee
cord harness walking system) as a support, but instead of having him stand on
the usual treadmill he uses it for, we put the trampoline under the lite gait system.
With the help and supervision of the parents, Sean was placed into the harness
and clipped into the lite gait. After demonstrating the jumping motion and doing it
along with Sean, he was able bounce on the trampoline. This was the first time
Sean had jumped and he did an amazing job. While he jumped, he was continuously looking down towards his feet. At first, it was a concern that he was unable to keep his head up. After questioning him about it, we learned he was only doing this to look at his feet since the jumping feeling was so new to him. As he jumped, his feet did not stay in a single location as usually done with jumping. He would push his feet out forward to push off with. Since he was on a smaller diameter trampoline, he would try to push off from the spring covered rim rather than the black jumping surface. This problem will be fixed when Sean is jumping on a larger trampoline. I videotaped Sean while he was jumping to give the team a recording to refer back to.

I also researched trampoline options for the Stengeins. The team was unsure of the types of trampolines on the market and what the best option for Sean would be. I learned there are two main types of trampolines, band trampolines and spring trampolines. The band trampolines are cheaper but made of a lesser quality. They provide less bounce to the user. The spring trampolines are of better quality and provide the user with a greater bounce. While the band trampoline may work better for Sean, we recommended that the family purchase a spring trampoline. I emailed Mrs. Stenglein with a list of choices of each type with the price, store, and hyperlink to the site to purchase the trampoline for the family.

The team AJD goals for next week include finalizing a cement company for the crane, continue to work out the crane delivery (since it is being delivered to a residential home there are some issues), sew the harness, strapping, and vinyl upholstering for the seat (we are still having issues getting a sewing machine to use), finish up the vertical harness, and finally work to attach the vertical rail to the horizontal trolley.

I worked a total of 9 hours this week.