Progress Report  
Week 9 (3/24/09-3/31/09)

The travel computer mount was completed several weeks ago. Last week, the team received the release forms needed to give the computer mount to the Stenglein family. Caitlin and I met with the Stengleins on Wednesday March 25. The family signed the release form (the form was already signed by Dr. Enderle) and we then handed over the travel computer mount to be put to good use. As we helped the family install the mount in the car, we showed them the key features of the mount and how to remove the mount if necessary. We then took pictures of the mount installed on the passenger seat headrest of the vehicle with and without the computer attached. From there, Mrs. Stenglein put Sean into his car seat and we were able to see Sean interact with the computer in the vehicle. The family will attach Sean's head control button to his car seat in order for the computer to be used.

Figure 1: Travel Computer Mount Installed in Vehicle Without Computer
The team still needs to write the User’s Manual and NSF report for the travel computer mount. This should be finished within the next two weeks depending on the progress of the assistive jumping device.

Due to the bending of the vertical rail with an added load, the team decided that a support beam needed to be added. Caitlin and I went to the machine shop to see if they had a beam that would fit our needs. When we got there, we found a 2” square beam about 1/4” thick. We decided that it would be the best for us and cut it to 5’ in length. Then, we took it back to the senior design lab to drill the 11 holes on the drill press to attach the support beam to the vertical rail. We drilled through the vertical rail into the support beam to align the holes correctly. Since the drill press wasn’t big enough to drill completely through the rail and the beam, we had to flip the beam over and drill through the opposite side. Once the holes were drilled, we took three bolts (all the lab had at the time) and tested that the holes were aligned when bolted through. I went to the hardware store the following day to purchase 11 bolts and nuts and 22 washers to make them all the same. Caitlin built a new stopper for the rail since it was no longer large enough with the support beam.

On Friday, the team went back to Dr. Peterson’s lab at the UConn Health Center. We hooked the support system back onto the trolley to test again. While the rail did not bend as much, we noticed that the unsupported 6 or so inches on the top of the vertical rail was bending. This was not acceptable and we would need to add more support. We then added the free weights to the attached chair to test the loading. When this was determined to be acceptable, the team decided it was time to test the AJD with a human test subject – me. So in order to get into the harness, we placed a desk under the system. I then stood on a stool on the desk to get into the
harness. I was strapped into the chair as Sean would be and began to bounce on my toes. The chair glided on the vertical rail with the help from the bungee cords. The bungee cords were attached to the trolley with two carabineers placed opposite ways for added security. The tests went well except for the bending of the vertical rail. We also noticed the trolley was rocking on the cranes I beam. We assumed this was due to the trolley not being completely tightened on the crane. Once fixed, this shouldn’t be an issue.

The team goals for the week including fixing the support beam and further testing the chair. We also need to write the user’s manual and the NSF report for the assistive jumping device.

I worked 14 hours this week.