

Motorized wheelchair mounting system

Progress Report #14, May 7, 2008

Client: Andrea E. Johnson, CASC OTR/IT

Team: Dustin Gardner (BSAC)

Nick Harrison (BWIG)

Richard Bamberg (Communicator)

Tyler Lark (Leader)

April 29 to May 7, 2008

Problem Statement

Design a motorized wheelchair mounting system for a Vanguard Plus speech generating device. The client currently drives an electric wheelchair without the Vanguard mounted. With the device mounted on his chair he cannot see to drive the wheelchair. We are interested to find out if a standard wheelchair mounting system could be adapted so that he is able to move his Vanguard into position to use, then out of the way to drive.

Last Weeks Goals

- Put finishing touches on prototype.
- Finish and print poster.
- Prepare for final presentations.
- Write final paper.

Summary of Accomplishments

Last week we finished the device, installed a gear box, and managed to motorize the mount with a handheld drill. We finished our poster and presented at the design exposition. This week we finished our final paper.

At the design expo, we talked to many individuals who were excited with our product. Professor Gregg VanderHeiden of the Trace Center suggested we send an email to the manufacturers of the Vanguard to inform them of our mount, and he also asked for a video of it to keep with his files to possibly display as an example of a custom device for wheelchairs.

This Weeks Goals

- Have end-of-semester meeting with advisor.
- Turn in paper, notebooks.
- Take a video of our device in action.
- Meet with client and deliver device to end user.

- **Project Schedule**

Week	Date	Goals
1	1/25	Form team, contact client, assign team roles, set up client meeting
2	2/1	Literature research, meet with client
3	2/8	PDS, brainstorming, post preliminary PDS and photo on website
4	2/15	Brainstorm, preliminary design ideas
5	2/22	Work on designs

6	2/29	Decide on design alternatives, make presentation
7	3/7	Oral presentation
8	3/12	Notebooks, evaluations and written report due
	3/14	Decide on final design
	3/21	SPRING BREAK
10	3/28	Work on final design
11	4/4	Work on final design,
12	4/11	Work on final design, begin preparing poster and paper
13	4/18	Product validation/verification testing, work on poster and paper
14	4/25	Complete design, print poster, edit paper
15	5/2	Final Poster Presentation
16	5/7	Hand in final deliverables
	5/9	Final meeting with advisor; deliver product to client

Activities

Dustin: Build (9 hr)

Presentation Practice (1 hr)

Design presentation (4 hr)

Final Paper (3 hr)

Total: 17 hrs

Nick: Build (5 hr)

Presentation Practice (2 hr)

Design presentation (4 hr)

Final Paper (3 hr)

Total: 14 hrs

Richard: Build (9 hr)

Presentation Practice (2 hr)

Design presentation (4 hr)

Final Paper (3 hr)

Total: 18 hrs

Tyler: Build (8 hr)

Presentation Practice (2 hr)

Design presentation (4 hr)

Final Paper (3 hr)

Total: 17 hrs