

Title: Device for acute rehabilitation of the paretic hand after stroke (Project #20)

Team: Medical College of Wisconsin: Dr. Michelle Johnson (client)
Sasha Cai Leshner-Perez (Leader)
Mike Socie (Leader)
Carly Brown (Communicator)
Karissa Thoma (BSAC)
Justin Lundell (BWIG)

Date: September 29 – October 5, 2006

Project Design Statement:

We will design a portable device that will facilitate hand rehabilitation in the acute phase (first three months) after stroke; the device will consist of a simple attachment to the impaired arm, comfort for the user and accommodations for almost complete universal use.

Restatement of Team Goals:

- Continue individual research
- Get a few primitive design ideas down on paper
- Make visit to UW hospital physical therapy unit
- Obtain wheelchair to get ideas for mounting device, get measurements
- Obtain TENS unit to familiarize ourselves with (from advisor)
- Put most recent version of PDS up on the team website
- Send client most recent version of PDS and alert them to the website
- Group brainstorming about design ideas

Individual Goals:

- Sasha Cai- brainstorming, preliminary design ideas
- Mike- brainstorming, preliminary design ideas
- Carly- brainstorming, preliminary design ideas, contact Michelle and Dr. McGuire
- Karissa- brainstorming, preliminary design ideas
- Justin- brainstorming, preliminary design ideas

Summary of Accomplishments:

- 1) Latest version of PDS is on the web
- 2) Individual brainstorming on design ideas
- 3) Sharing brainstorming with team to start thinking of complete designs
- 4) Received information about arm sizes, etc. from advisor
- 5) Acquired a loaner TENS unit to get comfortable with

Team Goals:

- Get started on the paper
- Continue individual and team brainstorming about design ideas

- Start compiling preliminary design ideas into complete designs
- Organize another meeting or video conference with Michelle
- Talk to Dr. McGuire about visiting PT at MCOW

Difficulties:

- We have still not been able to get contact with someone at UW hospital who can set us up to go visit physical therapy

Activities:

- 09/29/2006 Team Meeting: establish goals for the week, get comfortable with wheelchair, start getting comfortable with loaner TENS unit 2 hour
- 10/01/2006 Team Work: Individual Brainstorming (Design ideas) 1 hour
- 10/04/2006 Team Meeting: Discuss individual design brainstorming, set agenda for class on Friday 1 hour

Project Timeline:

DATES	Day of the Week	Goals
15-Sep-06	Friday	Contact Client; Meeting Set; Research on Given Websites; Find Outside Resources; Questions for Client; Group Picture
20-Sep-06	Wednesday	Initial PDS; Research on Subject (Individual) - Stroke, market designs, Possible Components; Regulations ; Solidworks
22-Sep-06	Friday	Initial Brainstorming; Solidworks; Compiled what client wants/needs;
29-Sep-06	Friday	Team Brainstorming; Revise PDS
4-Oct-06	Wednesday	Contact Client with Team Proposals; Solidworks of Team Proposals
6-Oct-06	Friday	Rough Team Paper; Powerpoint laid out; Midterm Presentation Begun
11-Oct-06	Wednesday	Midterm Fully Prepared; Design Chosen
13-Oct-06	Friday	Midterm Presentations
20-Oct-06	Friday	Components purchased
27-Oct-06	Friday	Construction of Prototype(s)

3-Nov-06	Friday	Construction of Prototype(s)
10-Nov-06	Friday	Construction of Prototype(s)
17-Nov-06	Friday	Construction of Prototype(s); Testing
24-Nov-06	Friday	Prototype(s) Finalized; Testing Finalized; Final Paper Done for Review; Powerpoint Done
8-Dec-06	Friday	Final Presentations

Expense Report:

Initial Budget: \$750.00

- Amount spent before September 29, 2006 : \$0.00

- Amount spent during September 29, 2006 – October 5, 2006: \$0.00

Remaining budget: \$750.00