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

Team: Medical College of Wisconsin: Dr. Michelle Johnson (client)
    Sasha Cai Lesher-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:

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