

**Title:** Device for acute rehabilitation of the paretic hand after stroke

**Team:** Sasha Cai Leshner-Pérez (Leader)  
Carly Brown (Communicator)  
Lee Linstroth (BSAC)  
Nathan Kleinhans (BWIG)

**Date:** November 30 – December 7, 2007

**Project Design Statement:**

Design a portable automated device that will facilitate hand rehabilitation in the acute phase (first three months) after stroke within a clinical setting; focus of rehabilitation will be supination/pronation movements of the wrist and gross flexion/extension of the fingers. Both active and passive movements will be focused on for rehabilitation, and the device should be able to simultaneously or independently assist rehabilitation of the two degrees of motion.

**Team Goals:**

- Finish prototype
- Work on programming
- Final Presentation
- Poster/PPT Design
- Get Functional simplified programming
- Begin Final Paper
- Contact Client

**Individual Goals:**

- **Carly:** Construction of device, make sure to be in communication with Michelle to monitor progress of proposal, begin writing final paper, practice final presentation, finalize ppt slides
- **Lee:** Construction of prototype, begin writing final paper, practice final presentation
- **Nathan:** Construction of prototype, begin writing final paper, practice final presentation
- **Sasha Cai:** Working on microprocessor programming, begin writing final paper, practice final presentation, purchase rheostat and create analog run velocity control program.

**Summary of Accomplishments:**

- 1) Finalized structure of device
- 2) Create simple commands
- 3) Incorporation of rheostat into system
- 4) Finalized final presentation
- 5) Began final paper
- 6) Contacted product design student at MIAD

**Difficulties:**

Problems programming

**Activities:**

<b>Construction Meeting:</b>	<b>11/30/07</b>	<b>3 hours</b>
<b>Team Meeting:</b>	<b>12/03/07</b>	<b>3 hours</b>
<b>Construction Meeting:</b>	<b>12/04/07</b>	<b>5 hours</b>
<b>Construction Meeting:</b>	<b>12/05/07</b>	<b>6 hours</b>
<b>Team Meeting:</b>	<b>12/06/07</b>	<b>2.5 hours</b>
<b>Final Presentation</b>	<b>12/07/07</b>	<b>2 hours</b>