Project Title: Sensory Substitution Device for Hearing Impairment

Team Members:
Ryan Thome, Co-Team Leader  thome@wisc.edu
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Client:
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Advisor:
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Date: 10/27/06-11/2/06

Problem Statement:
The goal is to design and develop an auditory substitution device that through the use of a
digital hearing aid and vibro- or electro-tactile stimulation can substitute for regional
frequency hearing loss.

Statement of Team Goals:
1. Meet with client
2. Create Problem statement
3. Begin work on PDS
4. Begin research and design
   a) Research all possible background information.
   b) Research existing solutions
   c) Develop possible design solutions
5. Continue research, design, and testing
6. Write Midterm paper
7. Create PowerPoint presentation
8. Discuss possible final design alternative
9. Finalize design
10. Build and test prototype
11. Present final design

**Project Schedule:**
9/8/06 – Choose team and project, meet with client
9/15/06 – Background research, preliminary design ideas
9/22/06 – Continue background research, develop PDS
9/29/06 – Brainstorm
10/6/06 – Decide on design alternatives
10/13/06 – Work on mid-semester presentation and report
10/20/06 – Give mid-semester presentation, finalize mid-semester report
10/27/06 – Decide on final design
11/3/06 – 11/24/06 – Work on final design
12/1/06 – Finalize design and final presentation, begin work on final paper
12/8/06 – Give final poster presentation, finalize paper
12/15/06 – Final meeting with advisor

**Summary of Team Accomplishments:**
1. Met with Professor Tyler to review work done thus far and work left to do as well as review mid-semester deliverables

**Summary of Individual Accomplishments:**
1. Jack updated the website with newest progress report
2. Each member completed individual research on part of the system
3. Sarah wrote the progress report

**Upcoming Week’s Team Goals:**
1. Contact Tom Crabb about vibro-tactile buzzers
2. Meet with client to discuss hearing aid output
3. Figure out digital to analog conversion
4. Construct project timeline

**Difficulties:**
We have yet to encounter any major difficulties.

**Activities:**

Ryan – class meeting 1.0 hr
background research (electro-tactile stimulation) 1.0 hr
advisor meeting 1.0 hr

Sarah – class meeting 1.0 hr
background research (SPU) 1.0 hr
advisor meeting 1.0 hr
progress report 0.5 hr
Amy - class meeting 1.0 hr
    background research (hearing aid output) 1.0 hr
    advisor meeting 1.0 hr

Laura - class meeting 1.0 hr
    background research (hearing aid output) 1.0 hr
    advisor meeting 1.0 hr

Jack - class meeting 1.0 hr
    background research (analog vs. digital signals) 1.0 hr
    advisor meeting 1.0 hr

Team Total Hours for this week: 15.5
Cumulative Team Hours to date: 148.0