Project Title: 25. Sensory Substitution Device for Hearing Impairment

Team Members:

Jack Page – Co-Leader
   jdpage@wisc.edu

Jimmy Fong - Co-Leader
   fong@wisc.edu

Matthew Valaskey - BWIG
   mvalaskey@wisc.edu

Becky Jones - BSAC
   rebeccajones@wisc.edu

Ryan Thome – Communicator
   thome@wisc.edu

Client:
Veronica H. Heide, Au.D.
Audible Difference
vheide@audible-difference.com
608.273.3036

Advisor:
Mitchell E. Tyler, P.E., M.S.
Dept. of Biomedical Engineering &
Dept. of Ortho-Rehab Medicine
University of Wisconsin - Madison
metyler1@facstaff.wisc.edu
608.265.3756

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. We will continue the work from last semester, mainly focusing
on integrating vibro-transducers into the system and converting the system to real time.

Statement of team goals:
1. Create problem statement
2. Create first draft of PDS
3. Begin to research and develop design ideas
4. Continue the design project
   a) Research all possible background information.
   b) Research existing and design alternatives
   c) Brainstorm for all possible solutions
   d) Meet with experts to gain ideas about possible solutions
   e) Develop possible design solutions
5. Choose final three design solutions
6. Develop final three solutions
7. Create Power point presentation
8. Finish mid semester report, PDS
9. Discuss possible final design alternative
10. Finalize Design
11. Build and test prototype
12. Present final design & poster

**Project Schedule**
1/26 – 2/2: Choose project, assign roles, meet with client
2/3 – 2/9: Draft first version of PDS, preliminary design ideas to improve prototype
2/10 – 2/16: Continue research and write PDS
2/17 – 2/23: Decide on design alternatives, brainstorm ideas
3/23 – 3/2: Work on design
3/9: Mid-semester oral presentations
3/16: Hand in written report, PDS and notebooks
3/17 – 3/31: Work on design
Spring Break
4/9 – 4/25: Work on Design, plan tests for the prototype
4/26 – 5/4: Work on final poster, presentation and report. Test the prototype and present to client.
5/4: Poster presentation

**Last week’s goal**

**Summary of Team Accomplishments:**
1. Organized group and set up roles.
2. Sent out contact information to everyone.
3. Set up client meeting

**Statement of Team Goals for Upcoming Week:**
1. Meet with client to get a better understanding of her goals and expectations with this project.
2. Begin drafting a preliminary PDS
3. Begin research into what still needs to be implemented on this project.
4. Set up the project webpage
5. Begin brainstorming

**Difficulties:**
None thus far

**Activities and Individual Accomplishments:**
Team In-class/lab meeting (1 hour)

Jimmy- 1hr Background research on previous work and progress report
Matt- 1 hr –Background research on previous work
Ryan 1 hr – Set up client meeting and reviewing work from last semester
Jack 1hr – Review previous work
Becky 1hr – Background research on the project

**Team total hours for this week:** 5.0hrs
**Cumulative team hours to date:** 6 hrs