

Tactile Auditory Sensory Substitution - Progress Report 1

1/25/08 – 2/1/08

Project Title: Sensory Substitution Device for Hearing Impairment

Team Members:

Becky Jones – Co-Team Leader
rebeccajones@wisc.edu

Jimmy Fong – Co-Team Leader
fong@wisc.edu

Jack Page – Communicator
jdp@wisc.edu

Ryan Thome – BWIG
thome@wisc.edu

Matthew Valaskey - BSAC
mvalaskey@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
metyer1@facstaff.wisc.edu
608.265.3756

Problem Statement:

The goal is to design and develop an auditory substitution device that through the use of vibrotactile stimulation can substitute for regional frequency hearing loss. We will continue the work from the last three semesters, mainly focusing on refining the technical operation of the prototype to be more production-ready, constructing housing to be more ergonomically friendly and obtaining clinical data on the performance of the system.

Statement of team goals:

1. Obtain IRB approval
2. Update PDS (product design specification) and create semester schedule
3. Continue design project
 - a) Review progress from previous semesters
 - b) Brainstorm ideas for direction we want to take the project
 - c) Meet with experts to gain ideas about possible solutions
 - d) Develop possible design solutions
4. Research and develop housing refinements
5. Refine and conduct a clinical study on the performance of TASS
6. Miniaturize electronics to create more aesthetically pleasing device
7. Document and analyze findings in a print-ready manuscript
8. Prepare final presentation and poster
9. Conduct an outreach event for the community

Project Schedule

1/25/08 – 2/1/08: Review progress from previous semesters. Organize schedule for semester. Revise and resubmit IRB.

Summary of Team Accomplishments:

1. Noted IRB reviewers' comments and revised application
2. Organized team roles for the project
3. Began to divide tasks for the project
4. Completed online training regarding outside interests possibly conflicting with IRB

Statement of Team Goals for Upcoming Week:

1. Finalize and submit IRB again
2. Brainstorm improvements to our current design
3. Meet with client ideas about project

Team Difficulties:

1. No significant difficulties this week.

Activities and Individual Accomplishments:

Group meeting: 1 hour

Ryan- 1.5 hrs: Revised IRB and online training

Jack- 1.5 hrs: Revised IRB and online training

Jimmy – 1.5 hrs: Revised IRB and online training

Becky – 1.5 hrs: Revised IRB and online training.

Matt – 1.5 hrs: Revised IRB and online training

Total hours for this week: 8.5 hrs

Cumulative hours to date: 8.5 hrs