

Progress Report
November 10th, 2005

Project Title: EEG Biofeedback Device

Team Members:

Ashley Anderson, Team Leader aandersoniii@wisc.edu
Chris Wegener, Co-Leader cjwegener@wisc.edu
Michele Lorenz, Communicator lorenz@wisc.edu
Ryan Thome, BWIG thome@wisc.edu
Shikha, BSAC shikha@wisc.edu

Client:

Daniel Muller, MD, PhD
Medicine (Rheumatology)
Institute on Aging, Mind-Body Center
2605 MSC
UW-Madison
265-2478 dmuller@wisc.edu

Advisor:

John Webster

Date: 11/10/05

Problem Statement:

(Project Description)

The goal of our project is to design and build an inexpensive, portable electroencephalogram (EEG - brain wave monitor) that teaches meditation practitioners to achieve optimal meditation by the presence of EEG alpha and theta waves.

Restatement of team goals:

1. Meet with client
2. Create Problem statement
3. Work on PDS
4. Begin research and design
 - a) Research all possible background information.
 - b) Research existing solutions
 - e) Develop possible design solutions
5. Continue research, design, and testing
6. Write Midterm paper
7. Finish PowerPoint presentation
8. Discussing possible final design alternative
9. Finalize design
10. Building and testing prototype
11. Present final design

Project Schedule:

09/02/05 – Choose team and project, set up meeting with client
09/09/05 – Meet with client, background research, discuss PDS
09/16/05 – 10/07/05 – Brainstorm, work on design
10/07/05 – Finalize oral presentation
10/14/05 – Oral presentations, written report, PDS, and notebooks are due
10/14/05 – 11/18/05 – Work on design
11/25/05 – Thanksgiving
12/02/05 – Final poster presentations
12/07/05 – Final written report, notebooks due
12/09/05 – Final meeting with advisor

Summary of Team Accomplishments:

1. Acquired silver wire, sponge/ear plug components of headband
2. Built amplifier.
3. Developed a testing procedure for electrode design and began evaluation of the newly constructed headband.

Summary of Individual Accomplishment:

1. Michele, Ryan and Shikha travelled around Madison to find parts for the headband and began construction.
2. Ashley and Chris continuing building and troubleshooting the amplifier.
3. Michele wrote the progress report.

Statement of Team Goals:

1. Finalize electrode and amplifier designs.
2. Develop later steps of design – combine existing components with plan to produce audio feedback.

Difficulties:

This week, we're finally getting to the testing phase for our basic prototype components, but we still have to connect the signal collection and amplification to the final product (some form of variable audio feedback).

Activities:

Ashley - Team meetings 0.5 hr
 Amplifier construction 2 hr
Chris - Team meetings 0.5 hr
 Amplifier construction 2 hr
Michele - Team meetings 0.5 hr
 Parts acquisition 1 hr
 Electrode construction 1 hr
Ryan - Team meetings 0.5 hr
 Parts acquisition 0.5 hr
 Electrode construction 1 hr
Shikha - Team meetings 0.5 hr

Parts aquisition 0.5 hr

Electrode construction 1 hr

Team Total Hours for this week: 11.5

Cumulative Team Hours to date: 114.0