

**Progress Report 9**  
November 3, 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:** 11/03/05

**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. Purchased parts
2. Started building the electrodes and amplifier

**Summary of Individual Accomplishment:**

1. Michele, Ryan and Shikha started making electrodes with headband
2. Ashley and Chris started building the amplifier
3. Shikha wrote the progress report

**Statement of Team Goals:**

1. Continue building the electrodes and amplifier
2. Begin to investigate analogue vs. digital

**Difficulties:**

We are having hard time finding the silver electrodes and silver wire compatible with our design. Work this week will hopefully lead to evaluation of our current plans and possible redesign.

**Activities:**

Ashley - Team meetings 1 hr  
Amplifier design 1hr  
Chris - team meetings 1 hr  
Amplifier Design 1 hr  
Michele - Team meetings 1 hr  
Electrode Design 1hr  
Ryan - Team meetings 1 hr  
Electrode Design 1 hr  
Shikha - team meetings 1 hr  
Electrode Design 1 hr

**Team Total Hours for this week: 10**

**Cumulative Team Hours to date: 102.5**