

Pulse Oximeter Team

Progress Report #9

3/28/09 – 4/2/09

Team Members

Bogdan Dzyubak – Communicator
Joe Helfenberger—BWIG
Jonathan Meyer—Leader
Matthew Parlato—BSAC

Clients

Amit Nimunkar
Jonathan Baran

Advisor

Dr. John Webster PhD.

Problem Statement

The purpose of this project is to develop a low-cost pulse oximeter for use in developing countries. It will be integrated with the MedCal, a handheld processing device which will record and display patient data. The oximeter must be rugged, durable, inexpensive, and must deliver data to the MedCal as an analog signal.

Team Goals

Previous goals for this week

- Finish the SolidWorks model
- Identify and acquire a suitable plastic
- Begin prototyping

Goals for next week

- Identify and acquire a suitable plastic
- Have SolidWorks draft reviewed by Eamon Bernardoni
- Begin prototyping

This week's accomplishments

- Prepared a SolidWorks draft of the probe for review
- Identified Orrin Lokken as a potential contact for automated milling prototyping
- Identified several plastics suppliers

Project Schedule

The table below is a Gantt chart of the projected timeline. Dark colors are used for completed stages, and light colors for incomplete stages.

Tasks	January		February				March				April				May	
	23	30	6	13	20	27	6	13	20	27	3	13	17	24	1	8
Project Development																
Research	█	█	█	█												
Brainstorm				█	█											
Design					█	█	█	█	█	█						
Prototype										█	█	█	█	█	█	
Deliverables																
Progress reports	█										█	█	█	█	█	█
Midsemester presentation							█									
Midsemester report								█								
Final presentation															█	
Final report																█
Communication																
Advisor Meetings		█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
Client Meetings	█	█														
Website							█	█	█	█	█	█	█	█	█	█

Difficulties

This was an exam week for three of the team members

Activities

Date	Time	Team member(s)	Activities
3.13.09/3.22.09	~5 h	Joe	Discussed plastics with personnel at the ECB Shop, and researched plastics online
3. 31.09	1.5 h	Joe	Researched plastics (types, attributes, and cost)
3. 31.09	~1 h	Jonathan	Edited SolidWorks Model
4.1.09	~1 h	Jonathan	Edited SolidWorks Model
4.2.09	2 h	Bogdan	Contacted Dr. Witt and Dr. Lake to discuss plastics
4.2.09	1 h	Team	Agreed on second draft of probe, discussed plastics manufacturers, learned about Orrin Lokken from Eamon Bernardoni

Expenses

Items	Cost
4 photodiodes (2mm×2mm)	< \$20