

Skin Color Monitor

Progress Report # 9, November 8, 2007

Client: Prof. John Webster

Team: Jack Ho (Leader)

Patrick Kurkiewicz (Communications)

Joseph Yeun (BWIG)

Brian Ginter (BSAC)

November 2 to November 8, 2007

Problem Statement

Develop a miniature electronic device that records change in skin color during hot flashes.

Last Weeks Goals

- Create an improved casing
- Continue testing

Summary of Accomplishments

We acquired a couple of erasers from the bookstore made of different materials, which we thought would have similar structural properties of what we were aiming for in making our device, and made a couple devices where we could test the voltage change of reflected light, rather than direct. We also reconfigured our circuit to give us a range from 0 to 3V (no light, full exposure), instead of 0 to 60 mV, which was what we were getting before.

While the new devices were an improvement over our older one, there are still many areas that need to be improved. First of all, the device needs to be black, or colored black, to reduce the reflection of light off of itself. The main problem we're having at this point, is that we haven't been able to fasten the LED and detector well enough where its orientation doesn't change noticeably when the device is pressed on, since, through testing, we've observed that where the light ends up focusing makes a large difference in detection.

Our priority at the moment is to fabricate a device that will detect reflected light well enough that we can begin testing to see what color of light will be the most efficient to use and whether or not we will need to amplify the output voltage given by our machine.

This Weeks Goals

- Acquire acrylic type material to machine for possible future prototype
- Create an improved casing
- Continue testing

Activities

Jack:

Team meeting (1.0 hrs)
Work on design (3.0 hrs)
Total: 4.0 hrs

Brian:

Work on design (1.0 hrs)
Total: 1.0 hrs

Patrick:

Team meeting (1.0 hrs)
Communications (1.0 hrs)
Work on design (3.0 hrs)
Total: 5.0 hrs

Joseph:

Team meeting (1.0 hrs)
Work on design (2.0 hrs)
Total: 3.0 hrs

Project Schedule

9/7 Form team, contact client, assign team roles, set up client meeting
9/14 Literature search, create problem statement, begin PDS
9/21 PDS, brainstorming, begin developing designs
9/28 Brainstorming
10/5 Decide on 3 design alternatives, prepare for mid-semester presentation
10/12 Work on presentation
10/19 Mid-Semester Presentation
10/25 Hand in report (and PDS) and notebooks, decide on final design
11/2 Work on final design
11/9 Work on final design
11/16 Work on final design
11/23 Thanksgiving Break
11/30 Work on final design, poster presentation and paper
12/7 Final Poster Presentation
12/12 Hand in final written report and notebooks
12/14 Final meeting with advisors

Expense

<i>Date</i>	<i>Place</i>	<i>Purchased</i>	<i>Price</i>
9/17/07	ECE parts shop	LED's, breadboard, wires	\$9.82
9/21/07	UW Bursar's Office	Keycards	\$50 (deposit)