

Low Cost Digital Thermometer and ECG

Contact Person

Amit Nimunkar

Dept. of Biomedical Engineering

Phone: 698-7413, Email: ajnimunkar@wisc.edu

Team

Colleen Farrell (Team Leader)

Tasha Benkovich (BSAC)

Deborah Yagow (BWIG)

Hallie Kreitlow (Communicator)

Week

February 12 to February 19, 2009

Problem Statement

Emerging countries are in need of a durable, low cost digital thermometer to interface with innovative display technology. This device should incorporate circuitry with a human sensory interface.

Last Week's Goals

- Obtain the ordered thermistors and test them in the lab
- Research the best areas to take temperature on the body
- Research the different options for the possible circuit and controller
 - i.e. one-supply op amps, capacitors, 555 timers, and microcontrollers
- Research the conditions of the emerging countries in which the design may be used

Accomplishments

- Attended Medical Issues in Developing Countries seminar
- Met with Mary Doherty and Luke Fortney from EWH to discuss project specifications that would be important
 - No disposable parts
 - Very rugged
 - No continuous monitoring
 - Should be oral with option for rectal
- Practiced building an op amp circuit for a thermistor
- Revised the PDS and problem statement with new information

This Week's Goals

- Test thermistors and microcontrollers once they are delivered
- Start brainstorming design options
- Research conductive materials to transfer heat to thermistor
- Decide whether to use wheatstone bridge or design alternate circuit

