

Low Cost Digital Thermometer and ECG

Contact Person

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Team

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Week

February 26 to March 5, 2009

Problem Statement

Emerging countries are in need of a durable, low-cost thermometer to operate with the MedCal, a handheld medical output device. The thermometer's incorporated circuitry should produce accurate temperature measurement through the use of a human interface.

Last Week's Goals

- Test more thermistors
 - Find thermistor with best accuracy in 32°-42°C range
- Decide which circuit (Wheatstone bridge or Op-Amp) works best
- Build temporary prototype
- Finish Midsemester paper, Powerpoint presentation

Accomplishments

- Added a differential OpAmp to circuit design to amplify signal
- Attended EWH soldering seminar
 - Learned to solder together a circuit
- Created designs for the casing of the probe
 - Use stainless steel tubing
 - Use metal tip (electrode snap) and plastic tubing
- Tested new circuit with OpAmp
- Made powerpoint for the midsemester presentation

This Week's Goals

- Build the circuit on prototyping board
- Test circuit in the range of body temperature (32-42 degrees C)
- Build and test various casings for the probe
- Practice the midsemester presentation
- Write midsemester paper

