Design Review 2 Agenda

EEG Alarm Group
Dr. Schafer
Stinson-Remick 205
10:00 AM March 9, 2023

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Agenda

1. Demonstration of Subsystems
   a. ECG Subsystem
   b. Pulse Oximetry Subsystem
   c. Alarm Subsystem
   d. Internet of Things (IoT) Subsystem
2. Board Design
3. Going Forward
4. Comments and Questions

Design Review 2 Notes

ECG Alarm Group
3/9/23

Alarm Subsystem
- Only holdup is the access to time
- Network time protocol? - Schafer
- Currently using Javascript date library to access time
    - Calculates the UTC from your computer and converts it to your time zone
- Showed website display of ECG graph; 10 seconds of data

ECG Subsystem
- Measures and displays heartbeat on oscilloscope
- Write data to an excel file to plot for now; waiting for wifi connection where it will then write to wifi
- How can we run program without having to access the serial monitor?

Pulse Ox Subsystem
- Heartbeat program and pulseOx+heart rate program
    - Heart Rate better on former
- 25 samples before calculating
- Pulse ox 99-100
- Some invalid values
    - Code will tell us when the reading is invalid, usually takes 1-2 sets of 25 samples to recalculate
- Sensor can calculate heart rate on its own

Board Design
- Boards complete, no connections made yet
- Main board and pulse oximetry/heart rate board
- Almost ready to order, will get on the same order as another team to save on shipping