**WEEKLY REPORT #17**

**Group# and Name: May1615 Portable ECG Atrial Fibrillation Detection**

**Client/Advisor: Mani Mina, Rakshak Sarda, Benjamin Sjulson**

**Attendees/Role:**

**Ian Abbott (Web Designer)**

**Nic Dubois (Lead Hardware Integration)**

**Aaron Melcer (Hardware Collaborator)**

**Donathan Morgan (Leader, Communicator, Connector, Hardware Collaborator)**

**Keegan Mumma (Software Collaborator)**

**Seth Rickard (Lead Software Integration)**

**Past week accomplishments (2/14/16 - 2/20/16)** o All the attendees met up as a group with Ben Sjulson on the 19th to discuss pending issues with our project and concluded that we should start from scratch to get a feedback signal from the heart actually pulsating and then amplify that.

* We went back to work on the circuit board to attempt to reduce unnecessary circuit components and use batteries as our source.

**Plan for coming week (2/21/16 - 2/27/16)** o The CE’s will continue working to understand the microcontroller and begin Bluetooth preparations.

* The EE’s will work on making the feedback from the electrodes clear and more visible.
* We plan to continue weekly meetings on Tuesdays and Thursdays at 2pm and also on Saturdays.
* The CE’s group plans to finish more programing on the microcontroller in the coming weeks.

# Pending issues

* Having a clear heart pulse signal retrieval in circuit ECG design from the electrodes.
* CE still needs to program the microcontroller.
* We need all parts ready for the integrated ECG detection device.

# Individual contributions

* Nic Dubois, Aaron Melcer, and Donathan Morgan are working towards a better design for the analog circuit.
* Seth Rickard and Keegan Mumma are now researching and working to program the microcontroller and prepare the Bluetooth device for integration.
* Ian Abbott got the app to store values in an SQL database so that they can then be displayed on a graph

# Individual hourly contribution

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| --- | --- | --- |
| **NAME**  | **Hours This Week**  | **HOURS** **Cumulative**  |
| Ian Abbott  | 4  | 50 |
| Nic Dubois  | 3  | 44  |
| Aaron Melcer  | 3  | 44  |
| Donathan Morgan  | 3  | 43  |
| Keegan Mumma  | 3  | 43  |
| Seth Rickard  | 8 | 54 |

# Comments and extended discussion

We took Prof. Gary Tuttle’s and Ben’s Sjulson advice, reducing the number of circuit components and flattening them. Now the circuit looks much better and we have dramatically reduced the random noise in circuit. Pictures from the old to new order appear respectively in the following:

