

EE / SE 492 Week 3 Status Report

Sep. 28, 2019 - Oct. 11, 2019

Group: sddec19-20

Project: Ultra-thin electronic skin for real-time health Monitoring

Advisor/Client: Liang Dong

Team Members:

Sovann Chak: Software Architect, iOS Developer

Omar El-Sherbiny: Circuit design and analysis of Sweat sensor

Justin Gordon: Software Developer, Communication research

Sungmin Kang: Circuit design and analysis of Mobility sensor

Sangwon Lee: Circuit design and analysis of ECG, DMD 3D printer

Passing Week's Accomplishments

Software Engineers

(Sovann)

- Soldered BLE Arduino to pin outs
 - Same for heartbeat sensor
- Connected the Arduino BLE to the heartbeat sensor
- Sent data via BLE arduino to rudimentary test application
- Setting up iOS BLE api
- Researching secure peripheral point for BLE

(Justin)

- Continued development of android application
- Continued research into different libraries that android provides
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Electrical Engineers

(Omar)

- Plan for R-R structure resistor-meter circuit
- Think about different kinds of circuit

(Sungmin)

- Try to cure the eco-flex in different rate (30 %, 40 % and 70 %)

- Try to put the graphene in different amounts (1 ml, 1.5 ml and 2 ml)
- Check the curing time for the eco-flex and graphene

(Sangwon)

- Graphene and eco-flex mix change
- CNT and Graphene Ratio test conductivity and flexible test.

Individual Contributions

Team Member	Contribution	Weekly Hrs	Total Hrs
Sovann	Received parts and began to assemble them into the new design.	6	75
Justin	Continued development on android app	4	68
Omar	Plan for R-R structure resistor-meter circuit Think about different kinds of circuit	6	54
Sungmin	Try to cure the different rate of eco-flex and graphene. Also, check the time for curing of each material and record it.	6	75
Sangwon	Graphene and eco-flex mix change ratio test	6	69

Plans for Next Week

- (Sovann) Begin working on iOS application
- (Sovann) Set up BLE framework on iOS

- (Sungmin) Check the conductivity after pouring CNT layer
- (Sungmin) Think about the best way for rolling the layer to make it fine
- (Sangwon) Device(sensors) test with DMM
- (Justin) Research libraries used for multiple views
- (Justin) Find implementation of graphing api for android
- (Omar) Test the circuit using Arduino-uno
- (Omar) If Arduino-uno is so big for our project, try to Arduino-nano