



BITNG LAB UPDATE

Carl Demolder

Date 3/11/2021

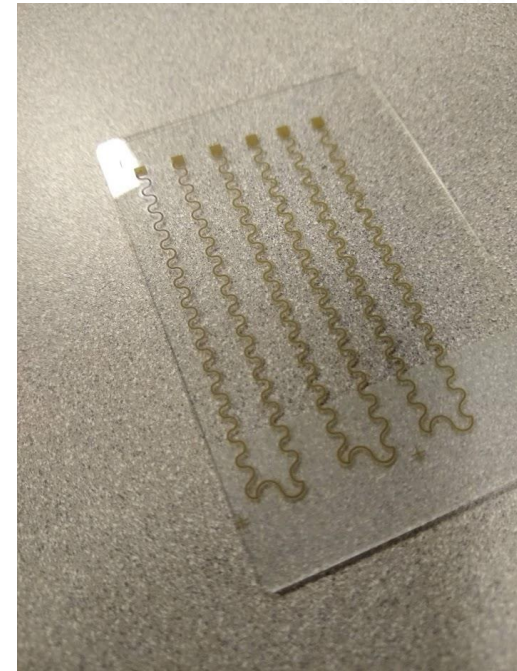
Progress from last week

- Shriner's project
 - Strain gauge
 - Firmware
 - Literature review
- LP-ECG
 - Power consumption
- Personal Schedule

SHRINER'S PROJECT

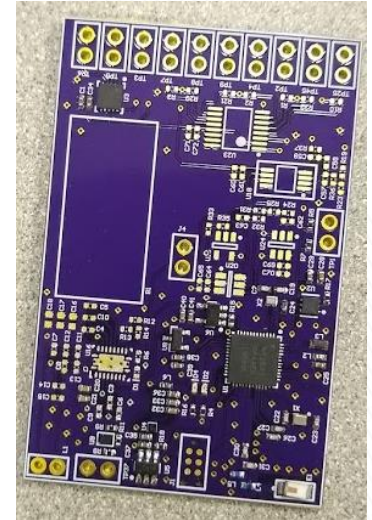
Strain Sensor: Round #8

- Sensor batch: 2/26
 - Manufacturing: Finished
 - Conductivity Test: ~600 ohms
 - ASSEMBLY: TO-DO
- Sensor batch: 3/5
 - Manufacturing: Failed
 - Uneven AgNW deposition
 - Possible clog??
 - Method to Fix:
 - Changing from 200 um nozzle to 300 um nozzle
 - Sonicating vial of AgNW
- Sensor batch: 3/12
 - Manufacturing: TO-DO



Firmware Development

- Pressure sensor Flex PCB:
 - Waiting on PCBMinions order...
 - Arrives 3/12/21
- Strain Sensor firmware (3/15 – 3/29)
 - ADG728: TO-DO
 - DAC5571: TO-DO
 - ADS1100: TO-DO



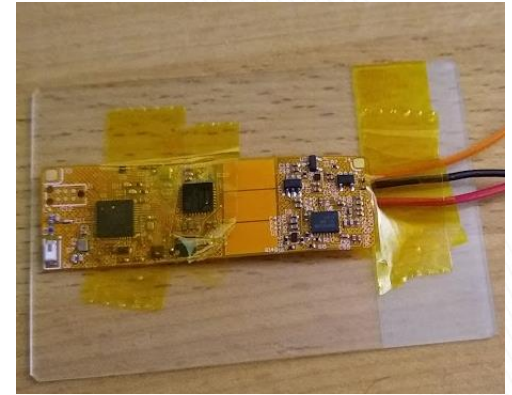
Literature review

- Pre-draft complete
- Figures complete
- Going to edit and then email initial draft

LOW POWER ECG

Power Consumption X02

- System off: 1.20 μA
- Advertising: 538 μA
- Long-term Data recording: 946 μA
 - long-term storage
 - ECG and Temperature
 - 7 Day Battery Capacity: $\sim 200 \text{ mAh}$
- BLE Data transmission: 903 μA
 - Instant data communication
 - ECG and Temperature
 - 7 Day Battery Capacity: $\sim 152 \text{ mAh}$



1908-1350-ND
170 mAh

(13.3 mm x 34.5 mm x 5.5 mm)

PATH FORWARD

Path forward (3/08/21 – 3/15/21)

- Shriner's Project:
 - Literature review
 - Pre-draft editing
 - Strain gauge, round #8

APPENDIX