



BITNG LAB UPDATE

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Date 2/25/2021

Outline

- Progress to date
- Path forward

PROGRESS TO DATE

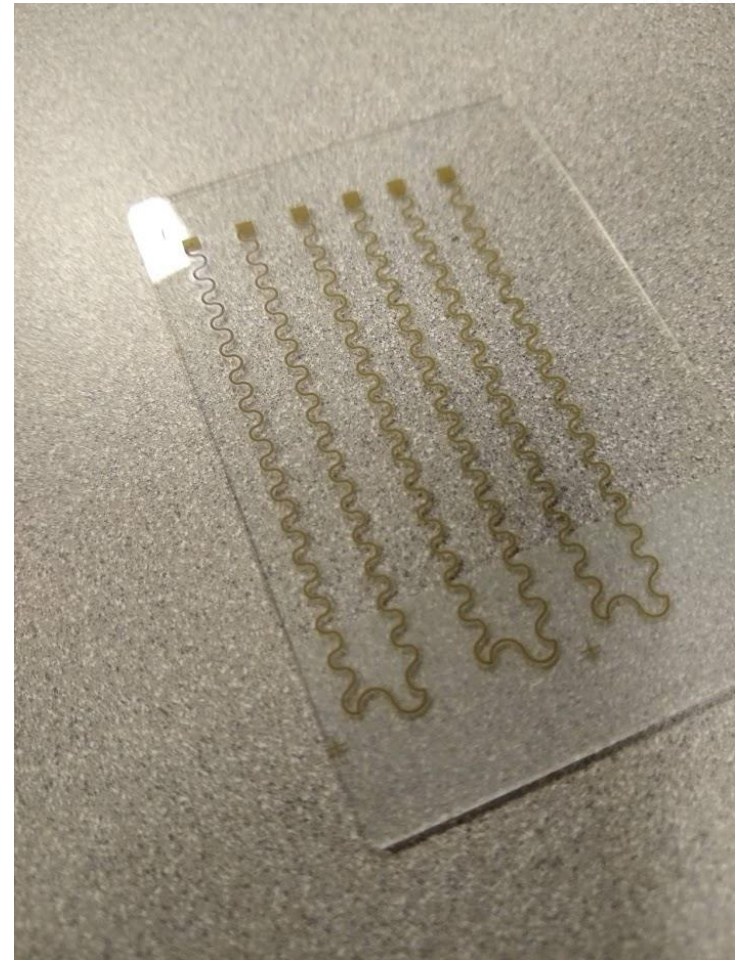
Progress from last week

- Shriner's project
 - Strain gauge
 - firmware

SHRINER'S PROJECT

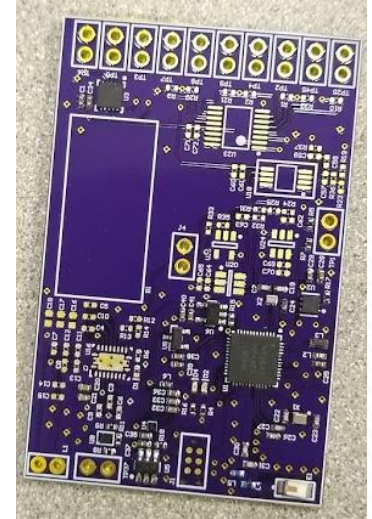
Strain Sensor: Round #6

- PDMA: Finished
- PI: Finished
- AG NW: Finished
- Conductivity Test: TO-DO
- PDMS: TO-DO
- ASSEMBLY: TO-DO
- ENCAPSULATION: TO-DO
- Characterization: TO-DO
- Conclusion
 - Less AgNW passes (5 to 3)
 - Wider PI layers
- Lab Session: Friday 2/26



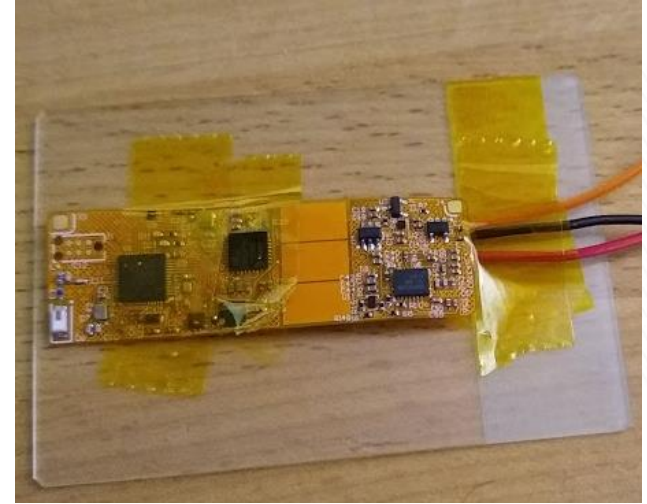
Firmware Development

- Drivers complete
- Testing & Debugging:
 - LP-ECG:
 - ~~External memory storage data transmission~~
 - ~~Power consumption measurement~~
 - Pressure Sensor:
 - ~~Testing with pressure sensor~~
 - ~~Fix function to change sampling rate~~
 - ~~Create document to detail app communication~~
 - Meet with Jihoon to encapsulate sensors



Power Consumption

- System off: 1.41 μ A
- Advertising: 1.26 mA
- Data recording: 1.44 mA
 - long-term storage
 - ECG and Temperature
 - 7 Day Battery Capacity: ~300 mAh
- BLE Data transmission: 1.67 mA
 - Instant data communication
 - ECG and Temperature
 - 7 Day Battery Capacity: ~350 mAh



PATH FORWARD

Path forward (2/22/21 – 3/01/21)

- Shriner's Project:
 - Literature review
 - Strain gauge, round #7
- Firmware development
 - ~~Pressure sensor~~
 - LP-ECG power consumption

APPENDIX