



# BITNG PROJECT UPDATE

Carl Demolder

Date 11/16/2020

# Outline

- Progress to date
- Shriner's project
- Schedule
  - Gantt Chart update
- Path forward

# PROGRESS TO DATE

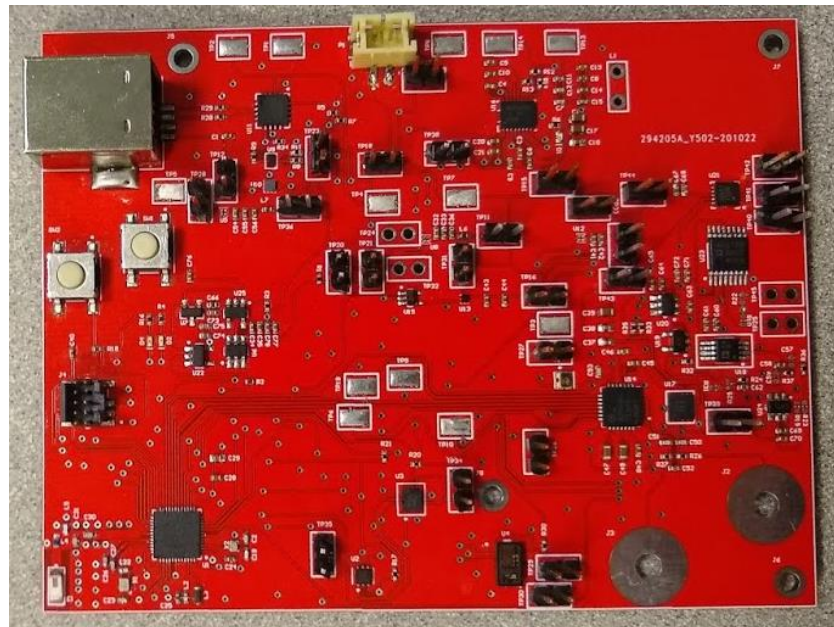
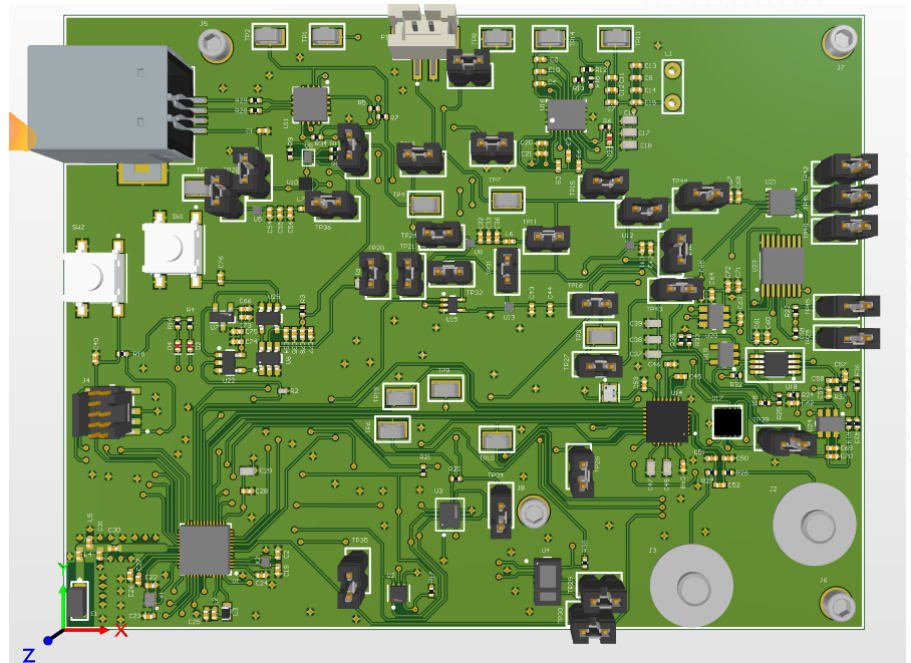
# Progress from last week

- Shriner's project
  - PCB debugging
  - Capacitance Pressure Sensor Characterization
  - Bi-Weekly meeting
- LP ECG
  - PCB debugging

# LP ECG PROJECT

# PCB design

- PCB: Arrived
- Stencil: Arrived
- Digikey: Arrived
- Assembly: Completed
- Hardware Debug: Completed
- Programming Check: TO DO



# Firmware

- ECG
  - ~~MAX30003~~
    - ~~Drivers~~
  - Optimization
- FRAM
  - CY15B108QI
    - Drivers
  - Optimization
- NRF52
  - BLE
  - Power Optimization
  - ~~RTC~~

# STRAIN SENSOR

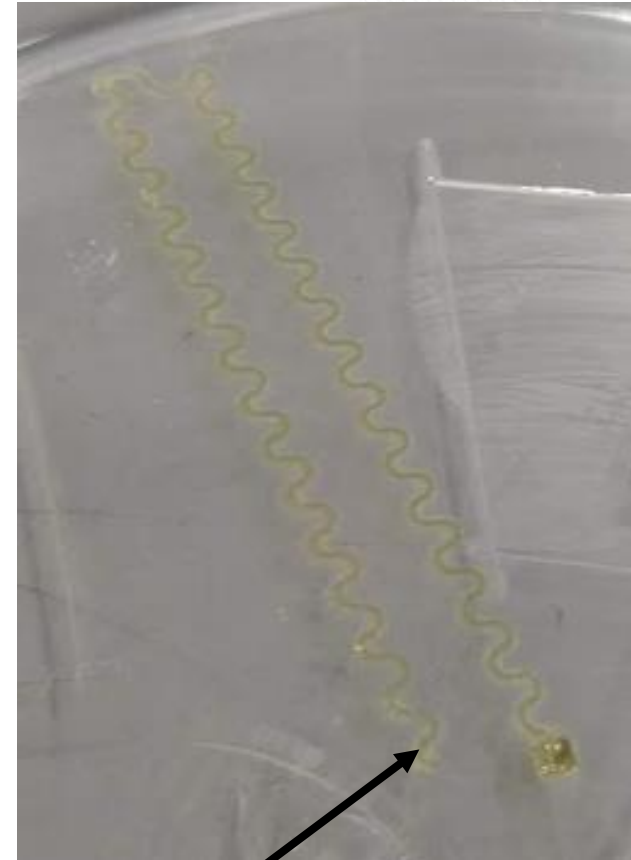


# Strain Sensor: Round #1

- PDMA: Finished
- PI: Finished
- AG NW: Finished
- PDMS: Finished
- ASSEMBLY: FAILED
- ENCAPSULATION: FAILED
- Characterization: FAILED



Not enough  
nano-wires



Broken pads

# Strain Sensor: Round #2

- PDMA: Finished
- PI: Finished
- AG NW: Finished
- Conductivity Test: TO-DO
- PDMS: TO-DO
- ASSEMBLY: TO-DO
- ENCAPSULATION: TO-DO
- Characterization: TO-DO

# PATH FORWARD

# Path forward (11/16/20 – 11/23/20)

- Shriner's Project:
  - Sensor manufacturing:
    - Strain sensors (2X)
      - Conductivity test and characterization
- LP ECG:
  - Firmware development
- Finals

# SCHEDULE

# Schedule Gantt chart

Task	11/08-11/15	11/16-11/23	11/23-11/30	11/30-12/07	12/07-12/14	12/14-12/21	12/21-12/28
LOW POWER ECG							
-PCB ASSEMBLY							
-HARDWARE DEBUGGING							
-FIRMWARE DEVELOPMENT	✕	●					
NEUROMOTOR PEDIATRIC WEARABLE							
-LITERATURE REVIEW	✕	●					
-PCB ASSEMBLY							
-HARDWARE DEBUGGING							
-FIRMWARE DEVELOPMENT	✕	●					
-PRESSURE SENSOR MANUFACTURING							
-STRAIN SENSOR MANUFACTURING	✕	●					

## LEGEND

- ✕ FINISHED
- TO-DO

# APPENDIX