



Bio-Sensor Wearable Development Board

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Date 9/03/2020

Outline

- Schedule
 - Gantt Chart update
- Progress update
 - Current progress
 - Path forward

SCHEDULE

Schedule Gantt chart

Task	6/3-8/16	8/16-8/23	8/23-8/30	8/30-9/6	9/6-9/13	9/13-9/20	9/20-9/27
ELECTRONICS DEVELOPMENT							
-SCHEMATIC GENERATION	✕						
-PCB LAYOUT AND ROUTING	✕						
-HARDWARE DEBUGGING	✕	✕	✕	●			
FIRMWARE DEVELOPMENT							
-PROJECT STACK ORGANIZATION	✕						
-SENSOR DRIVERS	✕	✕	✕				
-RTT AND SERIAL DATA LOGGING	✕	✕					
-FIRMWARE DEBUGGING	✕	✕	✕	●			
-NEUROMOTOR PEDIATRIC WEARABLE				●			

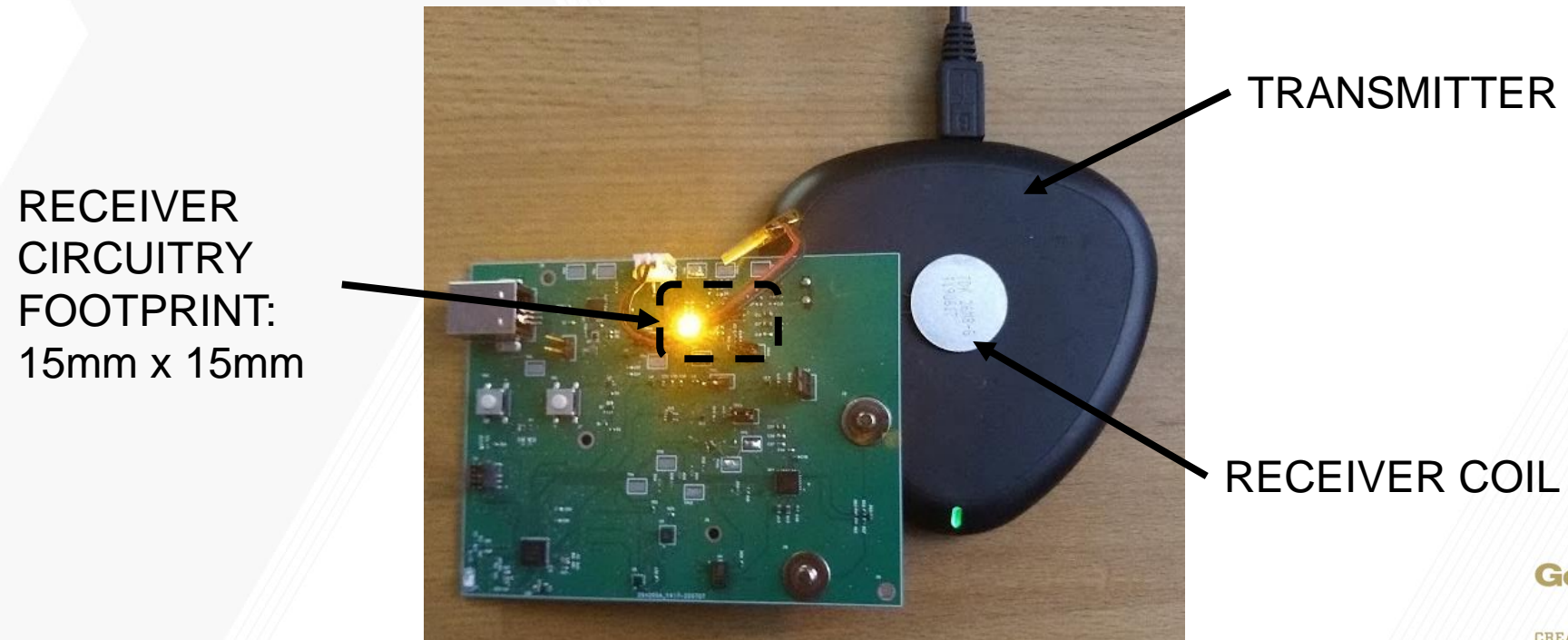
PROGRESS TO DATE

Progress from Monday

- Firmware
 - DAQ Slave driver (in progress)
- Hardware
 - Reduce wireless charging coil size [IN PROGRESS]
 - Submitted PO for RF harvesting chips [FINISHED]
- Training
 - Finish IEN training [IN PROGRESS]
- Pediatric Wearable
 - Literature review [IN PROGRESS]

Wireless charging: Inductive

- Hardware
 - Old wireless charging coil:
 - TDK 45-15F5-G (48.2mm x 32.2mm x 1.0mm)
 - Current inductive coil:
 - WR222230-26M8-G (22 mm x 22mm x 0.87 mm)



Wireless charging: RF

- RF Harvesting
 - Battery and battery-less electronics
 - 7 mA continuous @ 0.5 meter
- Companies contacted for development kit:
 - Humavox
 - Still waiting for a response
 - Energous
 - In conversation to receive 10 units of their receivers
 - Powercast
 - Digikey [PURCHASED]
 - Transmitter (TX91503 \$99.00)
 - Battery-less receiver module (P2110B \$48.33)
 - Battery charging receiver module (P1110B \$32.00)
 - Development kit (P1110-EVAL-PS \$420.00)

PATH FORWARD

Path forward (8/31/20 – 9/7/20)

- Firmware:
 - DAQ slave protocol
 - Python client for wired DAQ
 - BLE testing
- Hardware:
 - Wireless charging
 - Inductive charging: waiting for more samples
 - RF: waiting for samples
- Pediatrics Wearable:
 - Literature review
 - First biweekly meeting 9/04/20

APPENDIX