



BITNG PROJECT UPDATE

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Date 12/10/2020

Outline

- Progress to date
- LP ECG
- Schedule
 - Gantt Chart update
- Path forward

PROGRESS TO DATE

Progress from last week

- LP ECG
 - Firmware development
 - PCB layout

LP ECG PROJECT

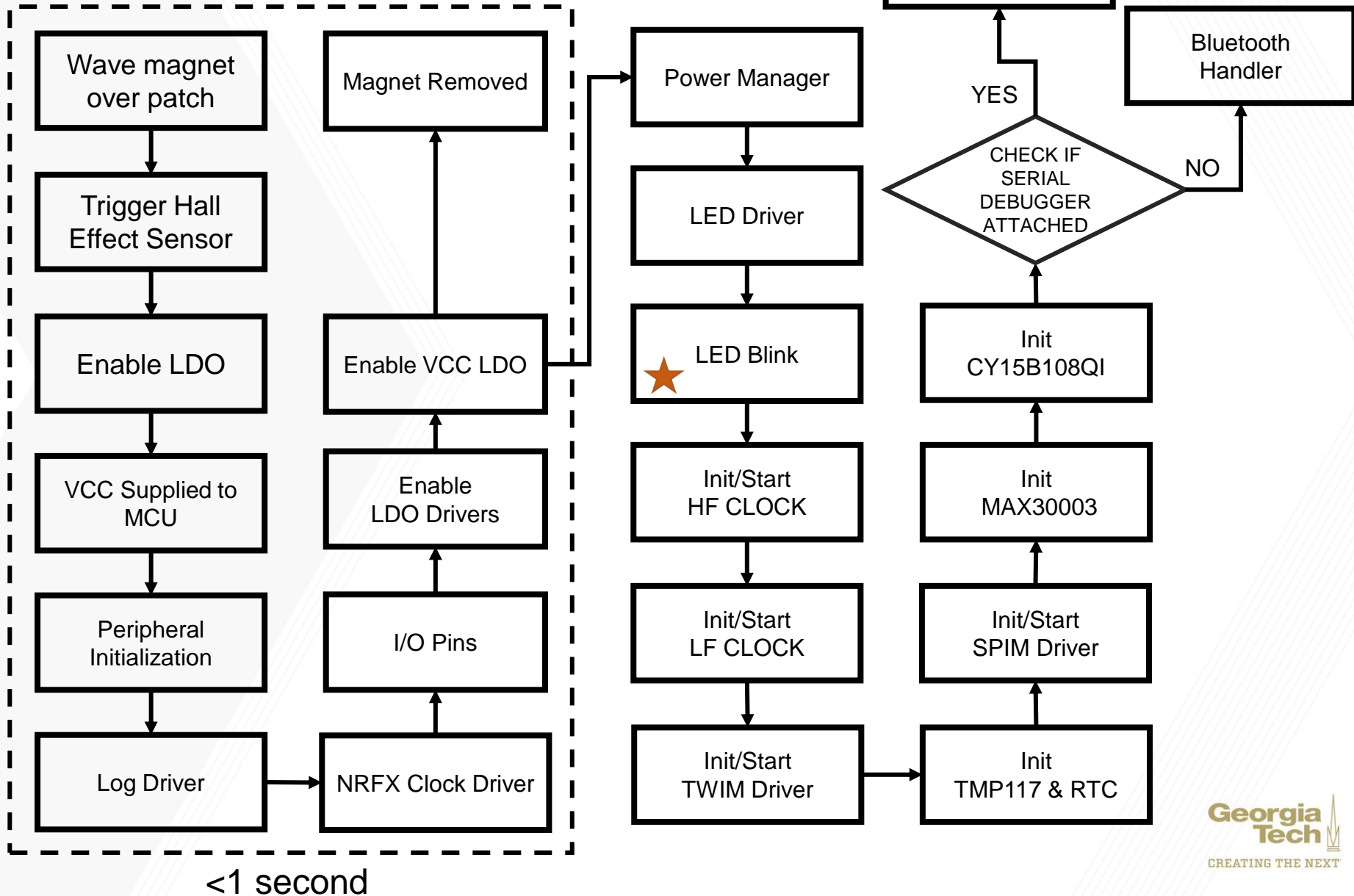
Firmware

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

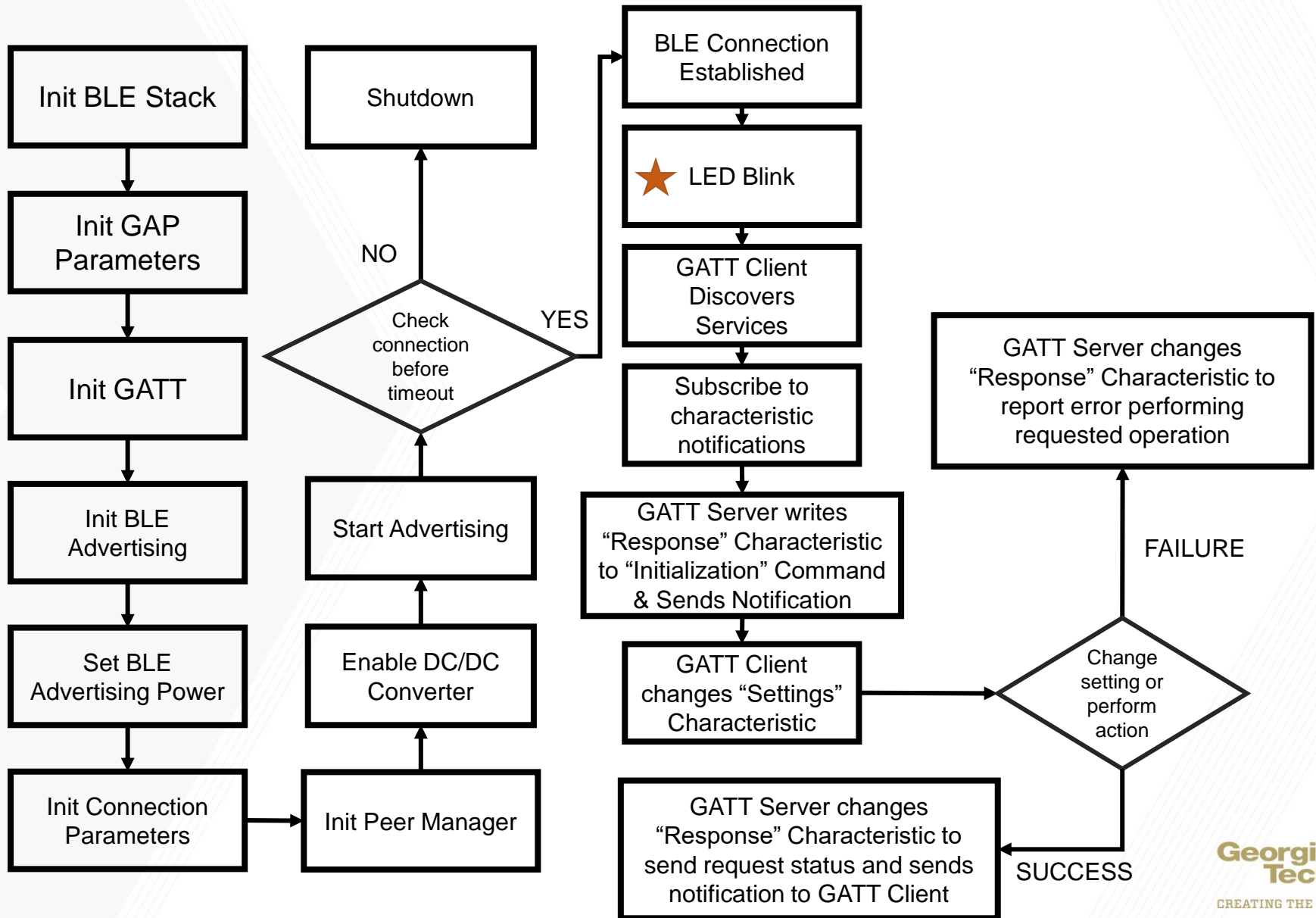
GATT Server [ECG Patch]

Service	Characteristic	Data Type	Read/Write	Notification
Configuration	Settings	uint8_t [10]	Write/Read	NO
	Response	uint8_t [2]	Read	Yes
	CRC	uint8_t [2]	Read	Yes
Temperature	Temperature	uint8_t [250]	Read	Yes
ECG	ECG	uint8_t [250]	Read	Yes

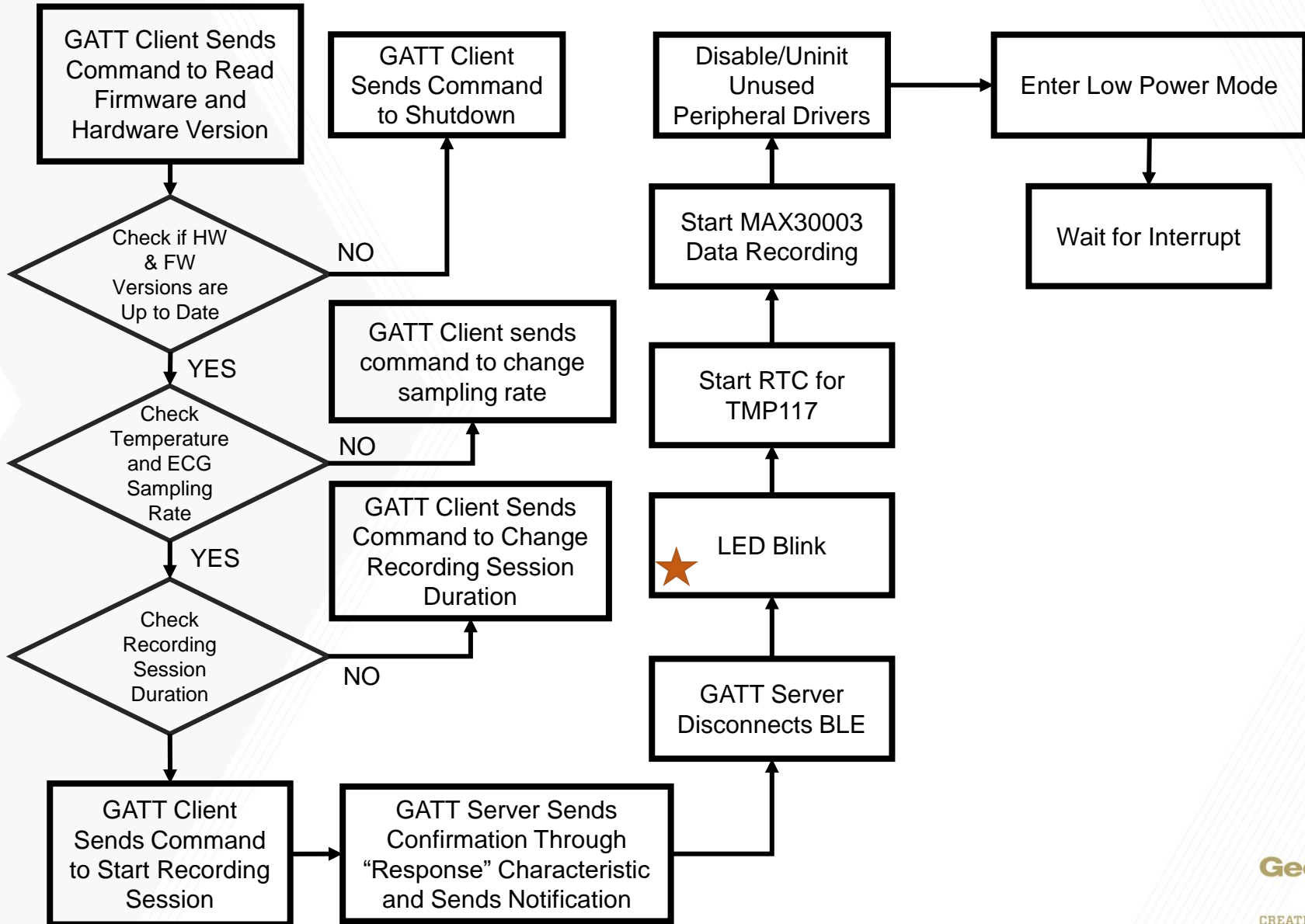
ECG Patch - Wakeup



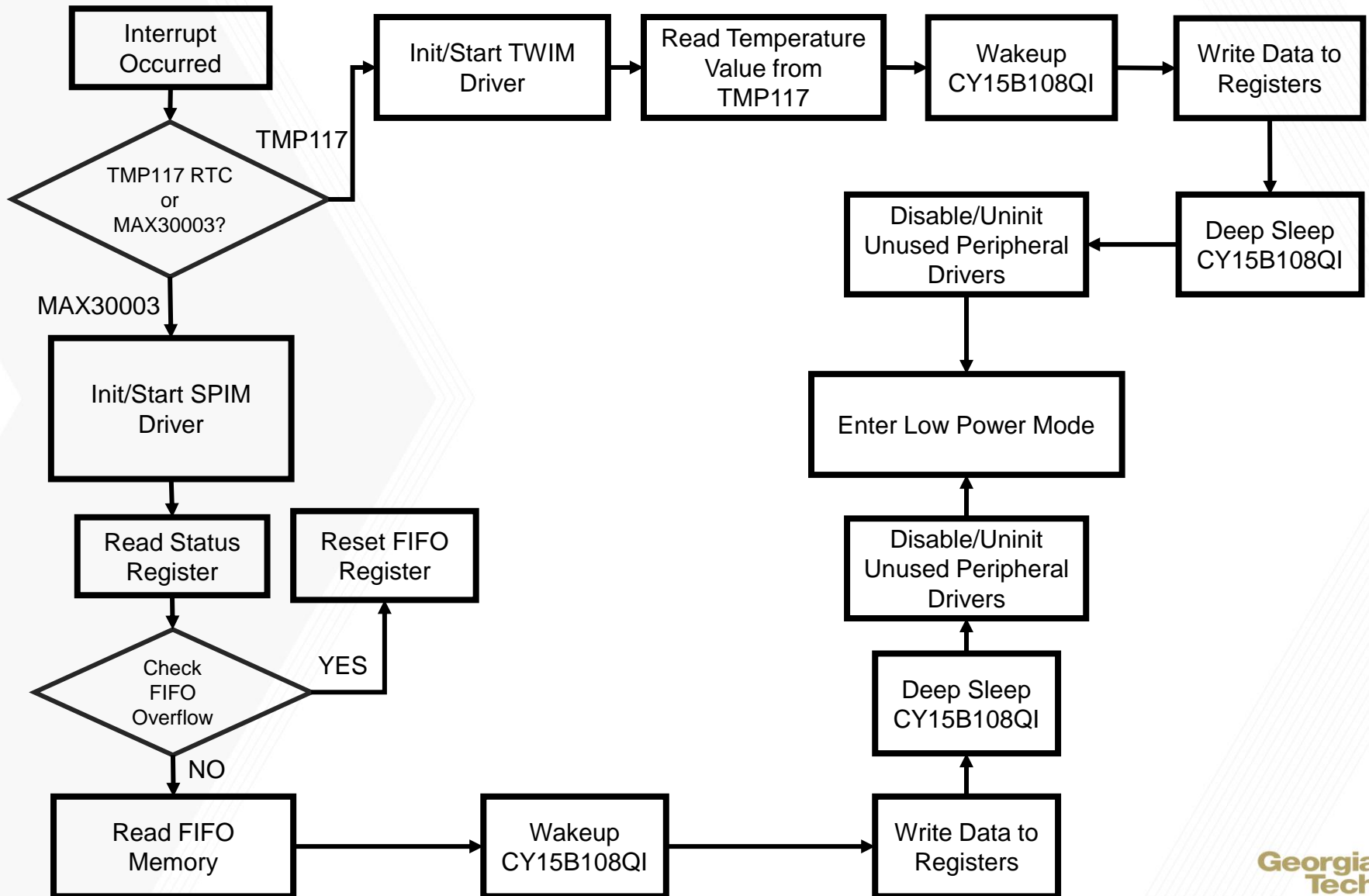
Bluetooth Handler



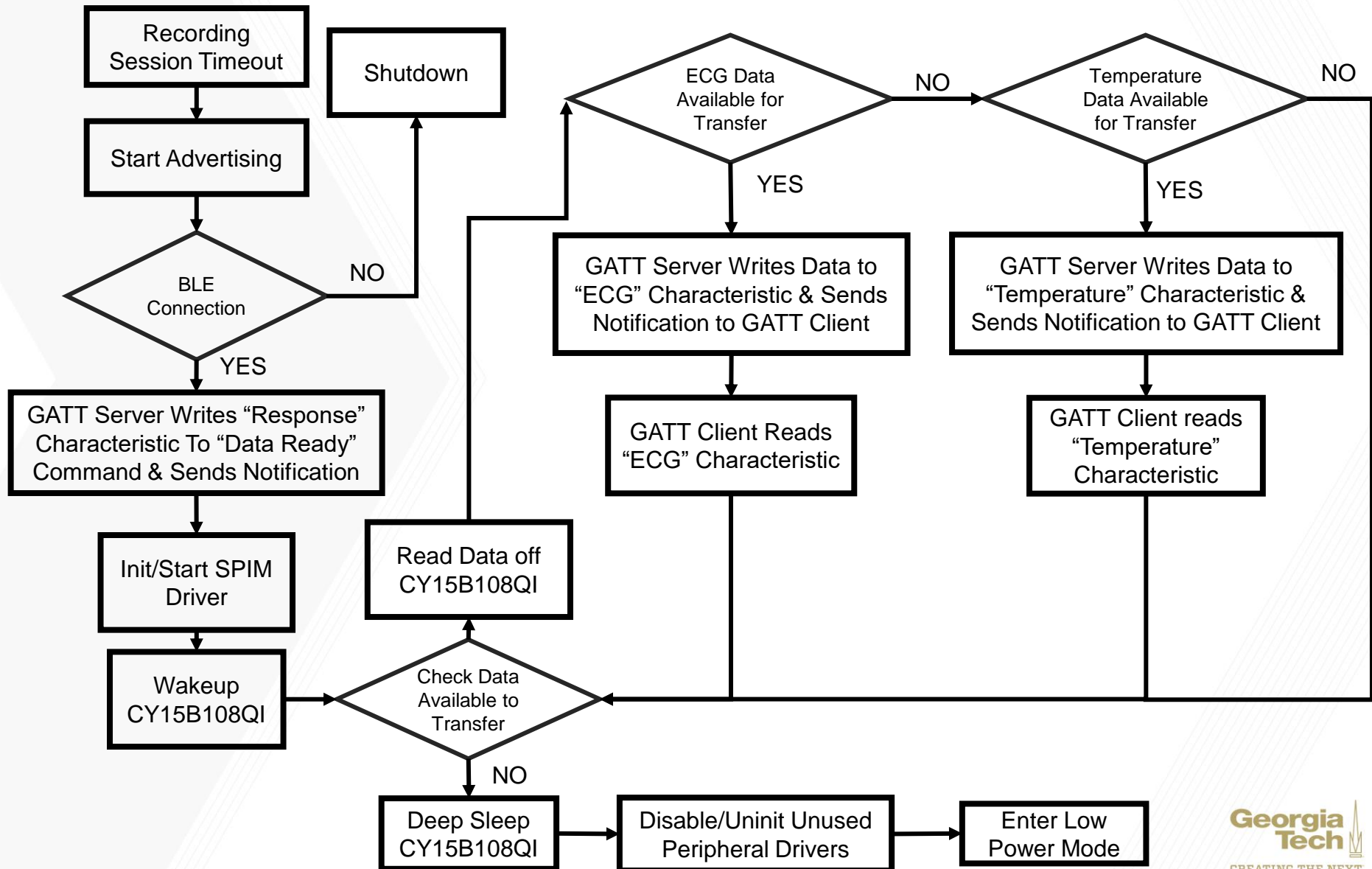
Data Recording Initialization



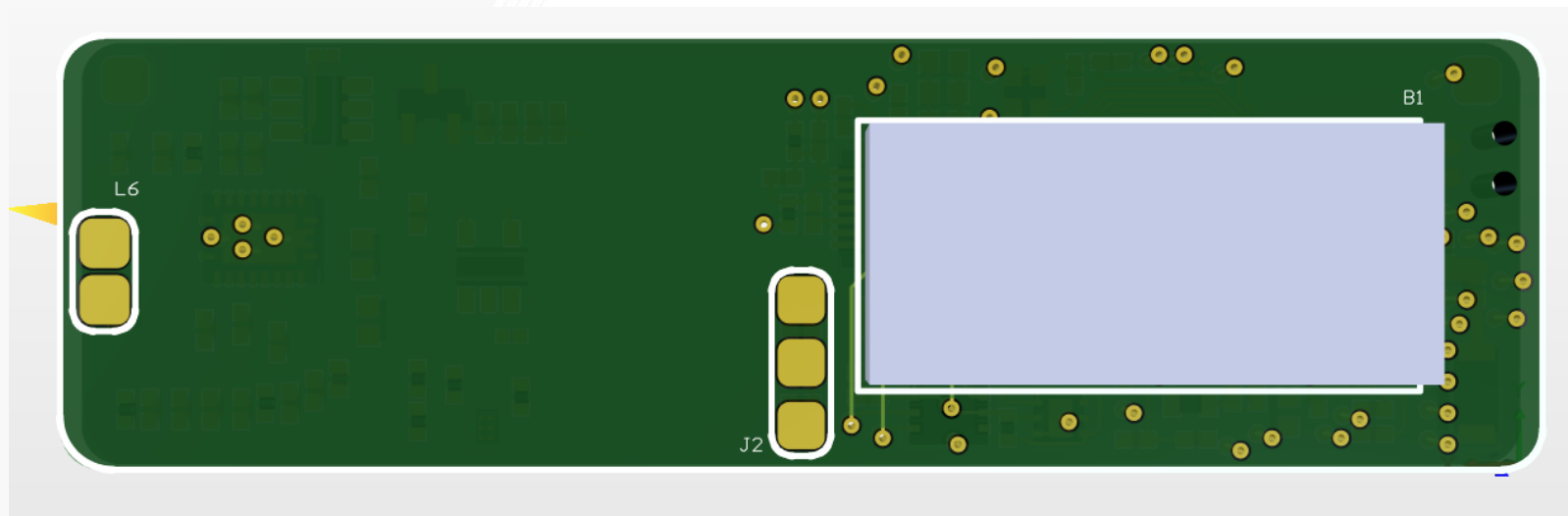
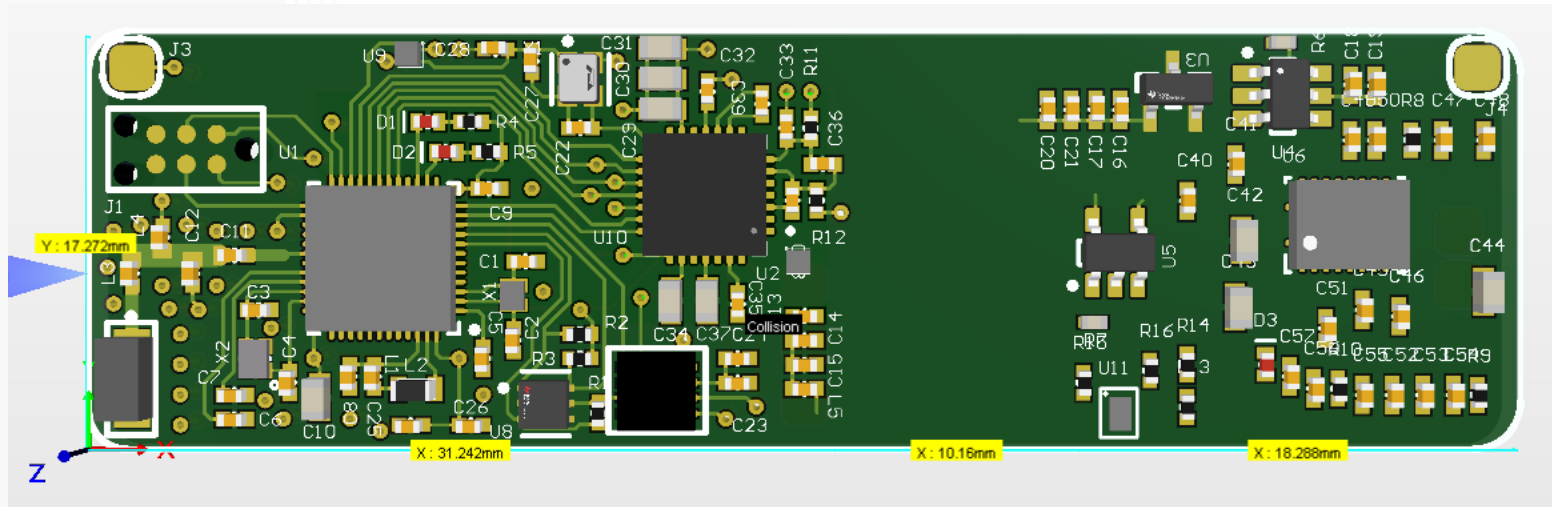
Data Interrupt



Recording Session Timeout



PCB layout



PATH FORWARD

Path forward (11/30/20 – 12/7/20)

- LP ECG:
 - Firmware development
 - Flexible PCB design
- Shriner's Project:
 - Sensor manufacturing:
 - Strain sensors (2X)
 - Trial #3

SCHEDULE

Schedule Gantt chart

Task	11/23-11/30	11/30-12/07	12/07-12/14	12/14-12/21	12/21-12/28	12/28-1/4	1/4-1/11
LOW POWER ECG							
-PCB ASSEMBLY							
-HARDWARE DEBUGGING							
-FIRMWARE DEVELOPMENT	✕	●					
-PCB DESIGN		●					
NEUROMOTOR PEDIATRIC WEARABLE							
-LITERATURE REVIEW	✕	●					
-PCB ASSEMBLY							
-HARDWARE DEBUGGING							
-FIRMWARE DEVELOPMENT							
-PRESSURE SENSOR MANUFACTURING			●				
-STRAIN SENSOR MANUFACTURING		●					

LEGEND



APPENDIX