**Subsystem 1 - Julia (9/16)**

* As a team we decided on the microcontroller and sensor we are using
  + Sensor: THERMAL IMAGE SENSOR 160HX120V
  + Microcontroller: ESP32
* Researched the viability of fiber optic cables to transfer data, not viable
* Researched how to encase the sensor and accompanying pcb, so the switchgear can pass the dielectric test.
  + A thin plastic material should work as it won’t interfere with the thermal sensor and isn’t metal
* Requested Altium access -> gained Altium access
* Created the github repository
* Researched possible power supplies, need at least 3.1 volts to power chosen sensor
  + GB20S05K01 - AC/DC CONVERTER 5V 15W ($8)
  + IRM-15-5 - Enclosed AC DC Converters 1 Output 5V 3A 85 ~ 305 VAC, 120 ~ 430 VDC Input ($9.28)
  + PAAM15-10 - Enclosed AC DC Converters 1 Output 5V 3A 90 ~ 264 VAC, 120 ~ 370 VDC Input ($20.59)
  + All three meet voltage requirements, PAAM has the best temperature rating with a max operating temp of 80 C, the other two have a max of 70 C.
    - Over double the price might not be worth only a 10 degree increase
* Researched how to plot a heatmap on matlab
  + https://www.mathworks.com/help/bioinfo/ref/heatmap.view.html
* Plan to order parts this week, so we can begin testing asap
* Set up Altium and start the subsystem project, goal is to finish
* For demo: Uart-usb then process in matlab

**Subsystem 2-v**

**Subsystem 3-Erica (9/16)**

* Started Researching website developments and built basic html layout that shows the video streaming feed
  + It currently displays an empty video and drop down to view different switchgear #’s
* Researching API for fetching videos
* Brainstorming new website features to be implemented:

Next steps:

* Make it look nice, put in powell colors/font
* Have login screen to input employee ID (requires database)
* Have search for switchgear serial code, once it pulls up it will display adjacent switchgears in drop down format (so operator does not have to retype code for switchgear right next to the original one)

**9/23 Erica**

* Completed Subsystem Introduction Project
* Continued working on Website UI design
* Met with company to discuss project requirements
* Started working on FSR and ICD

**Blake (9/16)**

\* Dev microcontroller has been received

\* Looking into frameworks and methods of ML to use

\* Will probably use TensorFlow to identify the switch and use my own pixel math to determine if the switch is open or closed.

\* More recently started on intro project