

# LAFAYETTE COLLEGE

*Electric Formula SAE 2019-2020*

Easton, Pennsylvania 18042-1775

## **FSAE Electric Formula Car Minutes – 3:10, AEC 429, November 25, 2019**

### **Firmware**

- Worked on CAN communication with the Raspberry Pis
- Then added ESP32 with transceiver
- Leah needs to get data from CAN onto the display
- Simone and Clement are going to combine their code and try to get data from SCADA

### **SCADA**

- Offline website is loading from a database
- Still in early stages, but working (Good job Dwayne!!!)

### **TSI**

- Firmware: need to make some changes based on some confusion about a voltage rating
- Boards: changed power supply for some signals, has been tested
- Accidentally burned a component, so waiting on a new order
- Cooling: schematic has been created, new parts have been ordered (adapters, quick disconnect, tubes)

### **TSV**

- PacMan board and parts ordered, most in by Wednesday
- Jon will start soldering on Sunday, if the parts are in
- Got parts on a CellMan board, want to start testing it tonight
- Mechanical side got a lot of parts in, want to have a prototype built by the end of next week

### **GLV**

- Finished board last week
- Now running tests on it
- Need to hook up to SCADA, but has passed every other test (maybe done before break? But some connectors on new board don't match old)
- Remaking the interconnectivity document based on the CarMan design review

## **Interconnect**

- Jon and Maureen want to work on an enclosure design for the cockpit, looking for some MechE help
- Maureen ordered connectors for motor controller to CarMan
- Need to update dyno room diagram based on new cooling system

## **CarMan**

- Design review on Tuesday, now adding more detail
- Another design review tomorrow (11/26)

## **Chassis**

- Designed a new battery box, bigger than the original
- Needed to be redesigned because the clearance with the wheels was not rules compliant
- Parts (tubes) are in to Rob now, hoping he has time over break to make those
- Front suspension pickup points are partially done, need to do the rest
- Need to make a couple changes to the dashboard design
- Emailed the judges about the design for the cockpit, they said the design was ok

## **Drivetrain**

- Submitted drawings for the motor shaft, will need to revise based on comments
- Purchase order put in for the sprocket and chain
- Assembly for drivetrain has a lot of issues, fixing them with Prof Helm
- Motor mount needs to be fixed, the gap is too close
- Cooling pipes that go into the motor need strain relief

## **Suspension**

- Started to mock-up the pickup points
- Worked on the battery box issue
- Worked on making the pickup points square on both sides
- Need to have 3 people in the shop to work on this, they are looking for help

## **Pedals**

- Started designing the mount for the master cylinders

## **Management**

- Need to do a design review next week, after break

## **Other Notes:**

- Talk at 3pm tomorrow during lab
- 3 weeks until rolling chassis
- Reallocated budget from drivetrain to cooling
- Chassis budget seems off, we'll work on fixing the budget