

LAFAYETTE COLLEGE

Electric Formula SAE 2020-21

Easton, Pennsylvania 18042-1775

FSAE Electric Formula Car Meeting Minutes – 3:10, Zoom, September 28, 2020

Checkin

Battery packs

ECE

- Goal was to complete wiring diagram, (Incomplete)
 - Nad → Diagram is important, going to take a lot of work, show it to him so he can help
- Completed Overall battery schematic (Incomplete)

MECHE

- Reached out to alumni → purchased everything to make final prototype packs,
- Need to reach out to inventory
- Come to ECE 400? (reach out to nad about the components that are all in one room)

Carman

TSI/GLV

- Working on Carman Diagram

- TSI worked with GLV took a look at the functions on each board/carman as a whole
 - Boards need to be redesigned but, want the functions to be the same
- Finished testing current TSI board → hence why we need new ones
 - Nad → Do you think you are starting to understand the functions and their implementations or are there still confusions → Just cooling (lacking documentation) → ask Nad for insight on cooling

Dashboard

- Pre-design review meeting → software system design → trying to minimize wires by using SCADA as an intermediate point
- NAD → There was some discussion about dashboard taking on side panels, buttons and lights on the cars → Side panels are similar to cockpit stuff so there yes, However need to discuss with TSI and come to a conclusion

Drivetrain & Cooling

- Cooling side got constraints from frame design review, so pieces can be mocked up in inventor.
- Understanding about how the system works (with carman)

Drive Train

- Good design review → final design review w/ more in depth look at how parts interface by friday
- Need to order some parts (purchase order should be in before wednesday)

Frame

- Rear chassis is published
- Cockpit work has begun
 - Seat

- Harness
- Firewall
- Meeting with helm on Tuesday to see where to go forward
- Structural Eq spreadsheet is on the horizon

Interconnect

- Top level System Diagram done
- Cable Workbench underway

SCADA

- IMU → raspberry PI
 - Can pull data,
 - Real time clock sync issues
 - GUI being developed to allow users to configure sensors
 - SSH into Dyno room, see real time CAN data
 - NAD → demo next week?

Steering, Suspension, Braking

- Went off frame design review (rear suspension)
 - No more interference with other systems
 - Updated in inventor
 - Optimum Kinematics underway
 - Helm → New shocks? (there are not a lot of marking on the shocks so they are hard to identify) → If we can get by with regular shocks instead of p shocks we can buy new ones

Management

- TD002
- System Engineer check ins (100% attendance)

Dyno Room

- Computer access setup
- Display to pi with camera aimed at it so ppl can see display
- Pit power setup to run car
 - Old one is falling apart → new one almost complete
- Want to work on Throttle controller

Questions

- CATME Survey → shows progression of how the car will come together throughout the project

UPCOMING DELIVERABLES

Structural Eq Spreadsheet

- Doc upload on website

Old ESF from the past has errors in it. Get Profs to look over any deliverable before submission.

Extra Thoughts

When are the T-shirts going to be available?

- A nice logo “would be good” → Leopard with a lightning bolt is NAD’s fantasy
- Helm wants Polos?
- Dickie work shirts were made one year

Comp going virtual

- Goals are the same

- It increases our chances of building the car
- There was a virtual “Check” in 2018 it was comprehensive

Whats the workflow transition if we are not on campus

- Right now the plan is we are on Campus during the spring semester