



Colorado State University

Team: Emulation of Aerospace Actuation Systems

Date: 12/2/2021

Attendance:

☒ Whole Team Present

☐ Members Missing

Meeting:

☐ PDR

☐ CDR

Missing Senior Design Students, if any:

[Click or tap here to enter text.](#)

EiR Mentor: Matt Heath

EiR Signature: *Matt Heath*

EiR mentor's recommendation for future steps:

(to be filled-in by mentor) – continue writing/typing on the back, if needed

Work is on track for mid-year deliverables.

Requirements:

- Develop requirements for GUI (interface) between user and HIL system
 - What needs to be annunciated for information (Alarms, Signal etc.)
 - What user inputs need to be modified from the GUI.
- Develop compliance matrix
 - What are the verification methods (Test, Analysis, etc.)?
 - How are you going to show compliance to “customer” (Test Report, Analysis Report, etc.)?

Design

- Research PI control
- Implement PI controller into HIL system.

Verification:

- Isolate noise source; verify the noise signal is in the acceptable range for Signal to Noise ratio.
- Look at filter (Software or hardware) if needed.
 - Can this be completed by changing the sampling philosophy.

Tell us what you think about the meeting:

- Overall, very useful checkin meeting.
- Matt suggested that we solve the noise problem in our TI output by adjusting the sampling rate.
- Matt also suggested that we add requirements for the GUI and interfaces between software/hardware. These requirements have been started but need to be refined now that the relationship is better understood.
- We need to adjust our code so that we don't have to manually hard-code values for specific parameters. This will help us establish the GUI.
- Need to review how to use LabView, download in advance of next semester and iron out any errors. Review the PXI interface and how to work with that for development of the GUI.
- Investigate compliance matrices from the powerpoint that Jayesh sent with Woodward's current standards and if there are any questions, talk to Matt.
- Matt is a great resource and we are on track for next semester. We just need to spend a little bit of time before break getting ready for next semester's developments.