

Meeting Minutes: 360 Designs - #14

Call to order

A meeting of 360 Designs was held in Dr. Beyerlein's office on 1/23/2020. Attendees included Tanner Sloan, Mark Jennings, Jake Metter, Max, Philip and Dr. Beyerlein.

Agenda

1. Call to Order
2. PowerPoint
 - a. Revised Schedule and Project Expectations
 - b. Coding Update
 - c. Hardware update
 - d. Visit EPC rescheduling

Reports

- We are going to shoot for 2 solid, finished designs to have for Expo.
- Mark and Phil have worked to produce a pulse signal which will be used to drive motors.

Unfinished business

- N/A

New Business

- Need to voltage divide down to 5 volts in order for stepper motor to read
 - Can buy a potentiometer to decrease voltage
 - Do we need the ability to modify our voltage or have an exact resistance that will modify our voltage to exactly 5V?
 - Could potentially purchase a stepper that can accept 9V
 - We're hoping to have a finalized design that we can present in February.
- Microstepping

- Once Mark has stepper working, Tanner and Jake will work with the feedback system to measure microstepping.
- Lets see if theres enough torque to microstep. If not, switch over to a servo or “beef up” our stepper.
- Check out Nick and Trevin’s flowchart.
- Repeatability concerns
 - We will likely have limitations as far as how accurate we can provide repeatable results. May not hit full resolution capabilities of the 58TP.

Announcements

- Goals for next week:
 - Jake and Tanner: Finish mounting plates and rack to the linear actuator.
 - Finish power output modifications to the stepper to allow us to begin testing, or decide what new hardware we need.
- Goals for before next Webex meeting in two weeks:
 - Create a model to share with EPC on our finalized bracket/plate mounting.
 - Create models that can show all of our success routine ideas/mounting, EPC logo laser engraving on toplate, etc.
 - Get stepper working as fast/slow in whatever direction is desired.
 - Stretch goal: get encoder to read an input.
- From Trevin: don’t rush this display. If it is the only one we get done by May, its ok. Focus on creating a quality product.

Adjournment

The meeting was adjourned.

Tanner Sloan - 1/21/2020

Secretary