**LAYOUT**

**TEAM MEETING**

***Cameron,*** *Diogo, Jose, Samuel, Yujui, Lio*

## Notes from meetings throughout the week

| **No.** | **Agenda and Minutes** | **Actions needed** |
| --- | --- | --- |
| **1/25** | 1DOF:   1. Mini-Design review    1. Talk about what materials to use    2. Belt size?    3. Belt tensioning included in device? 2. Discuss block diagram    1. Decide Motor Controller    2. Decide Controller 3. Discuss Motor 4. Decide parts to order 5. Do we need tensioning   Want to use arduino controller? Look into it more  Want to use ODrive controller.  Electromagnet w/ 10/32 holes, will have 24 volts same as ODrive Controller?  Talk about manufacturing  Mechanism:  Narrow down to 3 types of plausible designs: Cable bot, gantry, open/closed linkage | * Ray will decide Motor * Cam will research microcontrollers * Decide Encoder and Motor by Wednesday. * Order Everything Wednesday/Thursday * Then Lio will finish first version of design by Friday |
| **1/26**  **(Profs)** | Ray did motor research, Cam did encoder research  **Meeting With Profs**  **1DOF:**   * Add MC to block diagram * Motor Calculations * Talked to bill about what motor to Use * Talked about what controller to use * Doing research on ordering and sourcing components * Decided to use Ender3 Gantry to ease design headaches * Decided to use Arduino   **Mechanism**   * Talk about using gantry system from 3D printer * Incentive to make low fidelity prototypes of key ideas to test their envelope and the feeling of inertia and friction at different points * Make a more detailed list of key ideas and things we want to test out - use it to plan out next iterations and prototypes | * Finish up week 1 assignment: change block diagram, and add in part about Ender3(Cam) * Finish and Submit Week 2 assn.(Ray) * Aquire Ender3 Gantry from Bill(Cam) * Send stuff to Order from Jose * Redesign to Use Ender3 Gantry(Lio) * Order Motor, MicroController,ElectroMagnet(Cam) * Construct Simple linkage prototype(Sam and Jose) * Acquire/take apart 3D printer(Diogo) |

## Prepping Meeting with Professors

### 1DOF

Check over design-thoughts?

Check over block diagrams

Can we order from Misumi?

Do we need PID in control loop?

### Mechanism

Present 3 key types of ideas: Cable bot, 2DOF robot arm, and gantry system

## Notes From Meeting with Professors

### Questions

Newark Stocks Maxon

Use Ender3 Carriage instead of our own?

GM42BLFZ

59-210 to 240

NEMA 17 42MM HIGH TORQUE BRUSHLESS DC MOTOR

Ender 3 -pickup in A277

### Advice

Design looks good

Need to spend some time picking motor

### Plan going forward

1DOF team

Major Goal: Have physical system done/almost completed by end of next week.

Use ender3 gantry rather than custom-can always pivot back

Use similar size motor as drop-in replacement for Ender3 motor

Can potentially snag power supply from ender3

3DOF team

-Construct prototype of open/closed link robot arms

-Simple 2D prototype out of cardboard/acrylic

-construct gantry system prototype and investigate feeling sliding mechanism

-Slider bears have a lot of friction that be greatly detrimental to a gantry system in haptics

-Cable bot prototype?

## 

## POST MEETING

### 1DOF

Can we use Odrive with brushless servo motors?

Do we need to order Arduino?

### Mechanism

-Constructed 4-linkage prototype out of acrylic to investigate singularities and configuration space

-took apart a 3D printer to create a prototype of a gantry system and get a feel for inertia/friction