**Week 11**

**TEAM MEETING**

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

## Notes from meetings throughout the week

| **No.** | **Agenda and Minutes** | **Actions needed** |
| --- | --- | --- |
| 2/28 |  |  |
| 3/1 |  |  |
| 3/2 |  |  |
| 3/3 |  |  |
| 3/4 | On Friday, we discovered that a magnet hovering above the screen will not actually register as a touch, which will be important moving forward for magnet design |  |

## General Thoughts

Manufacturing: 2 people->Cam, Sam

Magnet coupling: 2 people->Diogo, Jose

* Decide what we want to measure
* Figure how we will measure it
* Full air bearing setup
* Improve user experience

Electronics: 1 person->Ray

Embedded code: 1 person ->Lio

10 Week Plan

Need to decide who is doing what, come back tomorrow with presentation

redesign

Send billie mcmaster carr order this week

Demo air bearing tomorrow

1st figure what we need to measure and how it would helps us

2nd figure the measuring means

Free motion - probably the hardest one to measure

Virtual wall (weights over a pulley to apply more and more force)

Design Plans:

* Reduce the thickness of link 3(?)
* Eliminate the long shaft by flipping a motor
* Design a place for limit switches
* Add shaft collars/snap rings/ something to hold the shafts
* Put a magnet into the design and think about how to swap stuff out
  + Plan: Use a delrin bushing permanently mounted in arms
* Change the feet of the 8020

Jose

Cam

Sam

# Meeting with Professors

## 

**Embedded**

* At what point will kinematics be implemented in C?
* Need to be able to command a force at the end effector and be able to deliver that
* What will be our haptic test? A circular wall? Move Robot to location of a button or a volume slider that you get constrained to once you are there? Can we produce a click - probably not something we want?
* Code with the test in mind

**Electronics**



**Magnet**

* The air bearing doesn't seem to be useful
* We need to find lateral forces - if we measure the force to move laterally when the arm is free; also when the arm is fixed what is the force displacement characteristic look like
* To make these 2 measurements - we can apply forces and use the touch screen to measure how the magnet moves - cable and over pulley w weights (add on weights aka keep on increasing the weights until it slips)
* We need to figure quickly if we can match magnet movement with touch screen
* We need these measurements to determine what is the best solution and move on
* Maybe try different spacing heights
* What are the best practices in an air bearing design - what are the avenues for optimization? Also do an air bering with the strong magnets
* Maybe we should get a center metal air bearing and just try it

**Manufacturing**

* If we are using keys they need to be fitted really nicely (tap in)