

NEUROTOUCH MEETING MINUTES

20 October 2016

Instructor Meeting

Attendance:

Team:

1. Brendan Souvenir
2. Christina Gibbs
3. Brooke Deans
4. Matt Harlow
5. Mazen Aljawi

Instructor: Dev Shrestha

Client: Mike Maughan

Start Time: 4:00 PM

Location: GJ 108

CURRENT BUSINESS

1. Balluff Meeting yesterday overview.
 - a. Decided on Ultrasound Sensor
2. Brooke presented new model design.
 - a. End effector decided on 1 cm in radius
 - b. Decided to add threading on end for a screw on cap to act as a protector
3. Problem
 - a. Dev identified issue if indentation spreads to the area the US is sensing.
 - i. Christina noted that it would show up in numerical measurements that surface being measured would begin to move away.
 - ii. If this happens we will need to make a whole new model. Cross that bridge when we get there.
 - b. Temperature considerations if load cell is working too hard?
 - i. Not likely. But will deal with that issue when arises.
 - c. Angle effects
 - i. Christina said that we can measure error with device to see if negligible or not.
 - ii. Dev suggests calculating with FBD
 - d. Friction on rod
 - i. Add bearings or narrow of material to hold rod in place with minimal friction.
 - ii. Calculations can be made to find out how much friction is taking away from measurements and coding can calibrate for it.
 - e. How to make sure user doesn't poke too much into brain?
 - i. Brooke noted how user may not realize if too much indentation with sensor because of no visualization

- ii. Can use US sensor to make a noise or utilize light that is already on the sensor to tell user once reached 10% of radius.
4. End Effector material
 - a. Metal Balls-Christina will go to Moscow Building Supply

FUTURE BUSINESS

1. Mazen: Get force resistance sensor from Dev and give to Brendan or Christina.
2. Brendan and Christina will start coding in Arduino
3. Brooke will look up dimensions of amplification cone and incorporate into design.
 - a. Also check for hole in design
4. Matt and Mazen- 3D print housing.
5. All need to get shop training.

Meeting Adjourned: 5:30 PM