Meeting Minutes

Leader: Kelsey
Note Taker: Elizabeth

1. Microcontroller and User Interface: Sarah and Kelsey
   a. Price breakdown
      - Determining if we need to buy resistors/capacitors- see website for list of common parts. Standard resistor 0805 (surface mount) kit is also stocked.
   b. Action items completed
      - Pin assignments and parts (with prices)
        o Comment: might be able to get free samples of microcontrollers- register for samples on the website
      - UI design- LCD screen?
        o Already have LED indicator lights
        o LCD screen could be useful for debugging.
   c. Questions/concerns about any setbacks
      - How to use part not listed in library?
        o Look in other Eagle libraries
        o If part not found, look for other parts with the same footprint
      - How to connect limit switches?
        o Look for case mount or panel mount parts
        o Also consider non-mechanical alternatives (i.e. phototransistor and LED set, 'photointerrupter'). Less bouncing, noise, etc.
   d. This week's action items
      - Order parts, write software
      - Board design
2. Power and XY Plotter- Tim and Elizabeth
   a. Price breakdown
   b. Action items completed
      - Frame design updates- parts selected
      - Motion design updates- parts selected
   c. Questions/concerns about any setbacks
   d. This week's action items
      - Power supply system
        o Wall plug- 5A.
          a. Check if this is regulated (must make sure we don't exceed max for the smaller regulators)

     b. What happens if we try to draw too much current? Do we need circuitry to prevent this from happening?
- 1. As power supply approaches current limit, voltage drops off, so motors will probably just run slower.
- 2. Could limit current with a MOSFET (voltage-controlled current source).
- 3. But probably won't be too much of an issue
   o How do we prove that power system works for design review?
- a. Measure actual stall currents, ensure that worst case is not more than 5A.

- H-bridge/motor controller
  - o Bridge will most likely have max pwm frequency
- Motion design

3. Other questions/concerns: All
  a. Agenda/Meeting minutes on website?
- Yes- this becomes final documentation.