Meeting Minutes

Leader: Kelsey
Note Taker: Elizabeth

1. Review status of parts ordered: All
   a. Any parts we are waiting on?
      - Carriage from Amazon has not been ordered- complications with tax, order from McMaster-Carr instead
2. Feedback from Design Review 1
   a. Concerns about power on one side
      - Working on 2-sided power design
   b. Concerns about ability of 6V motor to supply needed torque (especially after voltage drop across bridge)
      - Voltage drop issue has been resolved- motor now receives 5V
      - Should experiment with motor's response to load
3. Power and XY Plotter: Tim and Elizabeth
   a. Update: last week's action items
      - Second axis of motion?
         o Waiting on carriage.
   b. Questions/concerns
      - Powering both sides of long axis
         o Design: use motor to power a shaft that can turn both pulleys
         o Order parts: Gears, extra pulley, extra belt, shaft
            a. 3-foot shaft for $17 vs 12-ft shaft for $2?
               1. Don't buy 12-ft piece
   c. This week's action items
      - Order parts for 2-sided power
4. Microcontroller and User Interface: Sarah and Kelsey
   a. Update: last week's action items
      - Software
         o Limit switch, speed control, and up-down motion
            a. PWM now works with joystick- speed linearly scales with joystick motion
               1. Not too much motion needed before motor starts
               2. Going from full forward to full reverse does not cause problems
   b. Software for limit switches implemented

   c. Button for up-down motion implemented, lighting up an LED
- UI Mockup
  - Discussed panel mount components for UI. Connectors on board for UI components.
- Board/schematic design
  - Schematic mostly finished, just a few parts remaining
  - Begin routing this week

 b. Questions/concerns
- LCD display on board?
  - Not yet, but bringing out SPI pins so the capability is there
- Header files for our board?
  - Use configbits header specified for internal oscillator. Can set peripheral bus clock at a variety of different things
- Different methods of scaling A-D signal to PWM signal. Use signed numbers?

 c. This week's action items
- Keep working on board design – MUST begin routing this week!
- When finished, give to Prof. Schafer to look over

5. Other questions/concerns: All

 a. Required documentation for Design Review I?
- Won't be checked- just keep working on it to make life easier

 b. Looking ahead: Design Review II: 3/25/2014