PBB March 4, 2014

## **Meeting Minutes**

Leader: Elizabeth Note Taker: Tim

- 1. Review status of parts ordered: All
  - a. Received solenoid, McMaster-Carr order.
  - b. Still waiting on SDP-SI order.
- 2. Power and XY Plotter: Tim and Elizabeth
  - a. Update: last week's action items
    - Parts ordered for powering both sides of long axis
    - Started low-level design documentation
  - b. Questions/concerns?
    - How should we run wires to the moving motor.
    - Plastic pieces, discussion with MechEs.
  - c. This week's action items
    - Begin experimenting with solenoid and pen-lifting mechanism.
- 3. Microcontroller and User Interface: Sarah and Kelsey
  - a. Microcontroller blown.
    - Switching to FET as opposed to BJT.
    - Remember to add pull down resistor on the gate.
    - New microcontroller-board placed into the cart.
  - b. Update: last week's action items
    - UI Mockup Schematic-Board design
      - Difference between SOD-123 and SOD-123FL?
      - Pad spacing is only thing that matters when designing.
      - Minimum width for traces is, tentatively, 15mills.
    - Obtaining Microcontroller?
      - o Need to order samples from Microcontroller.
    - PFET vs NFET
      - o Double Check the math for PFET, might not be necessary.
      - o NFET has greater mobility, allowing for better Rds on.
      - Will have to change our design to allow for a NFET.
        - a. Software changes should fix the issue.
  - c. Questions/concerns
  - d. This week's action items
    - Keep working on board design

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- 4. Other questions/concern: All
  - a. Website server down
    - Recovered the old website from pre-power surge.
    - Will be moved to new server.