Automated Microbial Analysis Weekly Meeting Notes

11/7/19

* Group Members in Attendance
  + Bendt, Zachary
  + Bruslind, Jorian
  + Hall, Macklin
* Project Unknowns and Risks
  + Can a single Raspberry Pi be used to do image processing AND motor control?
  + Should we include a depression to catch the finished samples?
  + How can we ensure accurate motor movement?
  + Do we need to implement half-stepping in the motors? If so, will we still have enough torque?
  + What purpose does our final project aim to fulfill?
  + What type of user interface should we have?
* Tasks from This Week
  + Zach
    - Continued research on PyQT as a solution for a user interface (1 hr)
    - Reworked some of the code for image analysis testing (3 hr)
    - Power budget (1hr)
  + Jorian
    - Added more defining details to 3D model (2hrs)
    - Began 3D printing more prototypes (1hr)
    - Tested 3D printed prototypes (2hrs)
  + Mack
    - Helped debug decoder (1.5 hr)
    - Researching and setting grbl settings (45 min)
    - Wired safety power switch (15 min)
    - Researched porting grbl to Raspberry Pi (30 min)
* Group Meeting Topics
  + Hardware layout
  + The roles of the encoder/decoder in our system
  + Limit switch integration
* New Items
  + Safety power switch installed
  + Motor encoder proof-of-concept is reading data
* Tasks for Next Week
  + Zach
    - Continue work on code for image analysis test. (2 hr)
    - Work on user interface design (3 hr)
    - Client Update (1hr)
  + Jorian
    - Fix any issues with testing prototypes (2hrs)
    - Research materials for final design (1hr)
  + Mack
    - Convert reverse delta kinematic calculations to Python from C (1 hr)
    - Discuss custom PCB role with team mates (30 min)
    - Design custom PCB footprint (2 hours)
    - Wire limit switches (115 min)
  + Everyone
    - Do good; don’t do bad.
* Hours This Week

|  |  |  |  |
| --- | --- | --- | --- |
|  | Total Hours | Hours w/ Team | Hours Helping |
| Bendt, Zachary | 5 | 1 | 1 |
| Bruslind, Jorian | 5 | 1 | 2 |
| Hall, Macklin | 4 | 2.5 | 2.5 |