Automated Microbial Analysis Weekly Meeting Notes

10/25/19

* 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?
* Tasks from This Week
  + Zach
    - Worked on adding content to the Project Google Site.(2hrs)
    - Engineering Requirements refinement. (30 min)
    - Preparation for Communications Meeting. (1hr)
    - Research on OpenCV capabilities. (1 hr)
  + Jorian
    - Assembled 3D models in Inventor (finalize) (2hrs)
    - Designed better mount system for homing switches (2hrs)
    - Purchased prototyping parts (30min)
  + Mack
    - Wired proof-of-concept for power delivery system (1 hr.)
    - Established connection between Raspberry Pi and stepper motors (15 min.)
    - Researched potential vacuum pumps (45 min.)
* Group Meeting Topics
* New Items
  + Power delivery system proof-of-concept is now “proven”
  + Motors can now be controlled by streaming G-Code from a computer via Python script
  + Project website is now under development
* Tasks for Next Week
  + Zach
    - Continue Research on OpenCV (2 hr)
    - Start testing petrifilm samples (1 hr)
    - Update Google Site and Google Drive (1 hr)
  + Jorian
    - Add load in/out designs to Inventor (3hrs)
    - Create mounting enclosure for PCB (2hrs)
    - Test mechanical structure (1hr)
  + Mack
    - Clean up wiring for power delivery system (1 hr.)
    - Calculate and code motor positions for each arm state (1 hr.)
  + Everyone
    - Do good; don’t do bad.
* Hours This Week

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| --- | --- | --- | --- |
|  | Total Hours | Hours w/ Team | Hours Helping |
| Bendt, Zachary | 5.5 | 1.25 | 1.25 |
| Bruslind, Jorian | 4.5 | 1 | 1 |
| Hall, Macklin | 2 | 1.25 | 1.25 |