

sdmay19-12: Automatic Solder Dispenser

Week 6 Report

October 8 - October 14

Client: Leland Harker

Team Members

Jason Austin – Software Lead

Justin Wheeler – Mechanical Lead

Zachary Bumstead – Electrical Lead

Kevin Carlson – Mechanical/Electrical Integrator

Trenton Allison – Software/Electrical Integrator

Samuel Willford – Report Manager and Meeting Facilitator

Summary of Progress this Report

- Rebuild database interface - Jason
 - Change to a better GUI library to make programming easier
 - Database interface needs rebuilt
 - Made progress but is not finished
 - Replace servo cams on cutter - Justin
 - Lee had new servo arms for the cutter
 - Cams have been replaced but no re-tested
 - Driver Board Layout - Zach, Trent
 - Board was submitted to client but no ordered due to errors
 - Feedback received:
 - Screw terminals should be replaced with pins
 - Power connector should be changed to be flush with outside edge of box
 - Reduce 40-pin connector (if possible)
 - Designed spindles and updated spool brackets - Justin
 - Spindle designs were finished
 - Parts selected but not ordered
 - Get more extruders made - Kevin, Jason
 - Jason 3D printed extruder prototype
 - Kevin examined result and decided design should work
 - We now need to get cost estimates for aluminum vs. plastic extruder creation
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Pending Issues

- Solder tube/collector piece design
 - Needs to keep people from grabbing the solder and pulling more out
 - Needs to look nice (No elephant trunk/tail hanging from box)
 - Can't be risky in terms of a clog or jam

Plans for Upcoming Reporting Period

- Get cost estimates for extruder - Justin
 - Design was verified, we now need to decide on material
 - Talk with Lee about aluminum vs. plastic
 - Get a quote for both aluminum and plastic extruder
 - Decide (with input from Lee) which material to use
- Write about mechanical processes - Kevin
 - Touchscreen should have several screens that explain how the mechanical components in the box work.
 - Needs to be short and to the point because screen is relatively small
 - Should include pictures
- Write about different solder types - Zach
 - Touchscreen should display information about the different types of solder and when to use each one
 - Needs to be short and to the point because screen is relatively small in size
 - Should include pictures
- Finish driver board and order first parts list - Sam, Trent
 - Replace screw terminals with pins
 - Power connector needs changed to be flush with outside edge of box
 - Reduce 40-pin connector (if possible)

Individual Contributions

Team Member	Contribution	Weekly Hours	Total Hours
Sam Willford	Managing schedule, reports, lightning talks, design document	5	42
Jason Austin	Worked on rebuilding database interface, 3D printed extruder	4	34
Trent Allison	Fixed PCB design	8	36.5
Justin Wheeler	Designed spindles and updated spool brackets	6	35.5
Kevin Carlson	Examined result of 3D printed extruder	3	29

Zach Bumstead	Design document	4	25

Gitlab Activity Summary

 Action: pushed to, Sat Sep 08 2018

Author: willford

Title: Added Parts List

Action: joined, Sat Sep 08 2018

Author: wheeler1

Action: pushed to, Sat Sep 08 2018

Author: jsaustin

Title: Added stepper pinout file

Action: pushed to, Tue Sep 04 2018

Author: jsaustin

Title: updates

Action: pushed to, Tue Sep 04 2018

Author: jsaustin

Title: Upload of test app and env set

Action: pushed new, Thu Aug 30 2018

Author: jsaustin

Action: joined, Tue Aug 28 2018

Author: carlson5

Action: joined, Tue Aug 28 2018

Author: zrbum

Action: joined, Tue Aug 28 2018

Author: willford

Action: joined, Tue Aug 28 2018

Author: jsaustin

Action: created, Tue Aug 28 2018

Author: sd
