sdmay19-12: Automatic Solder Dispenser
Week 9 Report
October 29 - November 11
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

- Soldered motor driver board and found issues - Trent
    - PCB and components were received
    - Components were soldered to PCB board
    - 3 of 4 motors worked correctly through PCB board
        - 1 motor did not work correctly
            - Problem with chip connection is most likely the issue
    - 2 pins out of order on PCB Arduino connector
        - Minor issue, should be fixable

- Refined administrator interface and integrated it - Jason
    - Admin interface was completed

- Uploaded images to team website - Zach
    - Pictures of most individual team members were added
    - YouTube channel was made and solder cutting video was uploaded

- Created CSV file and programmed GUI to read it - Jason
    - Solder descriptions previously written was made into CSV file
        - This way they can be loaded by GUI
    - GUI was programmed to load and set values in a CSV file

- Lightning talks: Technical Challenge - Sam
    - Present our technical challenge
        - Challenge is finding a sensor to detect solder
        - We will brainstorm solutions and test several before deciding
        - Many possibilities, but we need to find best solution

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

- Find sensor to detect jams - Zach
    - We need a sensor that can detect when solder is present (or not present)
    - Many possible solutions, difficult to decide which is best
        - Solutions should be researched
        - Can test several sensors to determine which works best

- Finish extruders - Justin
    - Extruders were cut on waterjet
    - Still need to be cut on mill
    - Pins and screws need to be ordered

- Refactor GUI and DB - Jason

- Fix PCB errors and update PCB layout - Trent
    - Motor 3 is not currently working
    - Update PCB computer files in case new boards are made later

- Semester Presentation, Design Document, and Project Plan Updates - Sam
    - End of semester presentation needs to be prepared
    - Design Document and Project Plan both need to be updated
    - Reflections and plans for next semester need to be made

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Individual Contributions

Team Member	Contribution	Weekly Hours	Total Hours
Sam Willford	Managing schedule, reports, lightning talks	12	67
Jason Austin	Worked with Trent to figure out how they can simultaneously work on and divide coding	16	61
Trent Allison	Fixed PCB issues from client feedback	18	65.5
Justin Wheeler	Got waterjet cost estimates, decided best way to create extruders	12	57.5

Kevin Carlson	Write about mechanical pieces and how they function	9	46
Zach Bumstead	Write about the different solder types (for touchscreen display)	10	45

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
