

CprE 492 3D Metal Printer

Progress report 5

3/10/18 to 3/23/18

Client: Dr. Bigelow

Faculty Advisor: Dr. Bigelow

Team Members:

Ben Pieper - Control Software

Caleb Toney - Sensor System

Jett Ptacek - Control Software

Kevin Oran - Mechanical Design

Rachel Shannon - Sensor System

Accomplishments during reporting period

- (first half of reporting period was spring break, so many team members were out of town/unable to work)
- Received, unpacked, and started testing Velmex controllers and slides
- Tested fitment of electrical connectors with Velmex products
- Water jet parts done made progress on drawings for machine shops.

Pending Issues

- Acquiring the proper length of vacuum safe/low outgassing wire
- The wiring of the slides and sensors will take a lot of man hours

Individual Contributions

Team Member	Contribution	Weekly Hours	Total Hours
Ben Pieper	Helped unpack and test the Velmex controllers and slides	6	37
Caleb Toney	Began arduino programming, Picked up arduino, break	4	28

Jett Ptacek		4	26
Kevin Oran	Mechanical drawing progress	6	50
Rachel Shannon	Helped unpack and test Velmex controllers and slides	4	26
	Total Hours	26	117

Plans for next work period

- Sensor System
 - Work on wiring oxygen sensor
 - Begin work on data transfer program using newly received arduino
- Assembly
 - Begin assembly of project as slide brackets are finished machining and hardware (fasteners) comes in
- Mechanical
 - Finish machine shop orders.
- Software/motor control
 - Finish software to generate g-code for cubes of various dimensions and parameters
 - Begin testing software flow and 2 axis movement on assembled slides now that slides have come in

Summary of Advisor Meeting

Dr. Bigelow showed us the parts that had arrived during break especially the enclosure and the table. Discussed assembly challenges relating to enclosure bulk and potential solutions. Discussed plans for assembly and a future meeting.