

sdmay18-05: 3D Metal Printer

Week 4 Report

September 24 - September 30

Team MembersJett Ptacek — *Meeting Organizer / Researcher*Ben Pieper — *Researcher / Communicator*Kevin Oran — *3D CAD designer / mechanical leader*Rachael Shannon — *Researcher*Caleb Toney — *Designer/Scribe***Summary of Progress this Report**

This week consisted of finalizing stepper motors, talking to the chemistry machine shop, continuing box design, ordering a computer, and researching sensors and cameras. We have added to the design two movable print beds/ powder storage and also define height and widths of the box.

Pending Issues

The optical heads have been delayed by the supplier. The design of the 2-axis stepper motor is therefore delayed. We need to find way for the powder supply and runoff beds to be bigger and still work our powder applicator. Oxygen system/sensors need to be refocused as a safety system with alarms. We are slowly being able to move out of the research part of the development, however dealing with depressuring the box is taking more research than previously thought.

Plans for Upcoming Reporting Period

The stepper motors should be ordered. The box design should have the movable beds in the design and resized. The oxygen system/sensor should be defined and close to be finalized. Research for a door being included into the design is also in our plan.

Individual Contributions

Team Member	Contribution	Weekly Hours	Total Hours
Jett Ptacek	Jett met with the chemistry machine shop, researched pressure and oxygen sensors, and made sure both meeting were organized and focused. Jett also made a schedule that focuses our timeline to what we really need to be doing.	6	22
Ben Pieper	Ben worked with ETG and Dr. Zambreo to order a computer for our project. He also researched sensors focusing on oxygen sensors.	7	24
Kevin Oran	Kevin met with the chemistry machine shop,	8	28

