

EE/CprE/SE 492 - sdmay 20-30

Building a 3D Micro-Manufacturing System using Digital Micromirror Device

BI-WEEKLY 2 REPORT

August 2019 – May 2020

Client &/Advisor: **Meng Lu**

Team members:

Tong Di - Software

Di Meng - Hardware

Yu Cheng – Hardware

Shengpu Zou – Hardware

Haolun Ping- Software

Past Week Summary

We had a meeting with the instructor and talked about the progress we had made, the difficulties we need to solve. We came up with an idea on how to deal with the light source, and we also try to get technical assistance from the motorized stage company.

Past Week Accomplishments:

- Figure out the position of the light source which will replace the original source
- Finish the Peer Evaluation Survey
- Write BI-Weekly report 2

Pending Issues:

- Stable the light source and do some tests to make sure it can work
- Using LabVIEW to motivate the motorized stage
- Testing on the creation shop

Individual Contributions:

| Name | Contributions | Weekly hours | Cumulative Hours |
|-------------|---|--------------|------------------|
| Tong Di | Contacted the hardware company and got the LabView controller. Working on the connection between hardware and software. | 15 | 66 |
| Di Meng | Measure the precise size of the projector which we used. Have done the original model for the wrapping box and work on detecting the position and size of the hole. | 13 | 64 |
| Yu Cheng | Measure the precise size of the projector which we used. Have done the original model for the wrapping box and work on detecting the position and size of the hole. | 13 | 64 |
| Shengpu Zou | rebuild the optical lens. Replace and test the new UV light source. Find the possible resin which can cure under our light source. | 15 | 73 |
| Haolun Ping | Measure the size of the new light source and record the value. Find a suitable position for the new light source to | 13 | 64 |

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|--|-----------------------------------|--|--|
| | replace the original light source | | |
|--|-----------------------------------|--|--|

Plans for the upcoming week:

Tong Di - Work on the LabView controller and get the motorized stage connected to the computer.

Yu Cheng - Print out the wrapping box based on our design and test it if the light can go through the hole without any obstacle. In addition, make a couple of simple tests on the CreationWorkshop.

Di Meng – Print out the wrapping box based on our design and test it if the light can go through the hole without any obstacle. In addition, make a couple of simple tests on the CreationWorkshop.

Shengpu Zou - Test the system to cure resin, and check different optical lens, working distance, and different resin. Working on the light source replacement.

Haolun Ping - Help do some tests on the fixed projector to check whether it can work or not. If it can't work, we need to rework on the light source.