**September 25th**

Research about potential methods to construct a real-life 3D image to input into the holography system. Concepts such as Radon Transform and 3D reconstruction from multiple images.

**October 2nd**

Extensive study of Radon Transform, which is used to reconstruct cross-sectional image of MRI scan, to create a 3D surface with assumption of unit density of object. Conjured up a theoretical apparatus to realize this, but was hindered about its extreme sensitivity and difficult configuration, limitation of size, etc. Professor Keene gave great insight about using Kinect, as our goal is utilizing 3D model to create holography, not creating 3D model itself.

**October 9th**

Looked into some Kinect and Kinect SDK tutorials and saw what it can do, but we don’t have a Kinect yet so it will have to wait until we actually gets it. In the meantime, did some theoretical background study about properties of hologram (e.g. each parts contain the entire information of the picture) to see how we would implement it using SLM.

**October 16th**

Got the Kinect from Dino and set it up to make sure it works. Reading through the Chinese manual provided with our SLM and trying to make sense out of how it works by looking at SLMs from other companies.

**October 23rd**

Using Kinect to make 3D model of Ben Sterling. The model incorporates color, infrared, depth information, and can be rotated, which is what we desire to see in our holography. Right now the image is rather crude, but we hope to enhance quality as we get used to using it.

**October 30th**

Midterm presentations – prepared the motivation for the project and comparison with existing 3D modelling techniques, such as CAD software and 3D Printing.

**November 6th, November 13th**

I am overwhelmed by some personal crisis and didn’t contribute to the project, missed out on the poster presentation. I apologize for this irresponsible behavior to my teammates and Professor Keene.

**November 20th**

Thanksgiving holiday so no meeting. Helped making the outline for the final report.

**November 27th**

Did some research into potential practical applications of our project for purpose of writing introduction part of the final report.

**December 4th**

Wrote part of the introduction on the final report. Implemented the digital projection stage, final part of the pipeline, that manipulates the input and display of SLM using slmPy module. Modified the module for compatibility with Python version and the SLM we are using. Confirmed successful functioning of the program on second monitor of Slab machine.

**December 11th**

Helped debugging the wrapper code that puts together each of three stages of the pipeline together that starts from input image of pepper.png to output of computer-generated holography pattern of the given png file onto a monitor.

**December 18th**

Created slides and prepared for the final presentation. Wrote about incorporation of SLM and 3D printing technique in the introduction of final report, wrote the digital projection stage section and expanded on current progress and future works sections corresponding to the projection stage. Proofread the report to rule out runny sentences and factual errors.

**Words of apologies**

Professor Keene, I am sorry for my lack of contribution and attendance this semester. While this may not serve as an excuse, I was under influence of mild depression and failed to pursuit my other classes as well. I will make sure this won’t happen next semester. Thank you and have great winter break. Happy New Year.