August 20 - The project has been initiated. My inital idea is to make every building of the school so that a student can access the map and get their way around. Ideally you would be able to see important things like water fountains and what not. This way if you havent been to a building yet you can whip out your map and find the bathroom or what places you can find a snack.

August 21 - I thought it would be cool if there was like an arrow that guided you on the floor of the map so that you can get from place to place.

August 22 - Another great thought I had was to make this project have safety information. So pointing out fire hydrants, quickest route out of the building, where to go in a fire, etc.

August 23 - Nothing to report.

August 24 - Work has started on my one page pitch document. Most of the text part is done. However, I now have to get visuals to add to the project.

August 25 - Nothing to report.

August 26 - Nothing to report.

August 27 - Today I was able to gather images of the school that I can use for my one page pitch document. Although, Marty mentioned that the pitch document should be something like an add that would show how the final project would look upon completion. So as such I intend to put visuals over my school photos to show what I am invisioning for my project.

August 28 - I was able to sit down and get some of the visuals done for my one page pitch document.

August 29 - After Marty looked at my pitch document he suggested that I make some changes to the layout so that it reads better. I think finding some more images of the school would help out what he described. For instance he noted that because the images had to be somewhat small they had to be really informative and get the point accross fast.

August 30 - Made some tweeks to the layout of the pitch document.

August 31 - Nothing to report.

September 01 - Started on the project proposal. I intend to use what I learned from my project management course to guide my project proposal. For instance, the client will want to see what assests I need to make, what the use of my product will be for, and how it will improve their bottom line.

September 02 - I was able to make a lot of progress on the proposal. I'd say I am about half way to completing the document.

September 03 - I had some class mates look over my stuff and idea so far today. What they recommended I do is list everything I am going to need and quote varients of that. For example, if I needed a chair then I would need at least 3 varients of the chair to make the scene not look repetative. Taking this into account I decided to survey the campus a little and make note of some of the repeated features of the school. From what I was able to find every building has very similar safety features, newspaper holders, chairs, doorways, etc.

September 04 - Finialized the one pitch document and finished the remainder of the proposal.

September 05 - Before I submit my proposal I gave it one more look and found a couple things that could change. Proposal and one pitch have been submitted and approved.

September 06 - After talking to some more people I rediscovered the technology of photogrammetry. I can imagine that this technology would be helpful in modeling the pipes in the roof of the school. This is my first major problem, because one key feature to UVU is its use of pipes and concrete. Pipes can be much harder to model and chart than the hallways of the school.

September 07 - Nothing to report.

September 08 - I have done some looking into photogrammetery and found a couple peices of information to reseach later.

September 09 - Nothing to report.

September 10 - After looking at some of my resources I discovered that photogrammetry is a somewhat easy to do process. However, doing photogrammetry comes with a lot of draw backs. For instance you have to get the pictures to be as high resolution as possible and make sure that the color you take the photo is rouchgly the color you want the end result to look like. So no shadows in the photos.

September 11 - Nothing to report.

September 12 - Although I have looked at a decent amount of photogrametry by this point I still am unsure of how to acomplish doing photo grammetry. For now I am going to set up a folder with some images of a test subject that I have at home. This way I will have a practice set of images to use when approching photogrammetry.

September 13 - While I was accidentally sitting in on one of Marty's classes working on another project he suggested to the class that they keep a running journal of all the challenges they face in the design process. This way you can reference back to this project when its complete (or not) to get a better understanding of what went wrong and how to improve upon it. (As a note I thought it would be good from this point mention that everything prior to this entry is purely

things I can remember from earlier in the project. Dates and times may vary due to this.)

September 14 - Nothing to report.

September 15 - After some more digging I was able to find some videos of people doing walkthroughs of photogrammetry. Seeing it done in action affirmed that photogrammetry is the correct path toward completeing my project. As such I will begin to reseach the technology further so that I can effectivly use the process. I think this is the better way to go over hand modeling everything. Because, by using photogrametry you can get texture, models, and depth all in one process.

September 16 - Nothing to report.

September 17 - My plans for the day are to survey the school to get a better idea of how I am going to impliment photogrammetry. To start I am going to use photos from the hallway outside of class. I figured this would be the best thing because I could stitch the model of the pipes on the roof with the hallway that I modeled earlier. I have gotten a couple good sets of photos from the hallway and am thinking of starting the process of photogrammetry on my test data from home.

September 18 - Nothing to report.

September 19 - Today I spent most of the afternoon attempting to replicate the photogrammetry process. Alas I have gotten no where. After following the first couple steps of the process my computer would crash the program in a way where it wouldnt even give an error.

September 20 - After yesterday's failure I figured I would use the school's computer with much better processing power. However, even after the first couple steps my model still wasnt being created in teh way I expected it to. From here I am going to have to do some more reseach. Because, I figure that I will have to use the school computers to render out the product and I need to know what is going wrong so that I am not on campus until 10pm again.

September 21 - After some good rest I had a revelation that if I was able to get the process to work correctly I could use all the 20ish computers in the lab after hours to render different models. Doing this would mean only a couple long nights vs being on campus every night until close.

September 22 - Nothing to report.

September 23 - Nothing to report.

September 24 - Today I found out that photogrammetry has a lot more drawbacks than I previously thought. First, as I mentioned earlier, photogrammetry goes by what pictures you

have taken. This is a problem because as we go into the winter months you will be able to tell where some parts of the school are complete vs others. Second, photogrammetry takes a lot of time to render even simple scenes. Third, everything must have a really unique texture or it wont be caught by the program. Keeping these all in mind I will press forward with photogrammetry caustiously.

September 25 - Today I figured I would try my other photos from the hallway and see what those yeild being that they were taken with better angles. I was able to get a model from the program and am taking it home to finish later.

September 26 - I was able to bring the problems above up with Marty today and he mentioned that I should take into consideration the scope of the project first. For example it has taken me around a month to figure out how to even get a result from my process. Keeping this in mind I may switch gears soon if I am not able to create a result that is worth the effort.

September 27 - Today I figured that I would gather data like the one in the demo I watched. In the demo they use a rock that is by itself to get the data they need. I was able to find a rock like this on capus that I figured I should use to figure out how to make a good result.

September 28 - Nothing to report.

September 29 - Nothing to report.

September 30 - I laid out today how I would go about doing the project if photogrammetry is not going to work.

October 01 - Today was a big day because I was able to get a really decent point cloud from the program Colmap. It looks really good just from the result I was able to get with the point cloud. Although the render times pushed me to the end of the day again and I will have to work on it later.

October 02 - Tonight I was able to download the other free programs I am going to need to make the model work. From that I was able to get a really stellar example of photogrammetry.

October 03 - After showing the result to Marty I was able to get an idea of what to do next. From what we decided photogrammetry is something really great to have learned. Although, it wont be very practicle to use it for my project. Because, all of the above problems persist and the result of the program wont be good for what I intend to do for the project. Knowing this I will have to enact my previous plan of charting the school and hand modeling everything to make up for lost time.

October 04 - Nothing to report.

October 05 - Nothing to report.

October 06 - Today I had a really good thought to photograph the maps that are already posted around the campus so that I have a really solid starting point for my models.

October 07 - Nothing to report.

October 08 - Today I decided to use a tool I made a while ago to import the images I took of the school. After doing that I was able to make a quick model of the 5th floor of the CS building.

October 09 - Nothing to report.

October 10 - After surveying the CS building I found an image in the GT building where the whole floor was mapped out. Something like a floor plan. After seeing this I got inspiration to look around for more of these photos so that my modeling process would be greatly sped up. I brought this up with Marty and he mentioned that I should try to get in contact with administration to see if they had more of the floor plans availble. Thus I went out to find peoplein the facilities building that might know more. I did get a name and email of someone who might know more.

October 11 - Nothing to report.

October 12 - After emailing the person who had the floor plans I got a reply back that led me to a UVU website that hosts all of the school's floor plans for those that are disabled.

October 13 - I went to the site he pointed me to today and downloaded all the files and floor plans that I could. After doing this I was able to sit down and create the whole CS building in whitebox in one night.

October 14 - Going toward my goal I was able to create two more buildings in white box tonight.

October 15 - I realised that while reseaching things for this project that I hadn't started on the most important part of the project, the navigation. So I sat down and started to reseach different methods for going from point to point. I found a couple that might work but I settled on Dijkstra's algorythm which finds the shortest path between all points in a node graph.

October 16 - Before I make the navigation algorythm I decided that I need a script that'll get me the distance between all the points in my scene.

October 17 - After a lot of reseach in geometry I was able to create a program that spans an object between two points. It does this by finding the midpoint between two points and stretching the object between them.

October 18 - Now that I have the spanning script done I need to start on the navigation script to

meet my deadline.

October 19 - After looking at many resources I was able to create a script that emulates Dijkstra's alg. Now I just need to connect the two scripts so that I can navigate from point to point.

October 20 - The full navigation script is complete with some problems. For starters a couple things happen on update that probably shouldnt. Although for the time being I can call the script done.

October 21 - Finished the connection of my assets and am working toward my build. For my build I intend to make the CS building a decently working model of what I want to acomplish.

October 22 - Collected all my stuff to this point and have submitted it to artstation for review.