

CS11: 3D Scanning of Large Spaces

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- **MetaShape Script Progress :**

- Have been able to generate a texture yet
- We have tried multiple things, such as modifying earlier parameters to get the texture to work.
- Potential next steps:
 - Post the problem on a forum. We attempted to do this earlier on the metashape website, but we were unable to because they required administrator privileges. The next step would be to go to a different forum, like Stack Overflow
 - Meta Shape usually creates textures based on pictures rather than points, which is probably why the texture is so hard to figure out. If we are able to extract the pictures from Dot3d when we use it, we could potentially attach them to the user interface, and then use them to create the texture after.

- **Save functionality with the Unreal Engine Plugin :**

- The Unreal Engine Demo with the working plugin has been successfully turned into its own standalone executable file. We have support for Windows machines but we could also make executables for Android, iOS, and Linux operating systems.
- At this moment there is not a way for users to save their imports.
 - Imports utilizing the plugin take a very short time compared to the normal import tool. It takes on average about a fourth of the time.
- Need to create some way for a user to hop into the level with either VR or first person controls. VR would be preferable.

- **User Interface:**

- Currently integrating user interface with Metashape script
- UI can now execute script via system call
- User may need to pass absolute path of Metashape Pro application

- **What there is left to do:**

- Prepare for our 30 minute project evaluation presentation : 5/14
- Allow the Metashape plugin to create a texture and embed them into the FBX file that is exported.
- Connect the completed plugin with the user interface so that it works through the interface
- Continue with working on the Unreal engine plugin to create more of a setup for the user, such as first person controls.
- Integrate the Unreal Engine script with the user interface as well, so that the script is called from the interface.
- Style the user interface, and modify the options to match what is required for the MetaShape plugin.
- Scan a lab on campus.
- Discover solutions for larger scans(combining multiple point clouds)
- Reorganize the github, and find solutions to importing necessary modules
 - Allow almost any user to begin working with the software after installing metashape and unreal.
- Create a video that demonstrates the power of our software.