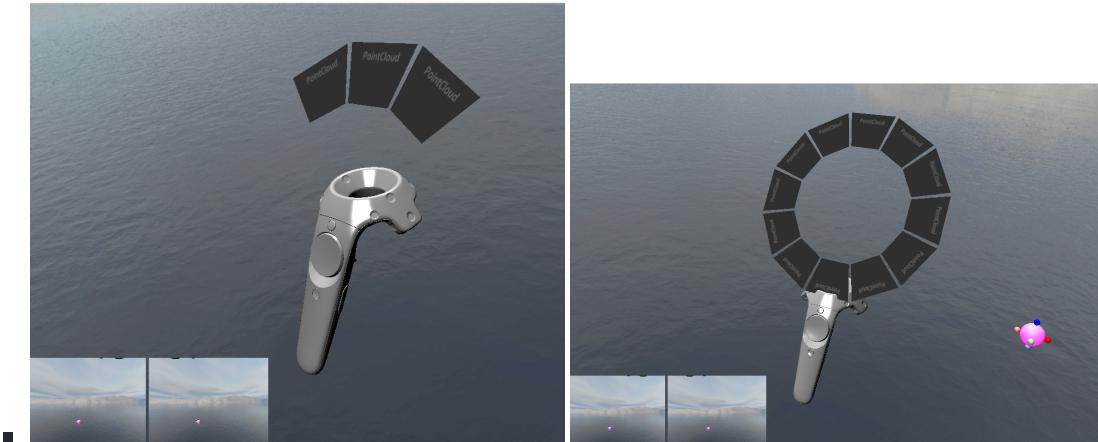


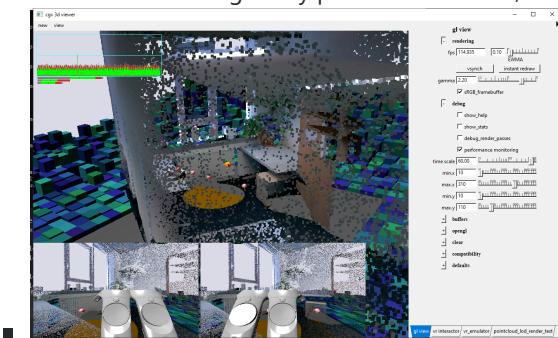
mixed.md

weekly report: 21/02/2021

- Point Cloud Merging:
 - Merged building scale point cloud
- Surface Reconstruction:
 - Tried the code from the paper: Instant Field-Aligned Meshes after reading the paper "The Replica Dataset: A Digital Replica of Indoor Spaces"
 - Does not support reading from point clouds originally, the algorithm supports
 - Found a fork that supports this, not working well as the following one
 - Tried the code from the paper: Field-aligned online surface reconstruction
 - Works with small scene, takes too long time for large scene reconstruction
 - Has a relative good mesh and visual effect, texture re-projection may be supported
 - Worked for my thesis, a better GUI made



- Selective LOD Rendering of my point clouds made, sub and super sampling



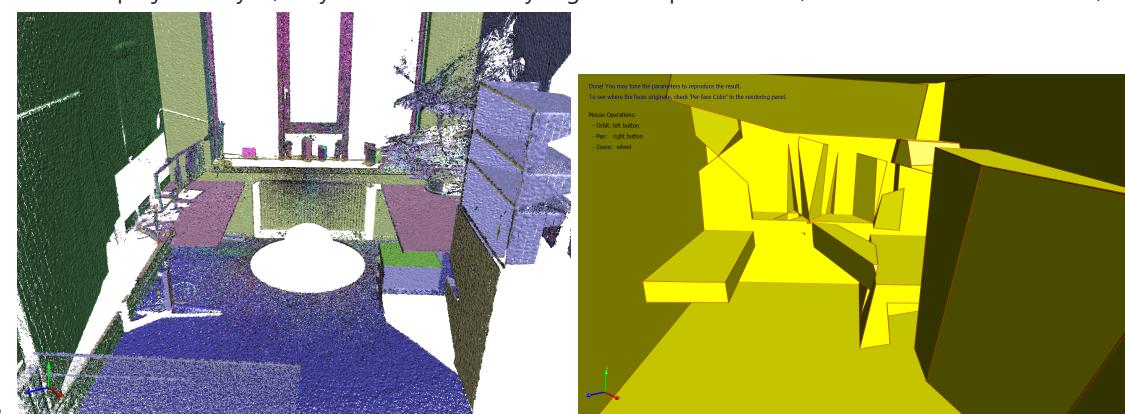
- Texture Reconstruction:

- Familiar with the software: Reality Capture



- Actually does not support texture re-projection, only supports from one model to an other, not what we need
- Prepare .e57 file with correct header, feed to RC
 - // Point cloud can not be loaded to RC after external edit, camera positions missing
 - Tried to cure this issue with pye57 library, failed
 - Tried to solve this problem with libe57Format, built successfully but the load of point clouds from sketch too complex, give up
 - Tried to modify the source code of the software: CloudCompare, load camera positions from external file, success
- Fit to low poly model:

- Tried the project: PolyFit, only work with carefully segmented point clouds, which we do not have now, skip for now



- Literature Review
- Working hours: 10