

pccomp_oct

Octree-based lossy point-cloud compression with open3d and numpy (.ocz)

How it works

Steps of the workflow:

- Computes octree codes in 16 depth
- Process arithmetical compression on the octree codes
- Removes repeated codes
- Ordering
- Entropia coding (zip)

Precision:

You can compute it by the depth. On a 30 m extend the resolution will be 0.5 mm.

Compilation of the compressing rate

Results in megabytes

<i>Point cloud type</i>	<i>LASzip</i>	<i>MrSID</i>	<i>pccomp_oct (.ocz)</i>
Architectural1	4,76MB	5,5MB	5,1MB
Architectural 2	13,64MB	15,3MB	10.14MB
Industrial 1	15,9MB	18,58MB	10.55MB
Industrial 2	15,3MB	15,37MB	7.76MB
Industrial 3	21,75MB	23,68MB	39,03MB
Industrial 4	30,3MB	failed	17.09MB

Percent of the original size

<i>Point cloud type</i>	<i>LASzip</i>	<i>MrSID</i>	<i>pccomp_oct (.ocz)</i>
Architectural1	<u>7,45</u>	8,61	7,98
Architectural 2	6,45	7,23	<u>4,79</u>
Industrial 1	13,44	15,71	<u>8,92</u>
Industrial 2	14,85	14,92	<u>7,53</u>
Industrial 3	<u>4,68</u>	5,09	8,39
Industrial 4	3,23	-	<u>1,82</u>