Robust and Adaptive Integration of Multiple Range Images with Photometric Attributes
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Consensus Surface with Photometric Attributes
Merging with photometric attributes, color, intensity, laser reflectance strength (LRS)...
Take consensus by median value

Integrating in Adaptive Resolution
Adaptive subdivision of octree based on
1. geometric attributes (curvature, ...)  
2. photometric attributes (intensity, ...)
Extend marching cubes for adaptive octree

Merging of Box
Remove specular reflectance in some input images
Preserve sharp texture edges

Merging of the Kamakura Buddha
Merging with LRS values
Compare 3 merging results
(A) without adaptive integration  
(B) subdividing only based on curvature  
(C) subdividing based on curvature and LRS

<table>
<thead>
<tr>
<th></th>
<th>Number of points</th>
<th>Time for Integration</th>
<th>Mean Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>(A)</td>
<td>3.0 million</td>
<td>252 min.</td>
<td>N/A</td>
</tr>
<tr>
<td>(B)</td>
<td>1.2 million</td>
<td>82 min.</td>
<td>0.99 mm</td>
</tr>
<tr>
<td>(C)</td>
<td>1.4 million</td>
<td>88 min.</td>
<td>0.44 mm</td>
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