

EnvyDepth: An Interface for Recovering Local Natural Illumination from Environment Maps ADDITIONAL MATERIAL

ID: paper 1314

1. L.A. Helipad Environment Map



Figure 1: *On the left, the Helipad environment map. On the right, a rendering of a gargoyle calculated using EnvyDepth reconstruction of the scene.*

2. Doge's Courtyard Environment Map

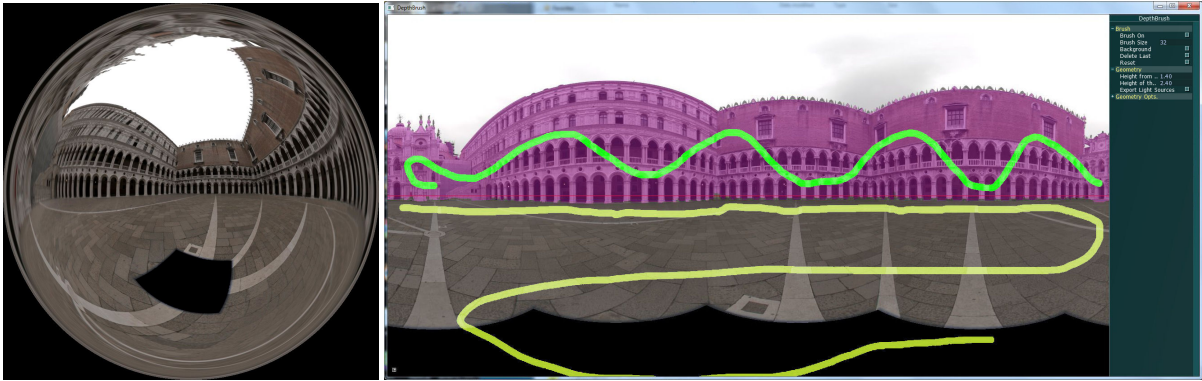


Figure 2: On the left, the Doge's environment map by Debevec. On the right, the environment map inside EnvyDepth for editing.

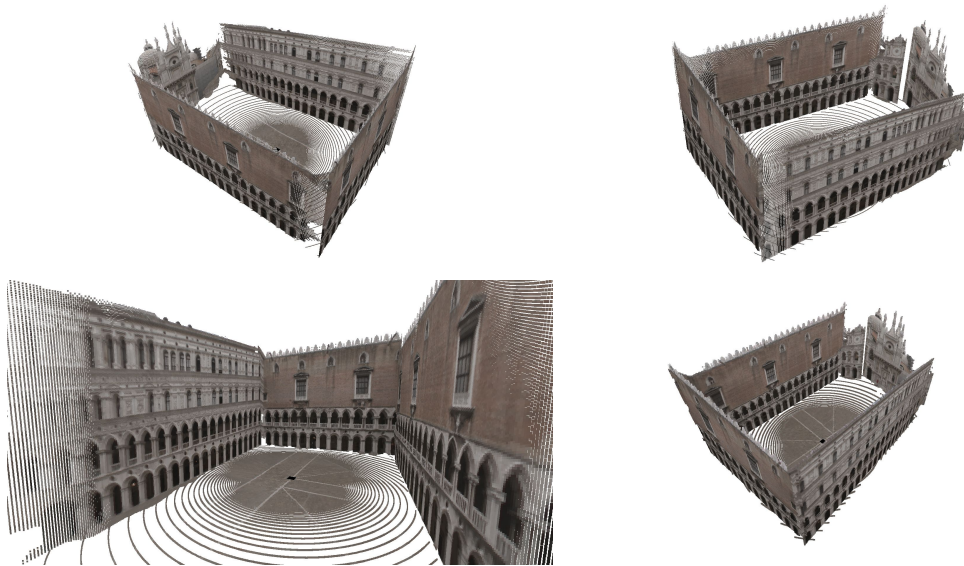


Figure 3: Extracted light sources from Figure ??.

3. Ueno's Environment Map

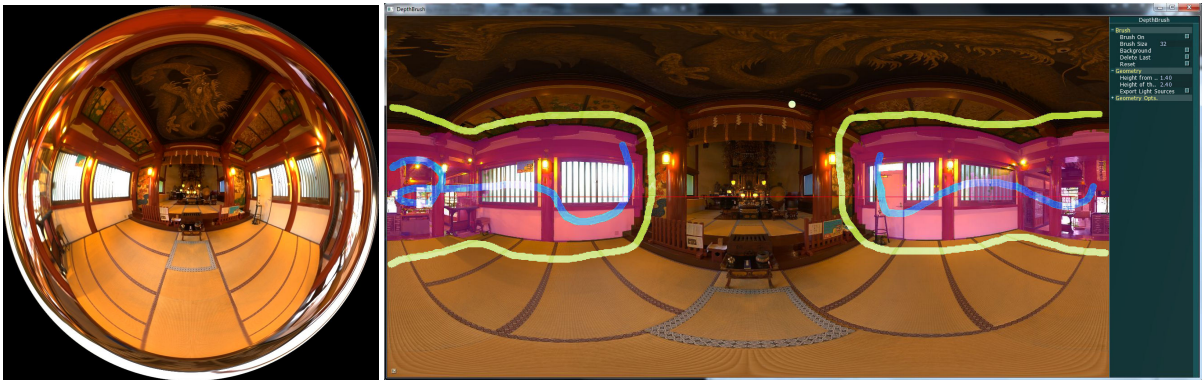


Figure 4: On the left side, Ueno's environment map. On the right, the environment map inside EnvyDepth for editing.

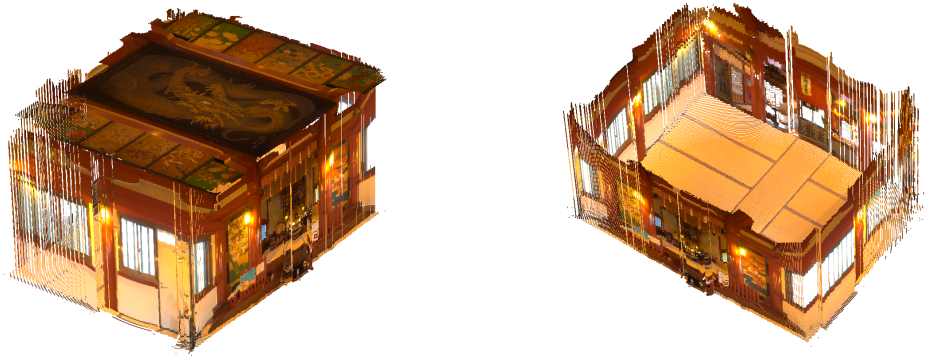


Figure 5: With simple strokes, it is easy to create a complete room, with walls, floor and ceiling. Input Figure ??.

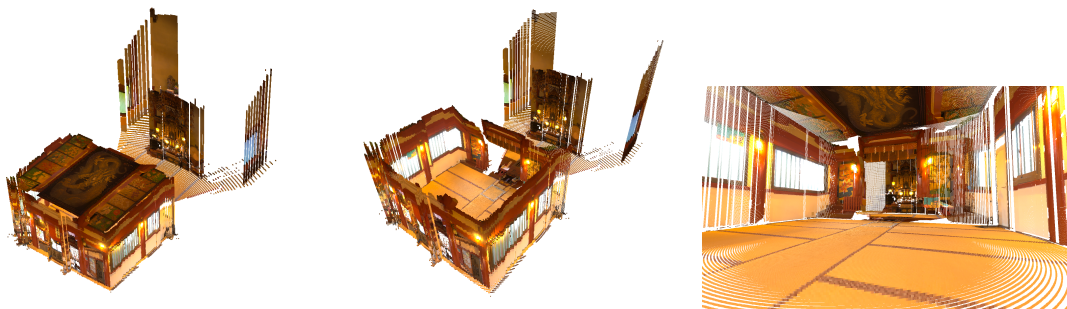


Figure 6: With slightly more effort, a more correct reconstruction, taking in account also the adjacent room can be achieved. Input Figure ??.

4. Environment map from Karsh et Al., Rendering synthetic objects into legacy photographs, Siggraph 2011



Figure 7: The environment map provided by Karsch et al.; note that the environment map has some artifacts such as misalignments.

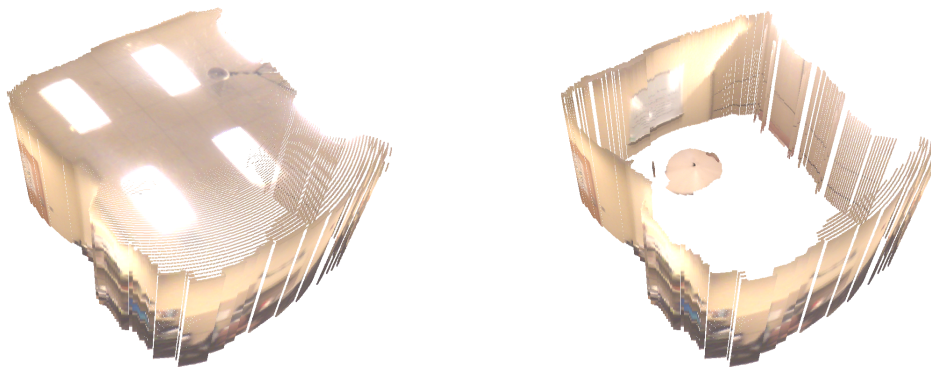


Figure 8: The geometry extracted from the environment map: the table, walls and ceiling. Input image in Figur ??.

5. Environment maps for ground truth comparison

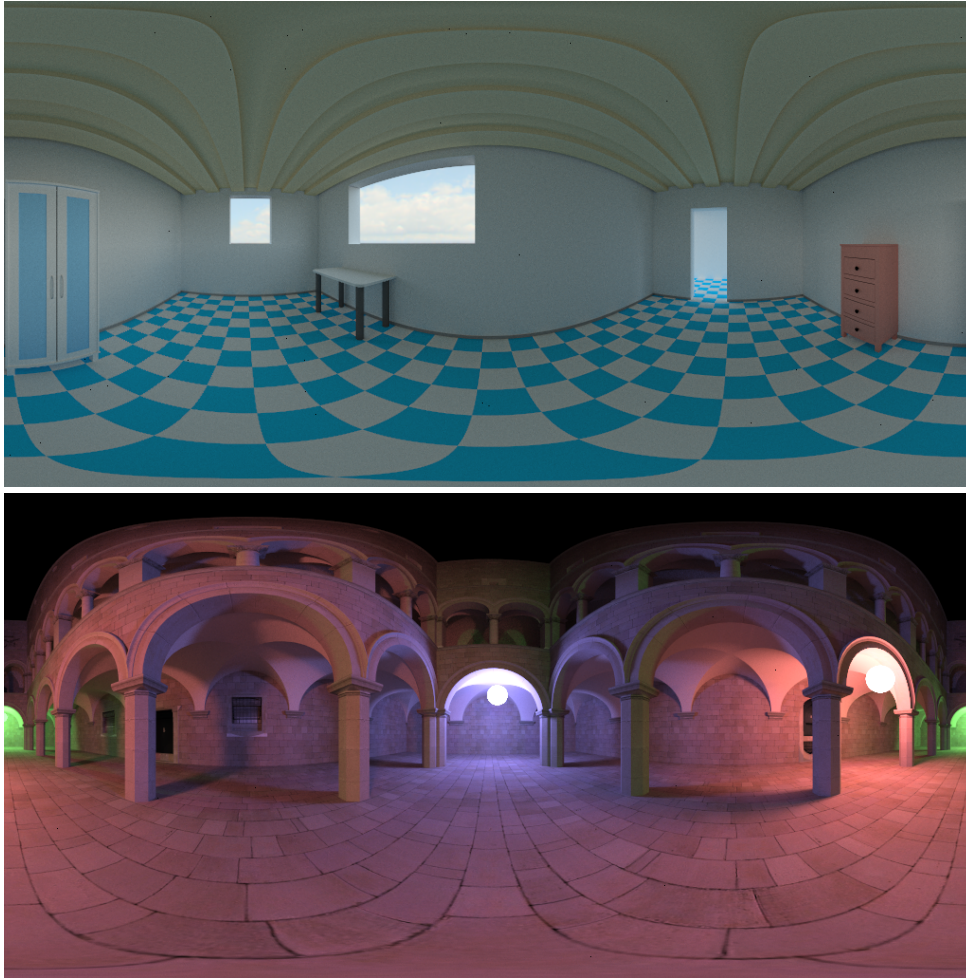


Figure 9: The Figure shows the environment maps used for ground truth comparison. The maps were generated starting from the 3D scene, after setting up a lighting environment. The maps were used for both IBL rendering and scene generation using EnvyDepth

6. Curved Amsterdam road.

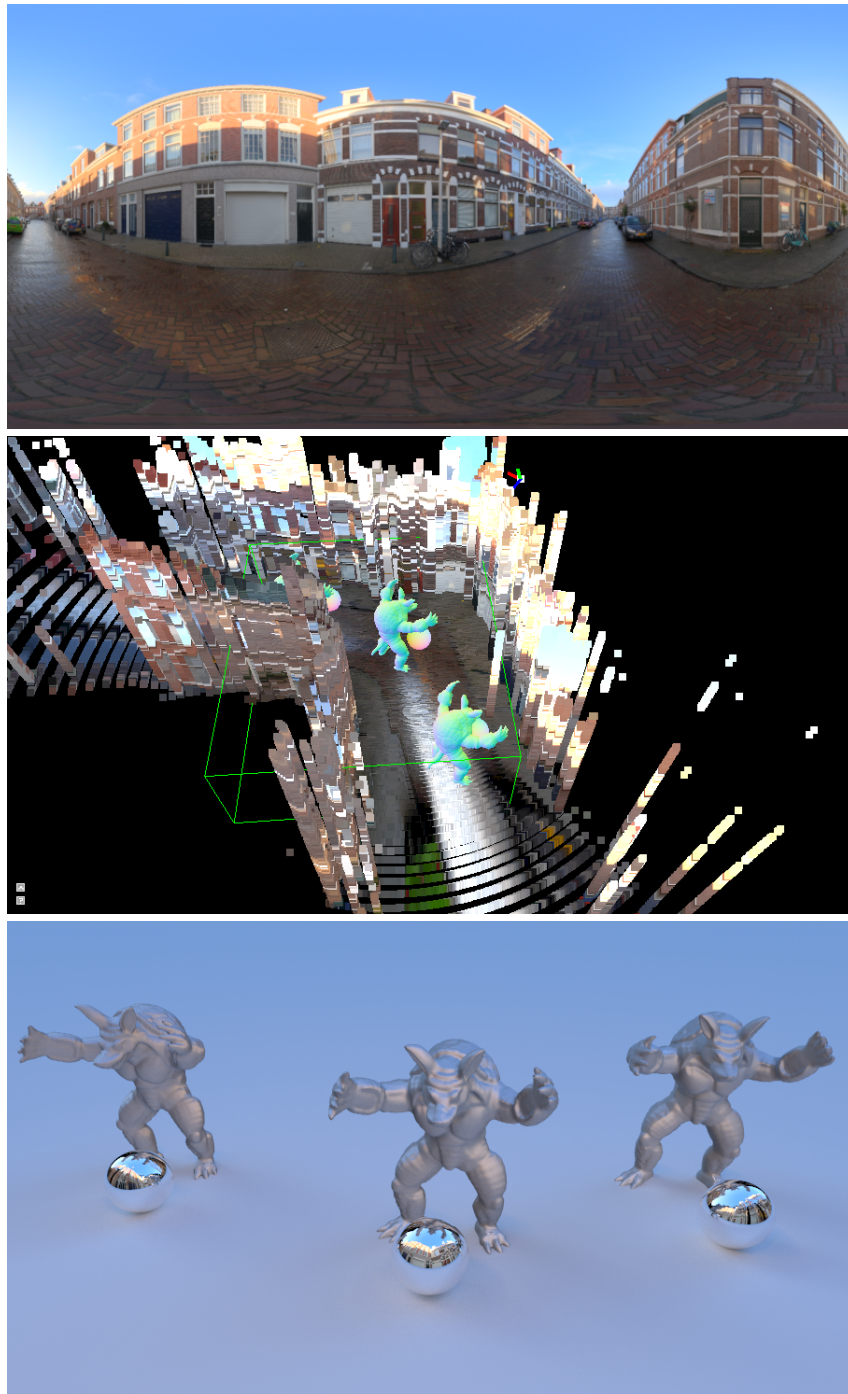


Figure 10: A case where our method reconstructs an untidy geometry. On top, the input environment map; in the middle, the reconstructed geometry, with the scene setup; on bottom, the rendering using our method. This street in Amsterdam, due to the extremely irregular outline of the buildings produce an untidy geometry; however, the spatial rendering is still convincing, and show different lighting and reflections which are coherent with the actual position of the inserted elements in the scene.