



Learning Neural Radiance Field from Quasi-Uniformly Sampled Spherical Image for Immersive Virtual Reality (Supplementary Material)

Le Wang^{1,2}  and Shigang Li^{1,3} 

¹ Graduate School of Information Sciences, Hiroshima City University, Japan

² dg65001@e.hiroshima-cu.ac.jp

³ shigangli@hiroshima-cu.ac.jp

1 Additional Visualization Results

In this section, we present additional qualitative results to supplement the main paper. We trained three networks Omni, 360, and Fusion, using equirectangular and discrete spherical images. To comprehensively evaluate the performance of NeRF, we synthesized three types of representations from each trained network: an equirectangular image (Equ Image), a discrete spherical image (DSI Image), and a perspective image (Cubemap). The Structured3D dataset [1] was used for experiments.

The visualization results for the equirectangular images from two scenes are shown in Figs. 1 and 2. Figs. 3 and 4 display the results for the discrete spherical images, while the synthesized perspective images are presented in Figs. 5 and 6. In the text on the left side of each figure, the first word indicates the network type, while the second word represents the data representation used during training.

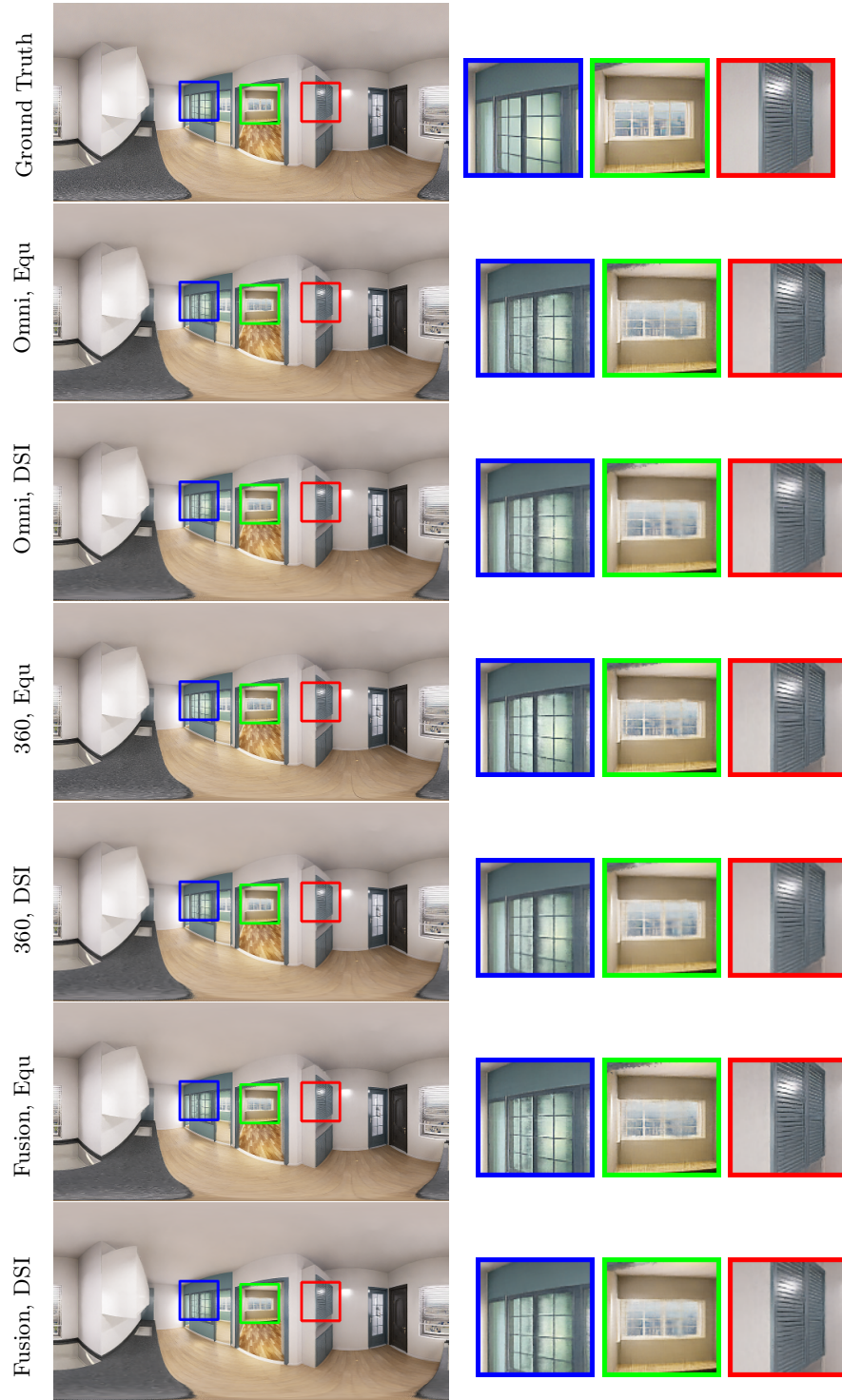


Fig. 1: Visualization of synthesizing equirectangular images, scene S1

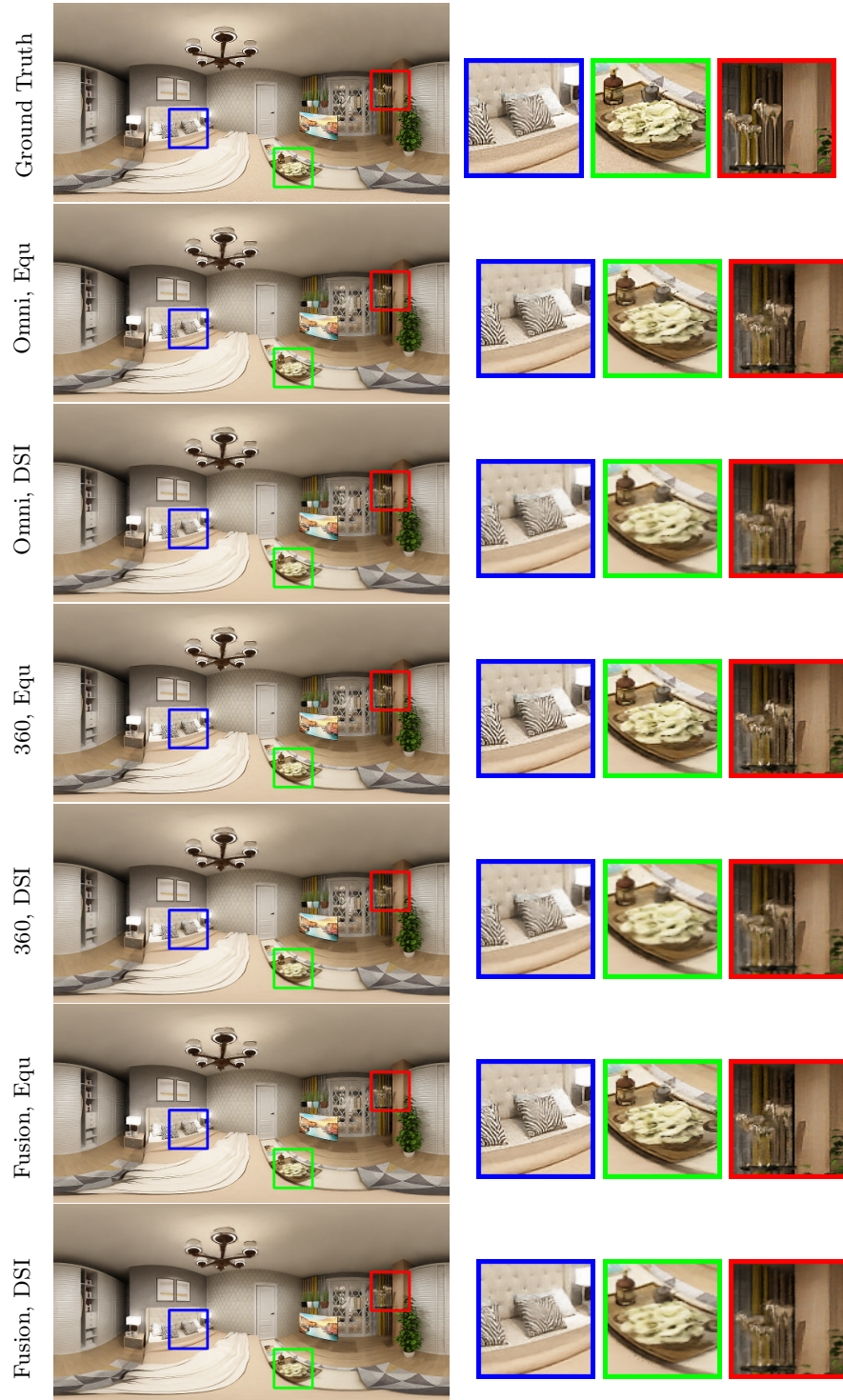


Fig. 2: Visualization of synthesizing equirectangular images, scene S2

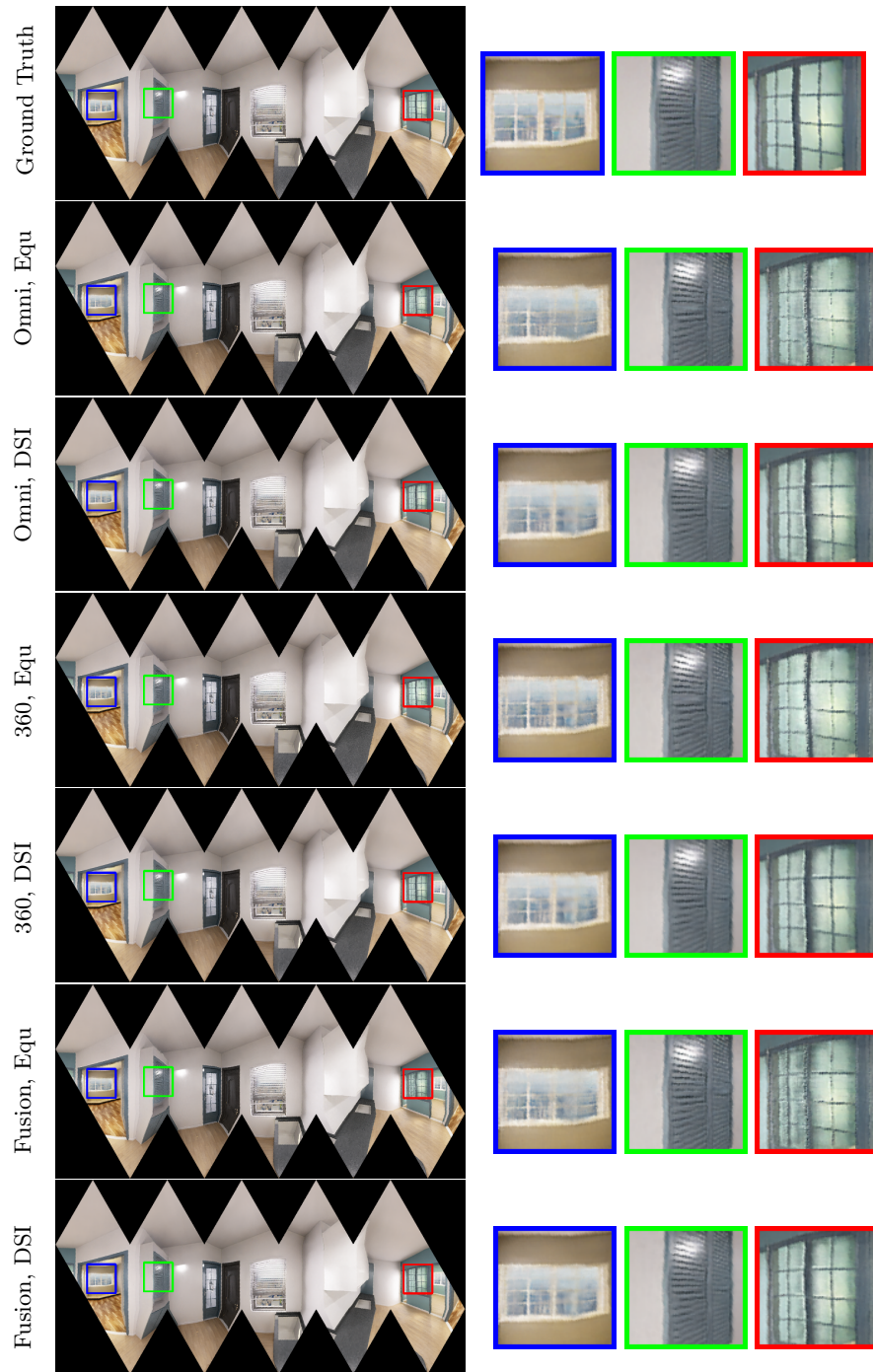


Fig. 3: Visualization of synthesizing DSI images, scene S1

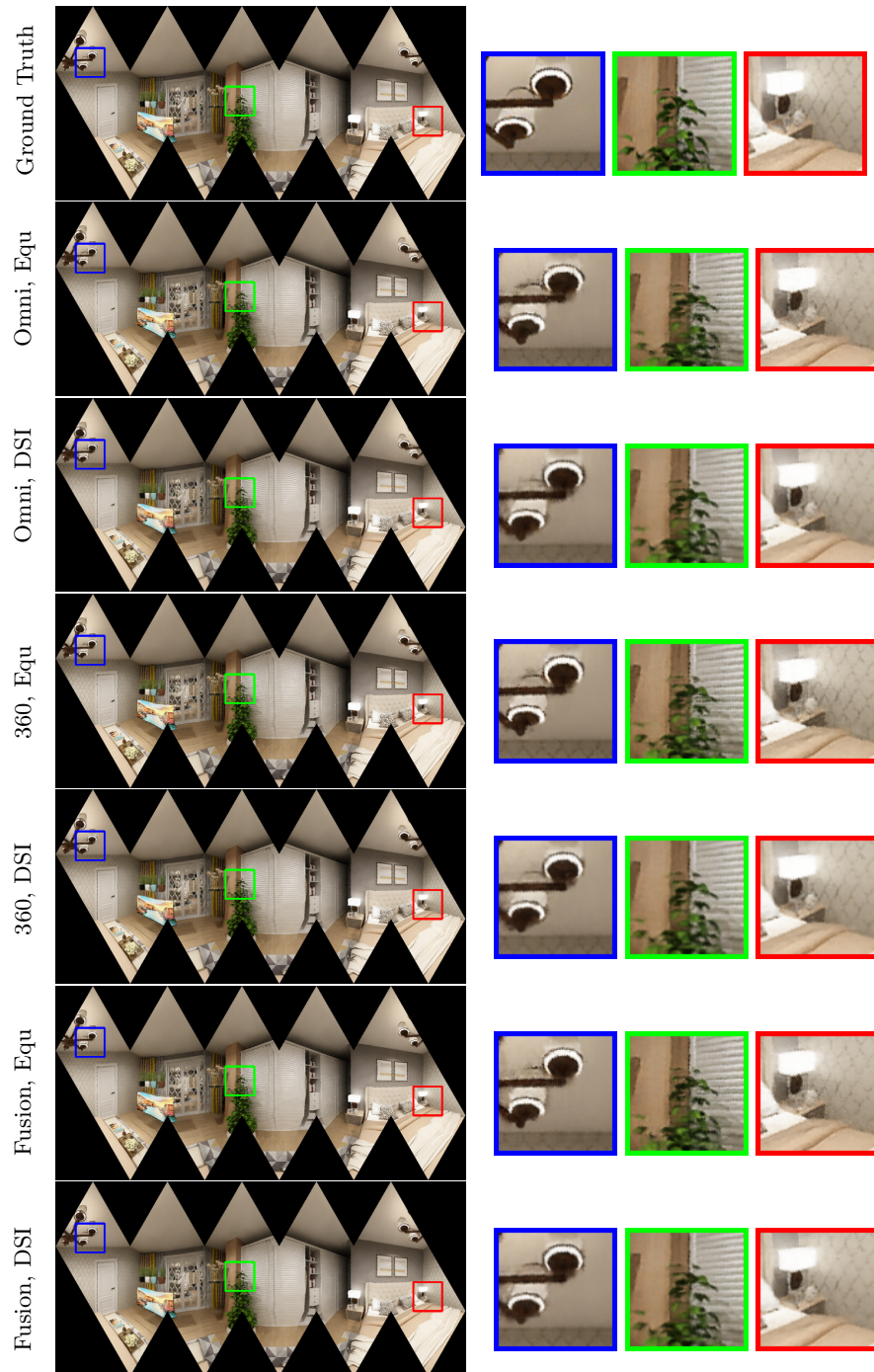


Fig. 4: Visualization of synthesizing DSI images, scene S2

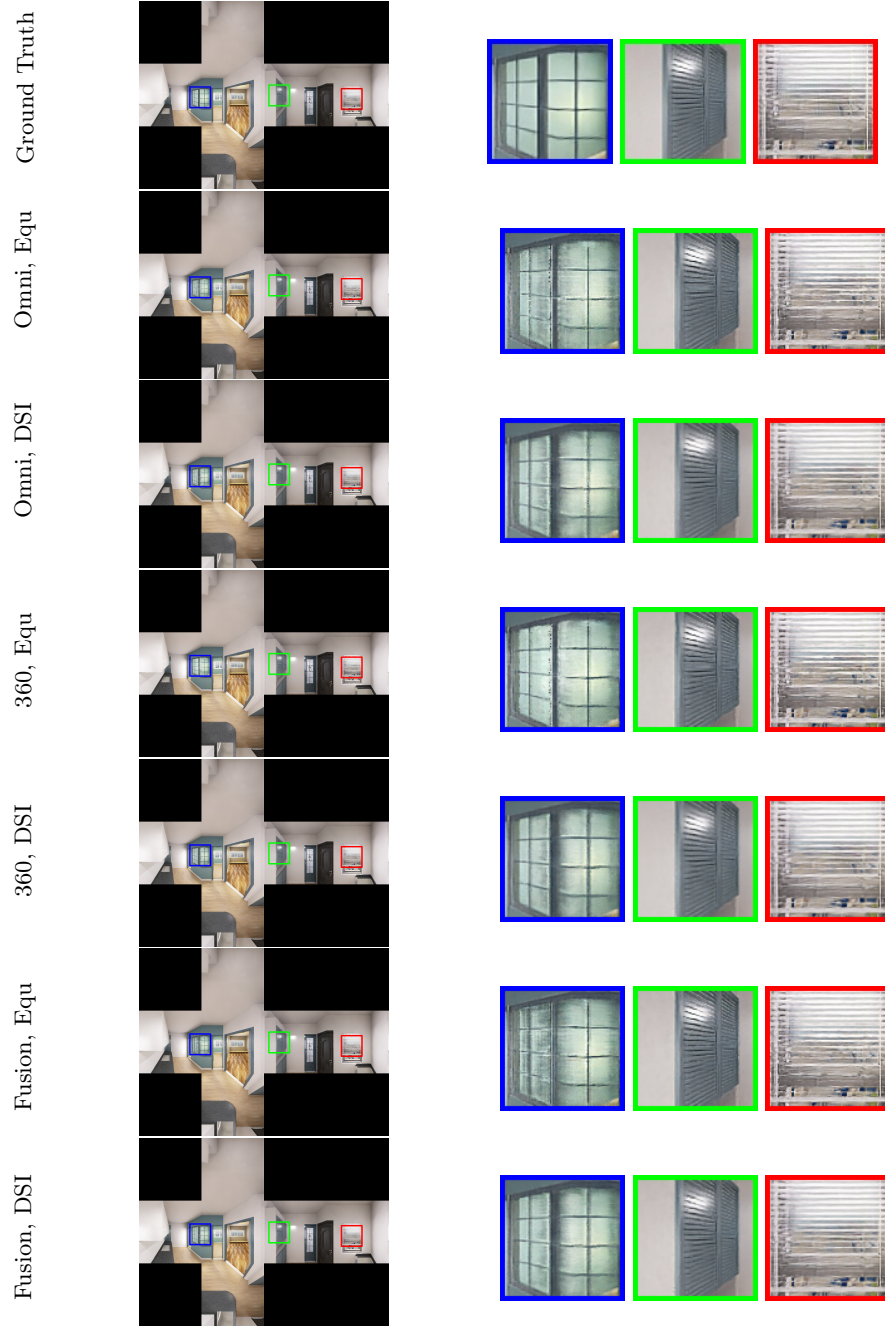


Fig. 5: Visualization of synthesizing Cubemap images, scene S1

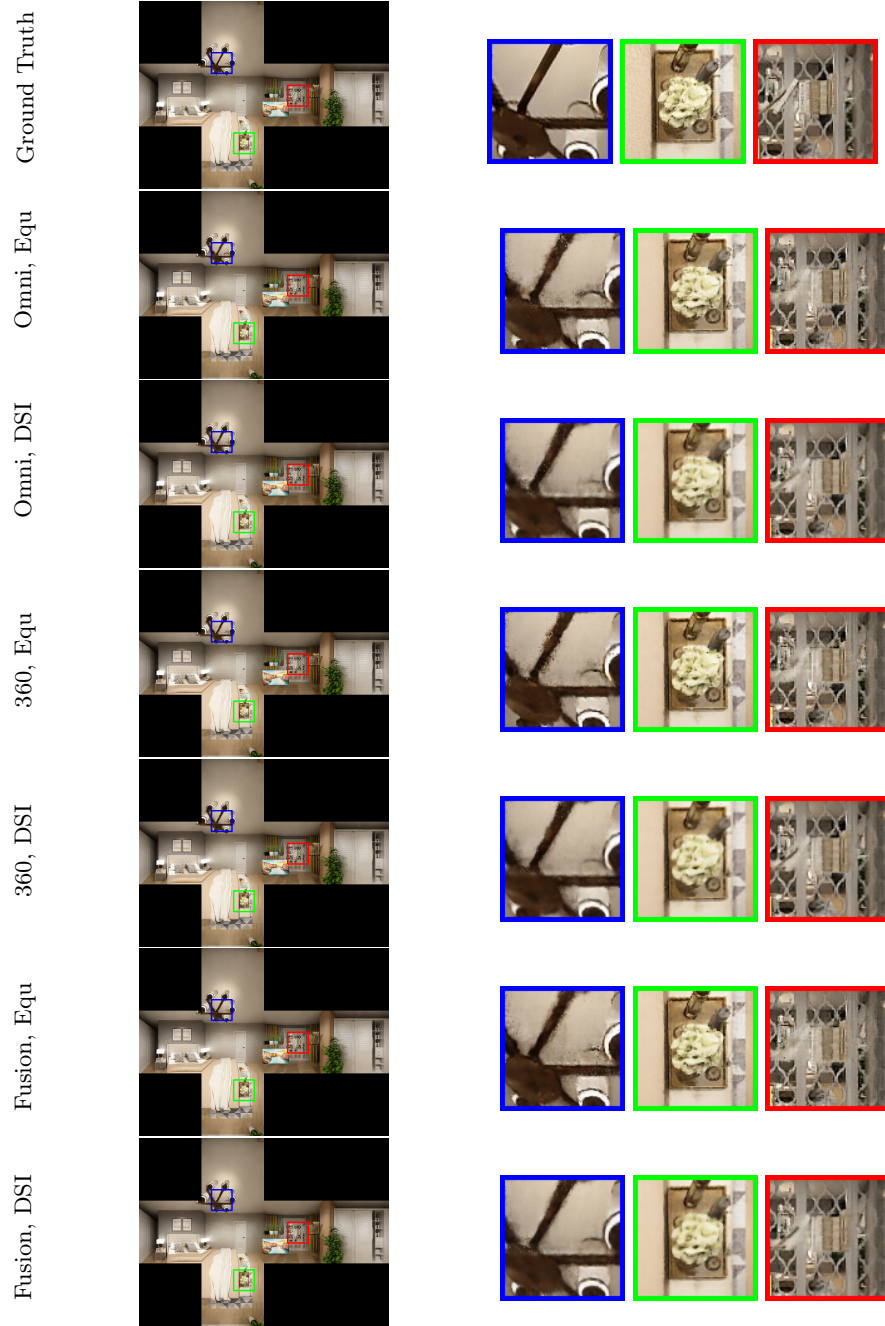


Fig. 6: Visualization of synthesizing Cubemap images, scene S2

References

1. Zheng J, Zhang J, Li J, et al. Structured3d: A large photo-realistic dataset for structured 3d modeling[C], Computer Vision—ECCV 2020: 16th European Conference, Glasgow, UK, August 23–28, 2020, Proceedings, Part IX 16. Springer International Publishing, 2020: 519-535.