

SceneNN: A Scene Meshes Dataset with aNNotations

Binh-Son Hua¹

Quang-Hieu Pham¹

Duc Thanh Nguyen²

Minh-Khoi Tran¹

Lap-Fai Yu³

Sai-Kit Yeung¹

¹ Singapore University of Technology and Design

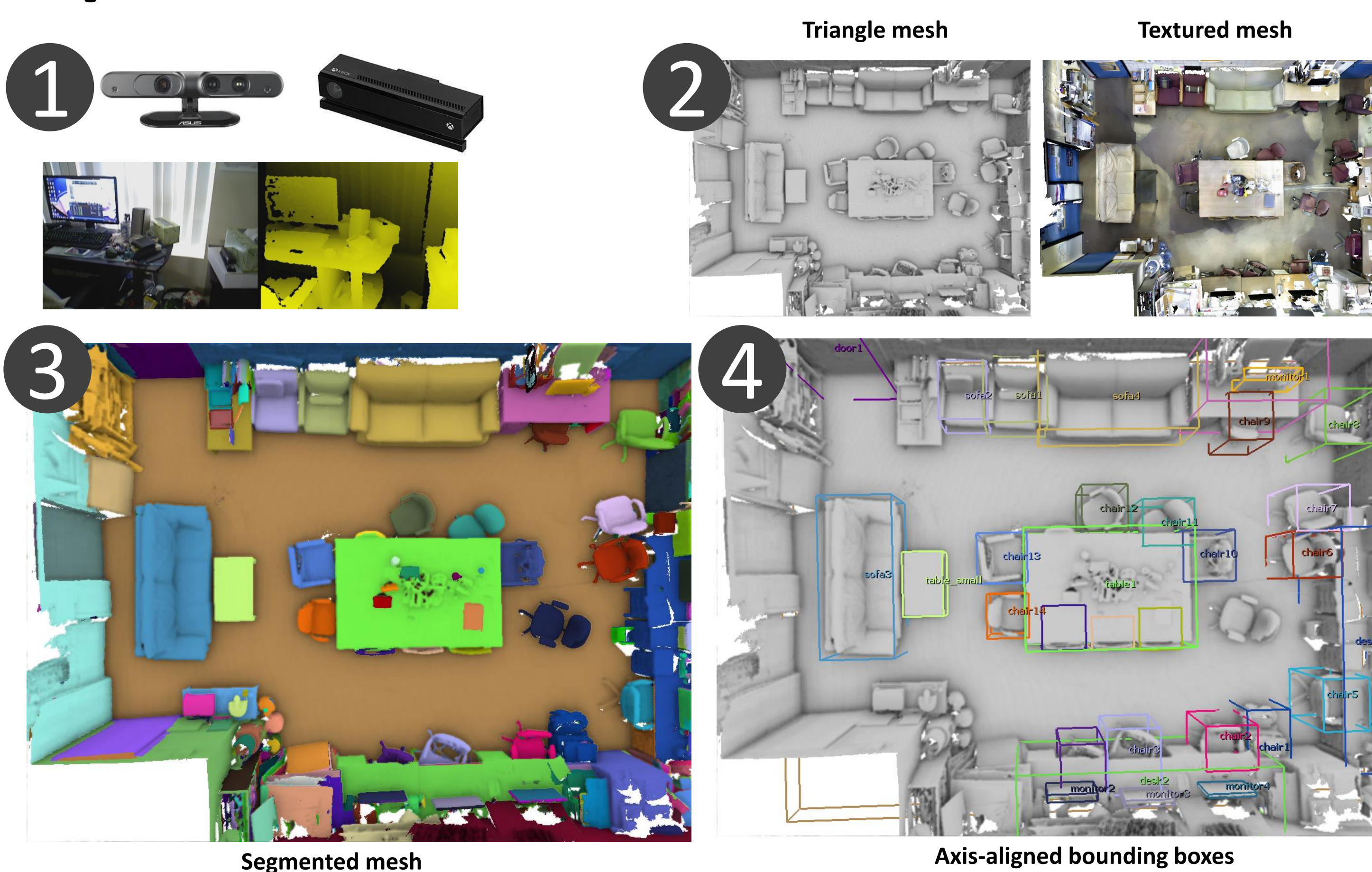
² Deakin University

³ University of Massachusetts Boston

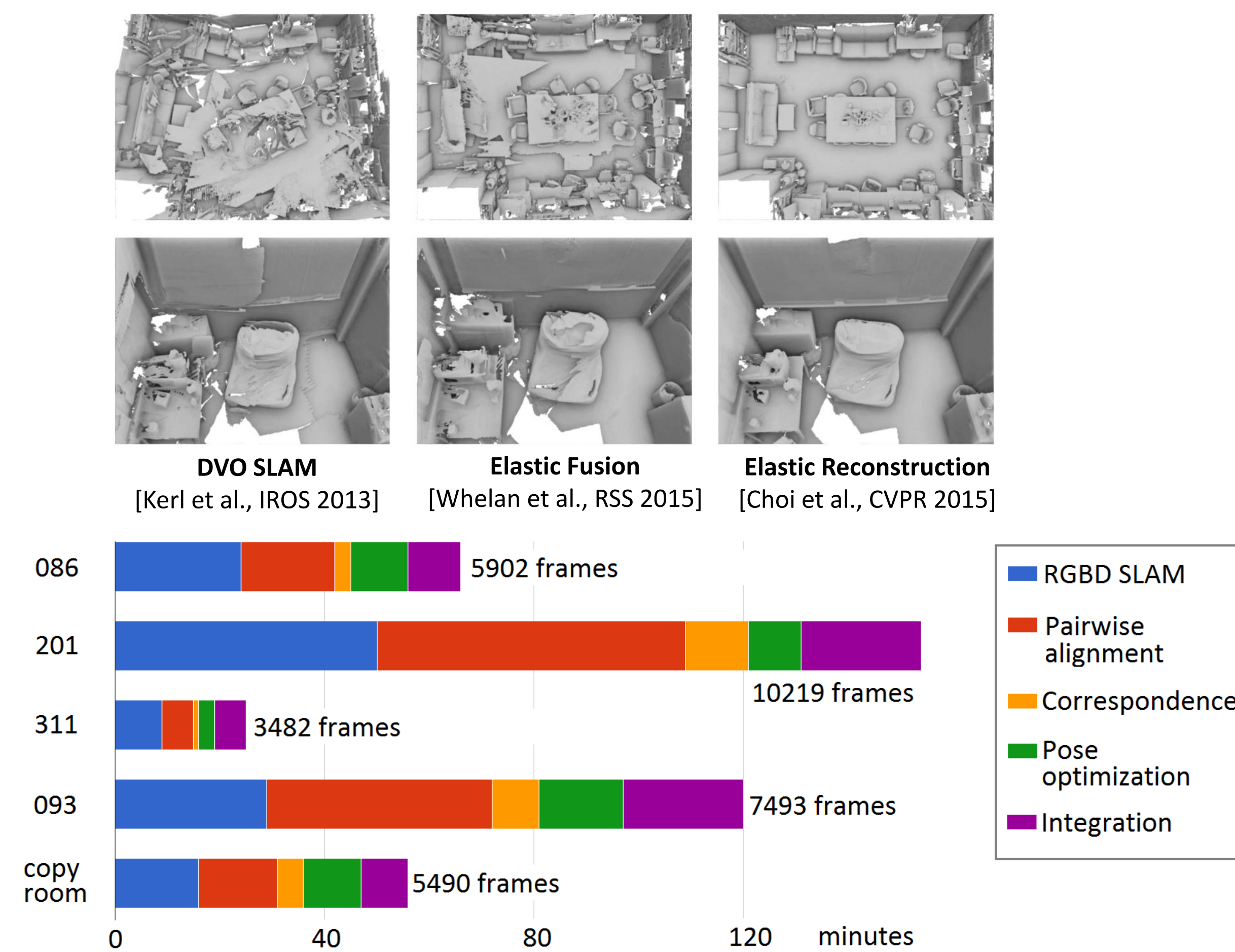
SceneNN dataset

- > **100+** RGBD scenes, from 2,000 to 10,000 frames
- > Reconstructed **triangle meshes**, camera poses
- > **Per-vertex** and **per-pixel** labelling
- > **Annotated bounding boxes**, object poses
- > Categories: Workplace (27) Bedroom (19) Living room (8) Kitchen (11) Study space (9) Meeting space (3) Lounge (8) Other (10) Sensor comparison (6)

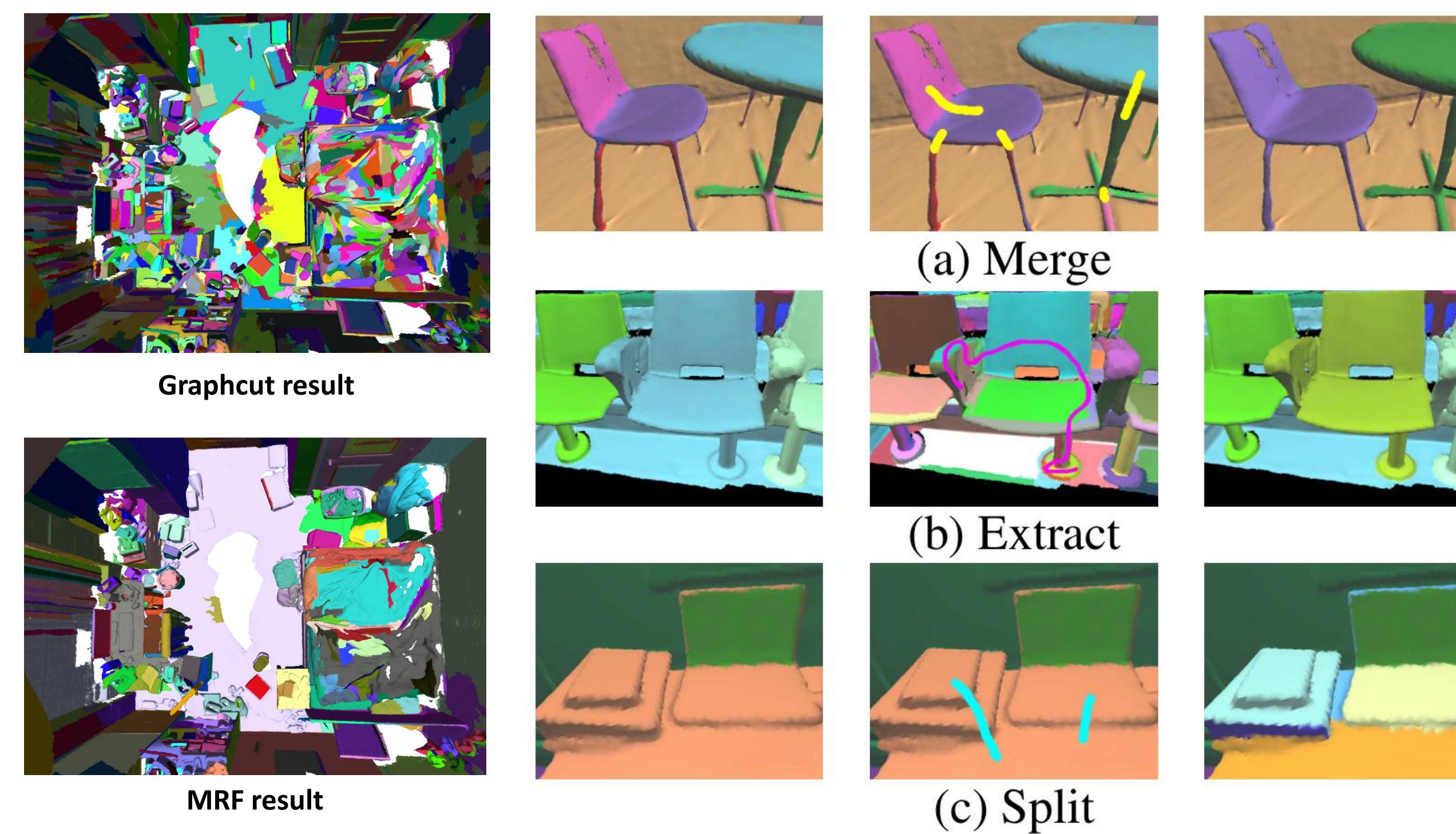
Pipeline



Reconstruction

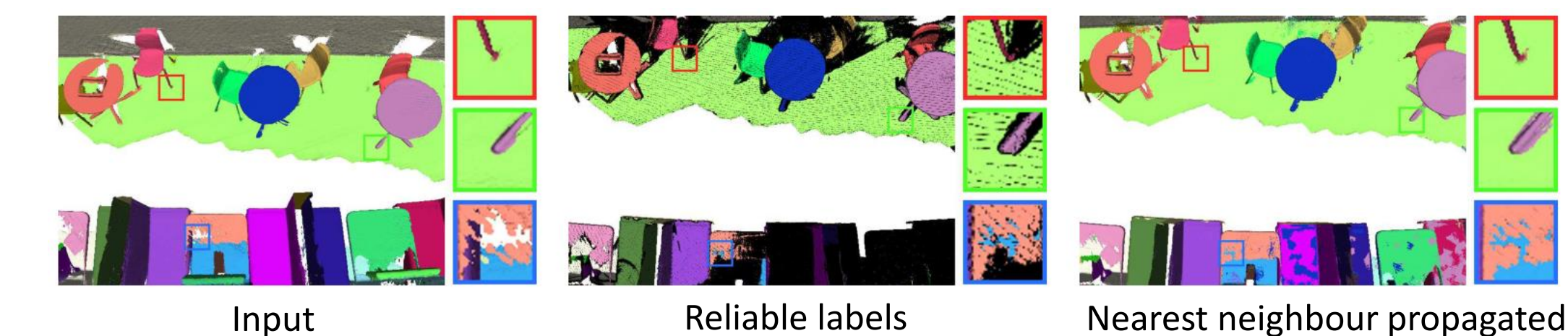


User interaction

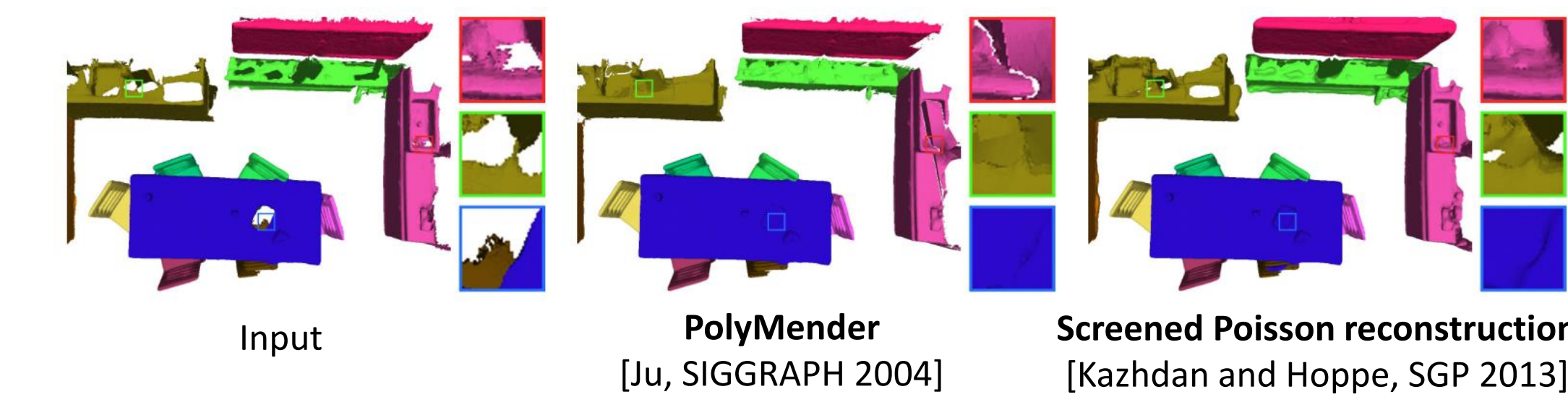


Proof-of-concept applications

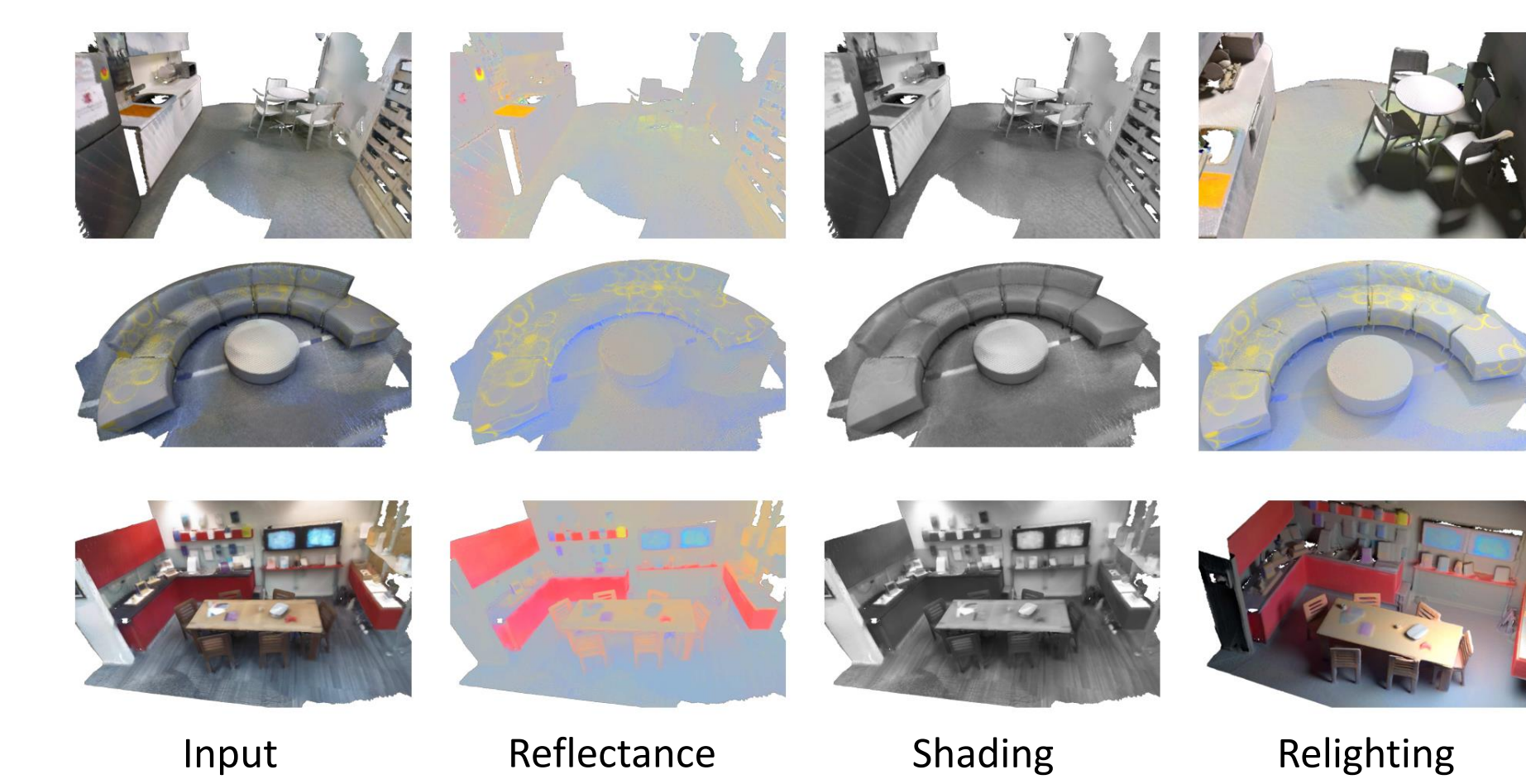
Annotation transfer



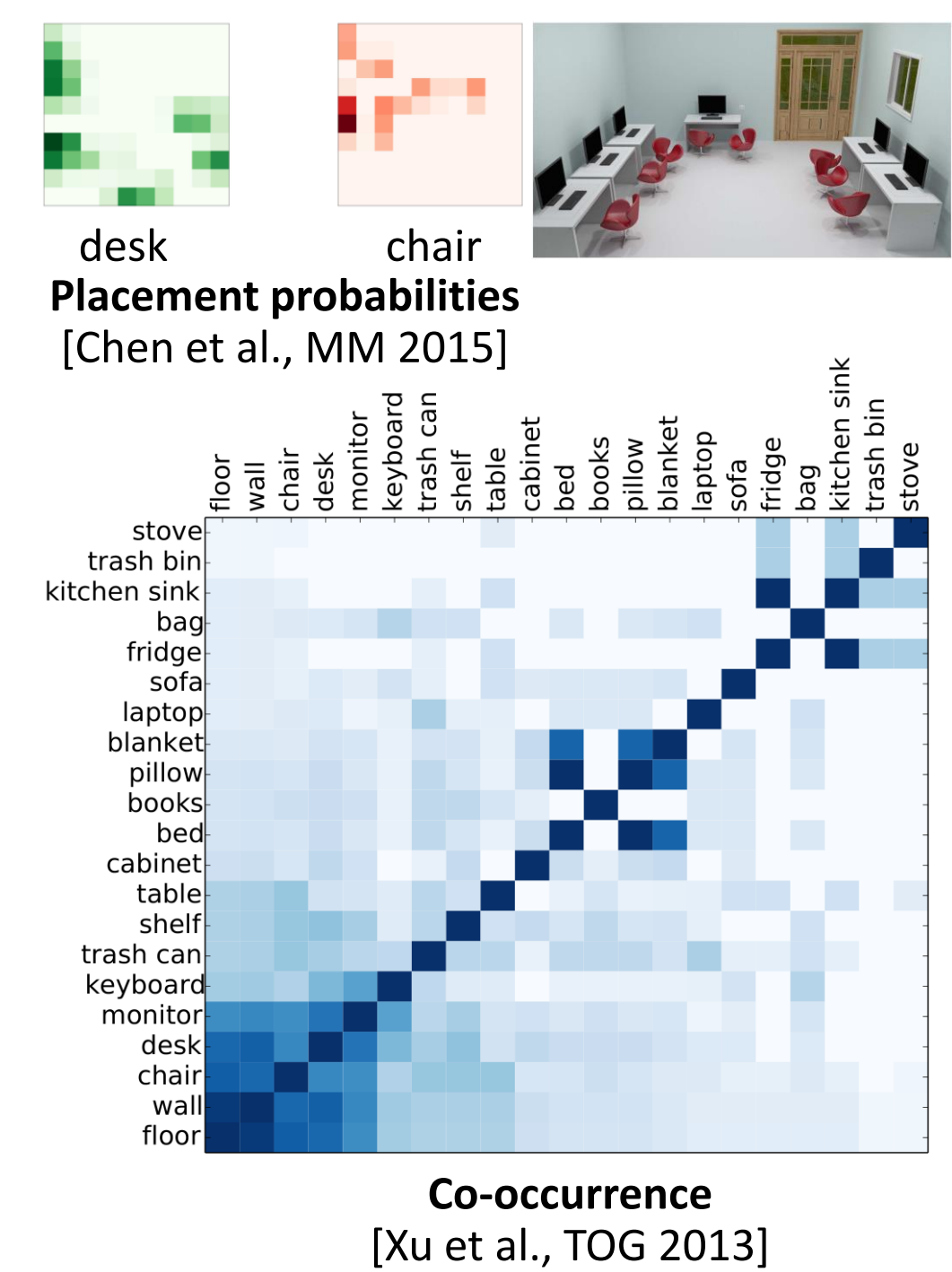
Shape completion



Scene relighting



Scene synthesis



Novel view synthesis

