Floorplan Priors for Joint Camera Pose and Room Layout Estimation
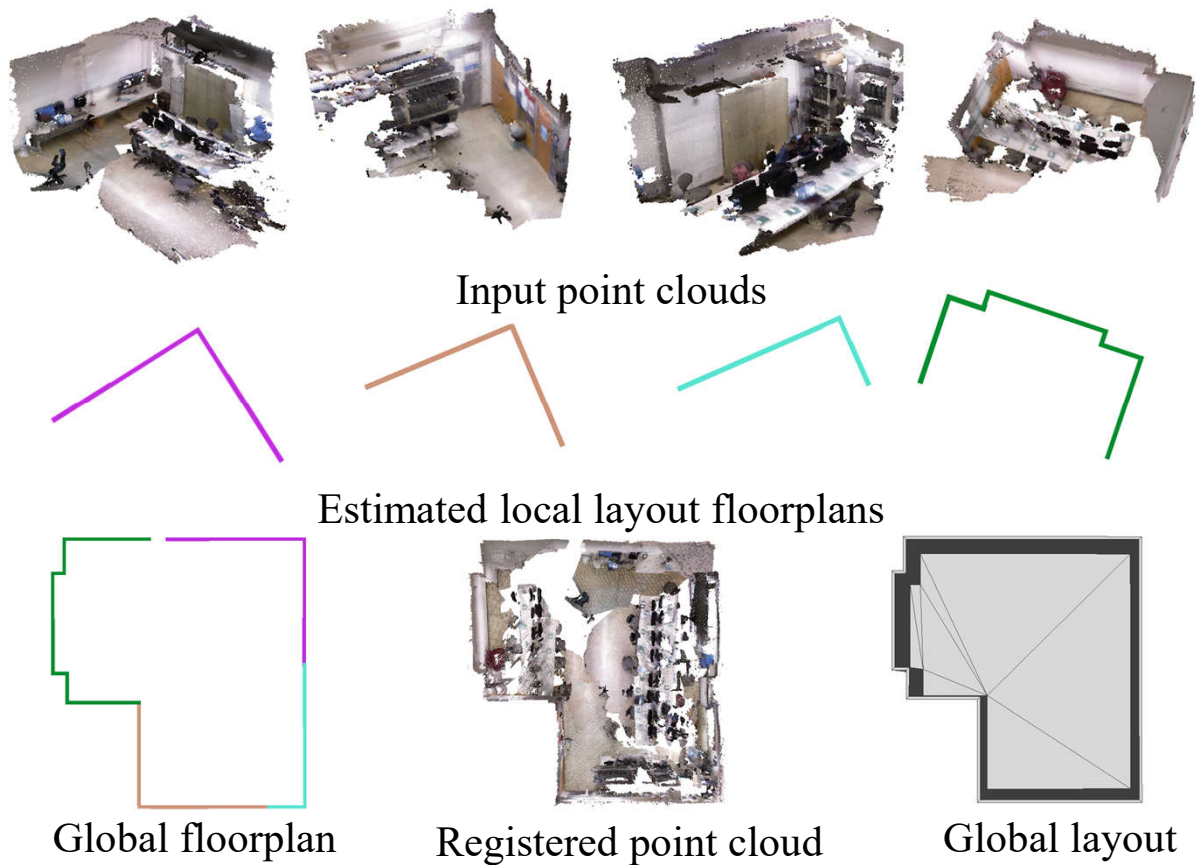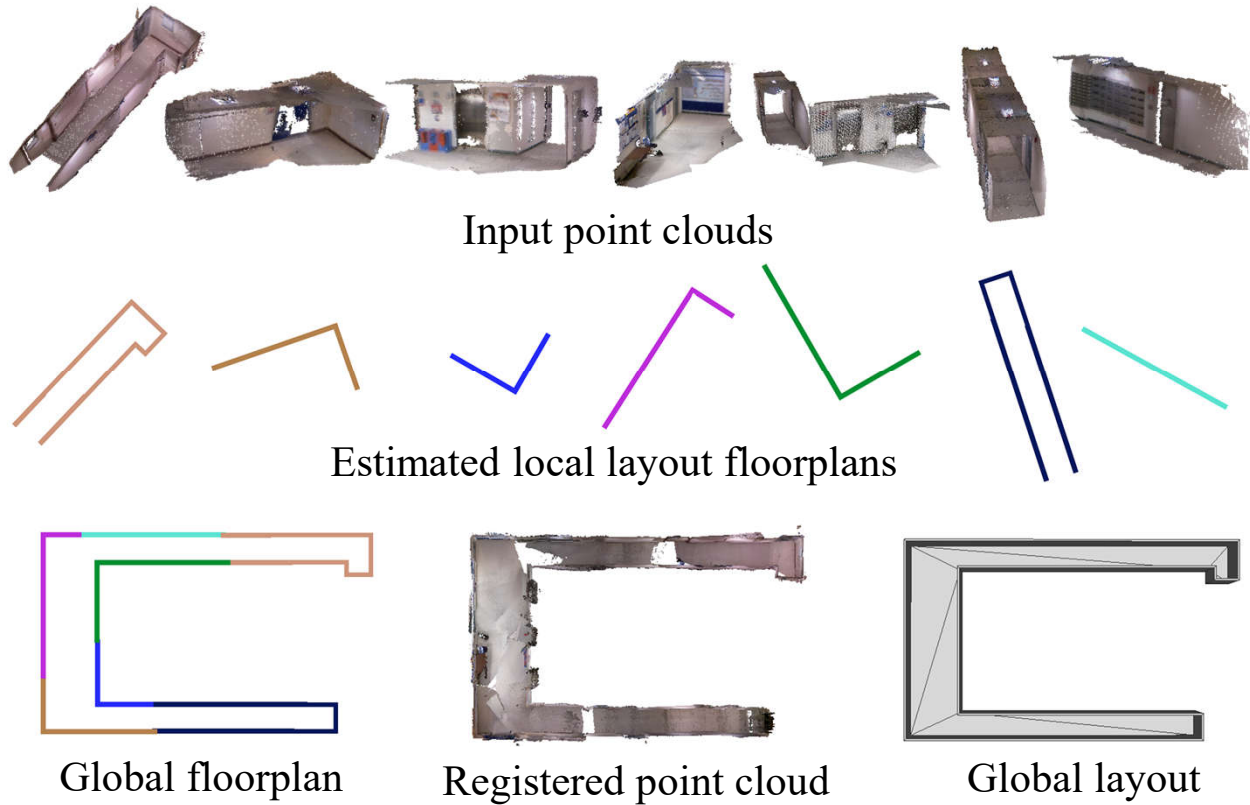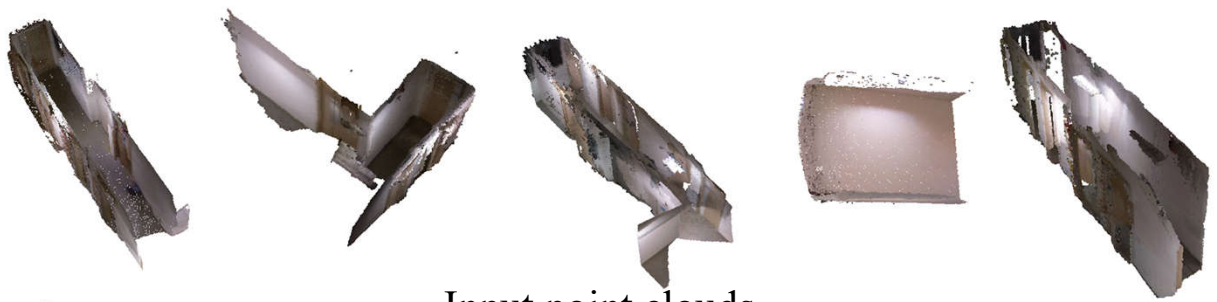
Supplementary Material

We provide the results from our algorithm for 21 scenes with totally 100 partial fragments. The inputs of the results include real world scanned data, synthetic scanned data, real world RGB-D images and synthetic RGB-D images.

We show the results in four aspects: (1) Estimated local layout for each partial data; (2) estimated global floorplan from the combination of the local floorplans; (3) registered point cloud using estimated camera poses; (4) reconstructed global layout model.
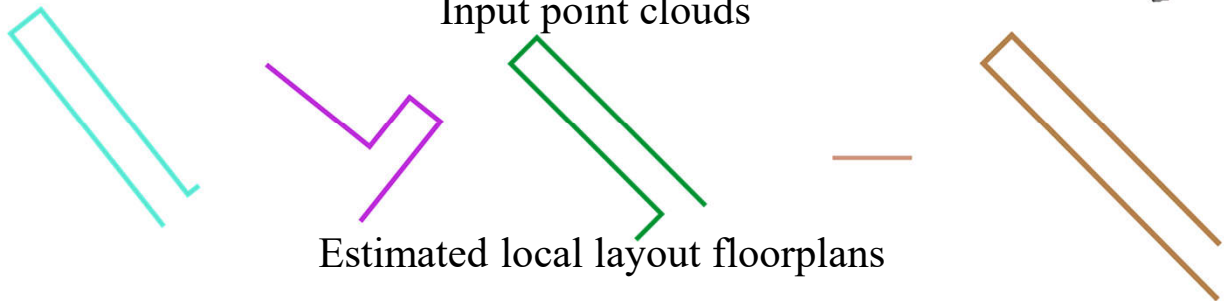
1.   Results from partial scans

1.1 Real world data

Input point clouds

Estimated local layout floorplans

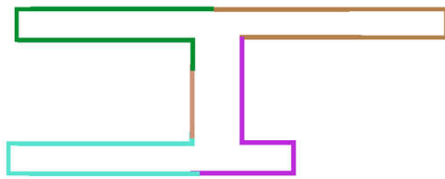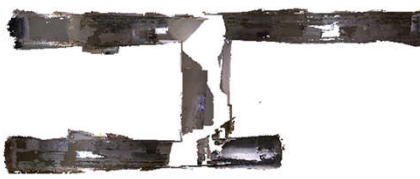Global floorplan   Registered point cloud   Global layout
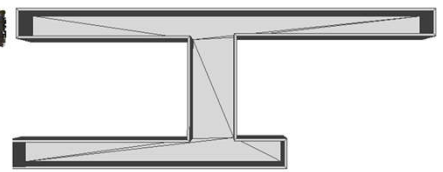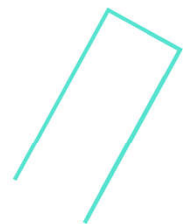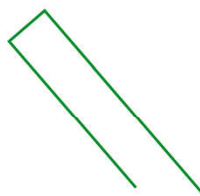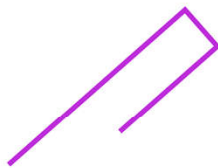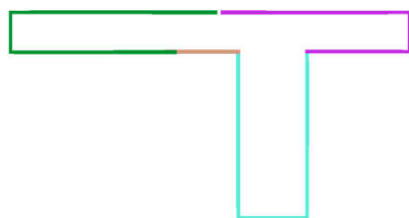

Input point clouds

Estimated local layout floorplans

Global floorplan   Registered point cloud   Global layout

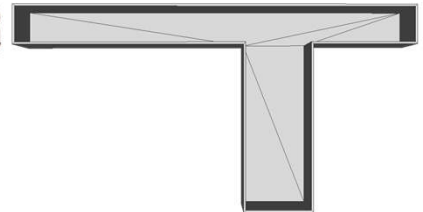Input point clouds

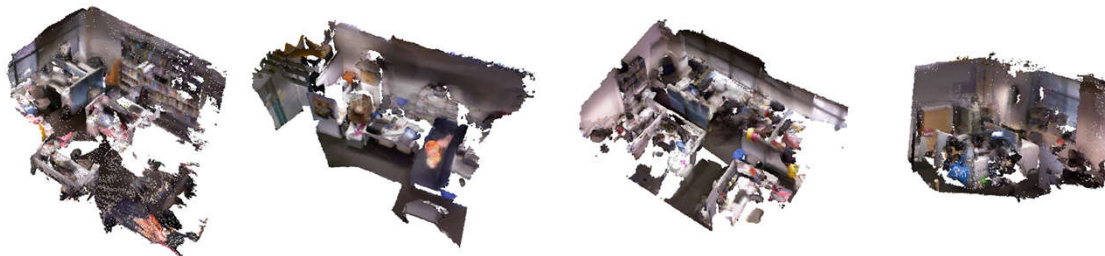Estimated local layout floorplans

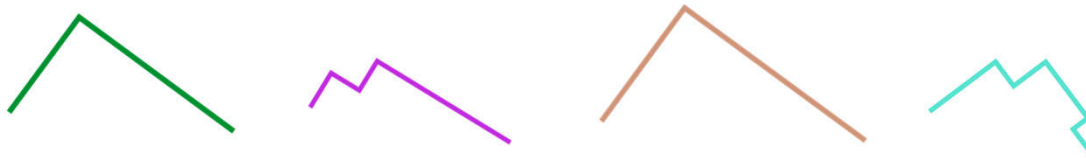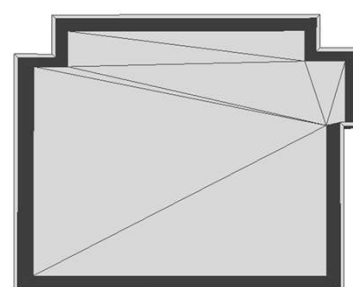Global floorplan   Registered point cloud   Global layout

Input point clouds

Estimated local layout floorplans
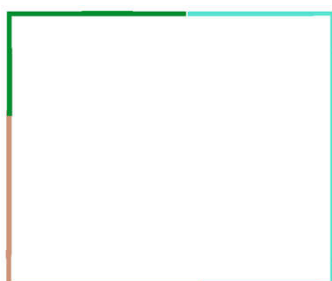
Global floorplan   Registered point cloud   Global layout
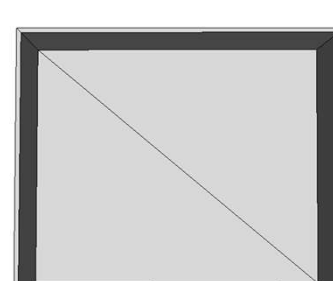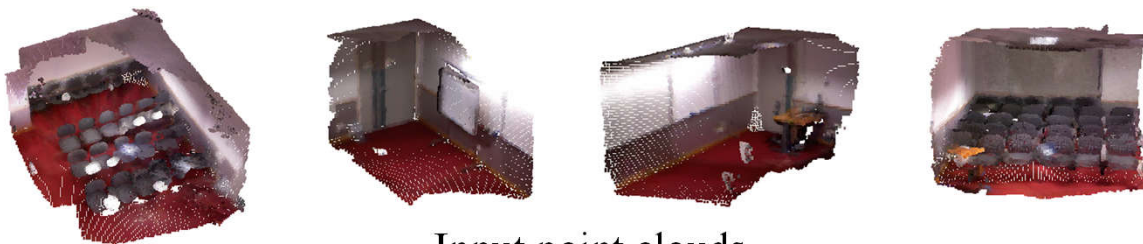
Input point clouds

Estimated local layout floorplans

Global floorplan   Registered point cloud   Global layout

Input point clouds

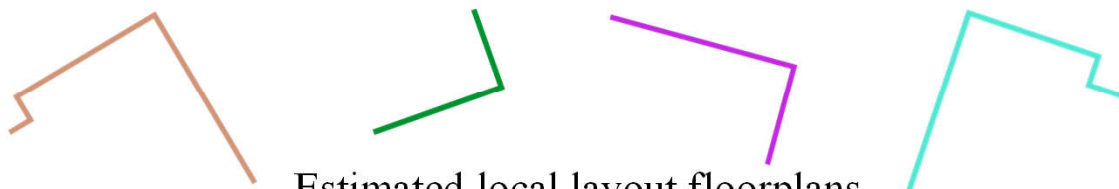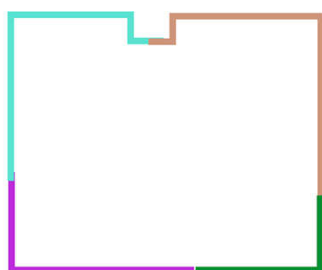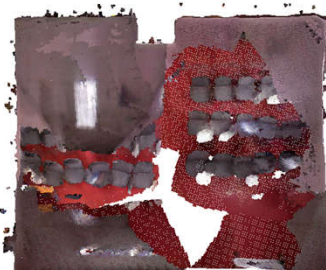Estimated local layout floorplans

Global floorplan   Registered point cloud   Global layout

Input point clouds

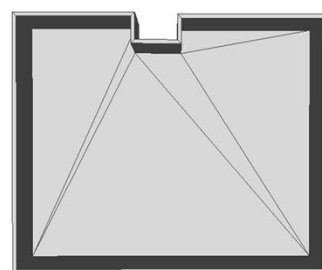Estimated local layout floorplans
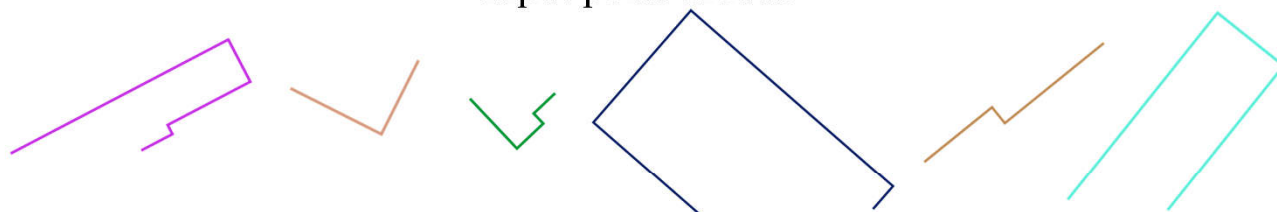
Global floorplan   Registered point cloud   Global layout
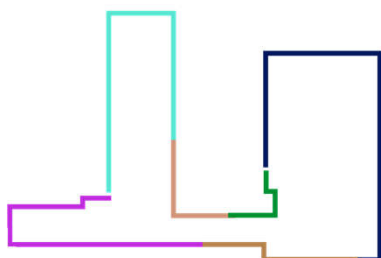
Input point clouds

Estimated local layout floorplans

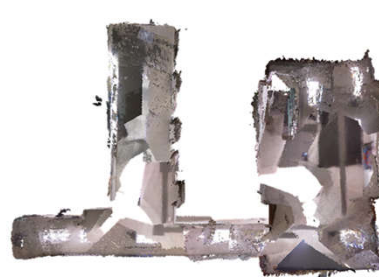Global floorplan   Registered point cloud   Global layout

1.2 Synthetic data

Input point clouds
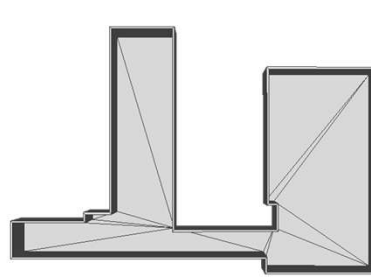

Estimated local layout floorplans

Global floorplan   Registered point cloud   Global layout

Input point clouds

Estimated local layout floorplans

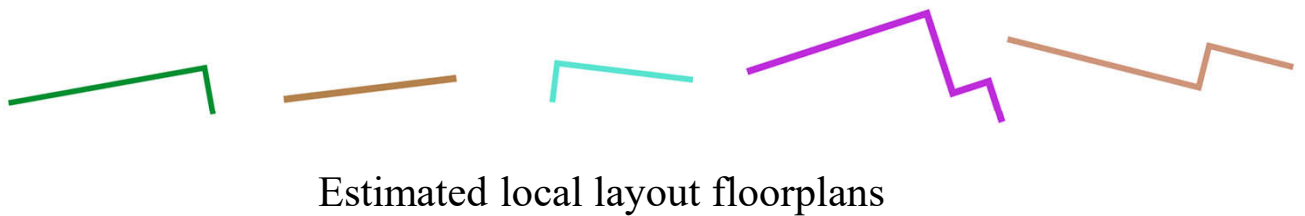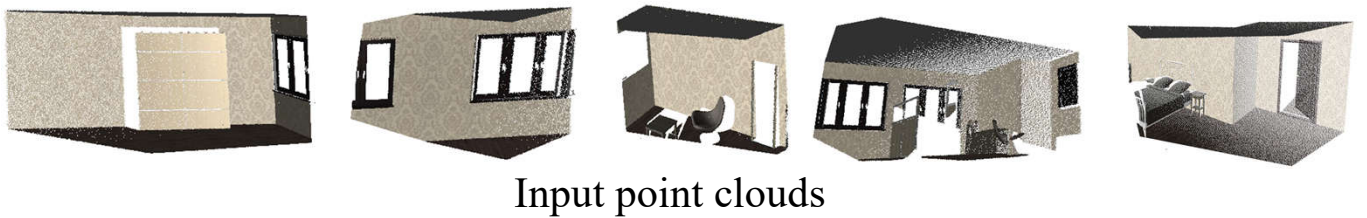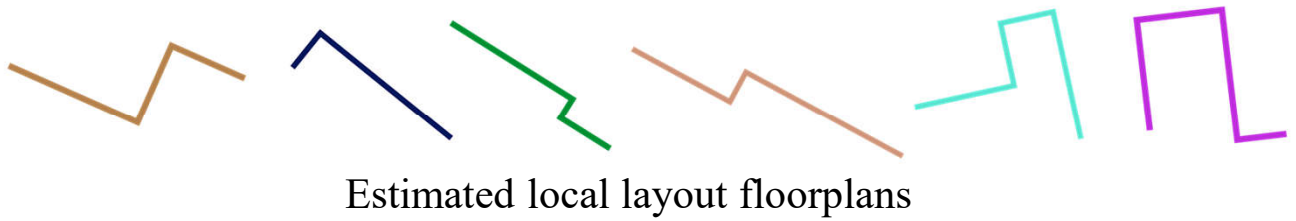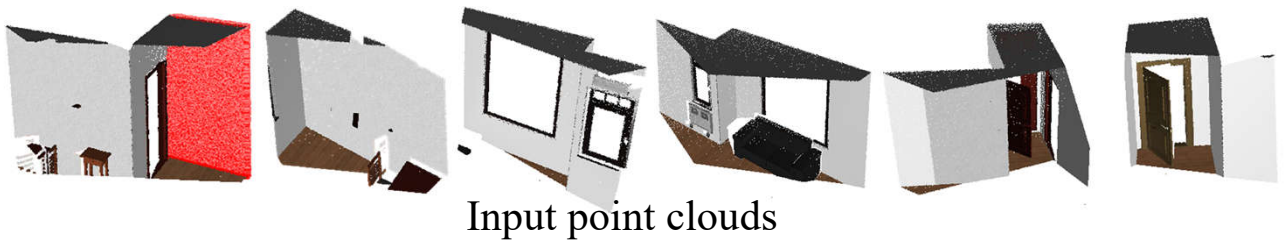Global floorplan   Registered point cloud   Global layout

2.   Results from RGB-D images
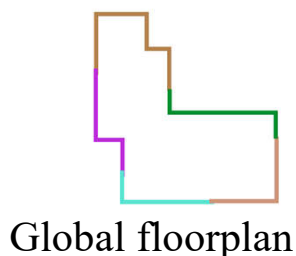
2.1 Real world data

Input RGB-D images
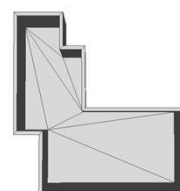
Generated point clouds

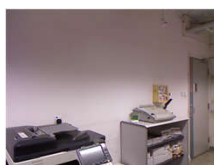Estimated local layout floorplans

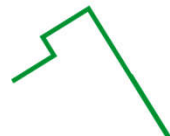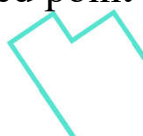Global floorplan   Registered point cloud   Global layout

Input RGB-D images

Generated point clouds

Estimated local layout floorplans

Global floorplan   Registered point cloud   Global layout

Input RGB-D images
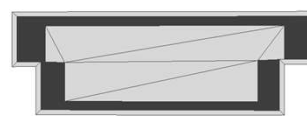
Generated point clouds

Estimated local layout floorplans

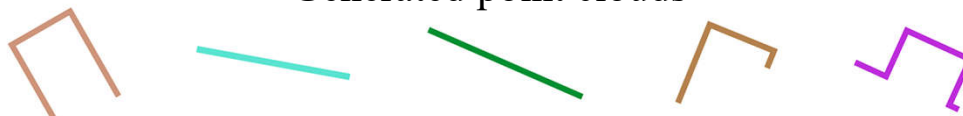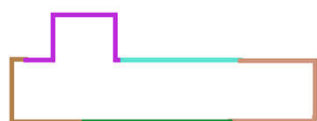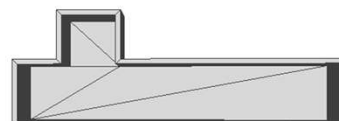Global floorplan   Registered point cloud   Global layout

Input RGB-D images

Generated point clouds

Estimated local layout floorplans

Global floorplan   Registered point cloud   Global layout
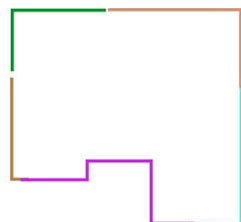
Input RGB-D images

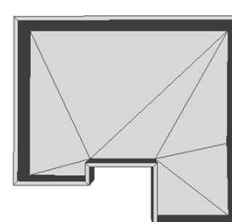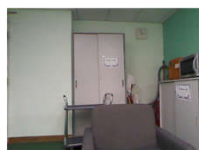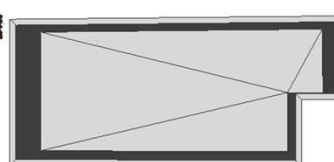Generated point clouds

Estimated local layout floorplans

Global floorplan   Registered point cloud   Global layout

Input RGB-D images

Generated point clouds

Estimated local layout floorplans

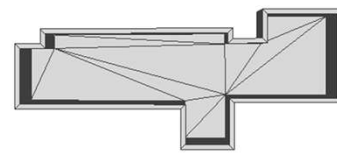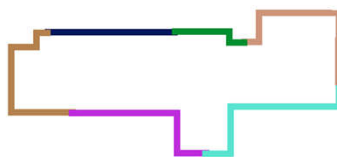Global floorplan   Registered point cloud   Global layout

Input RGB-D images

Generated point clouds

Estimated local layout floorplans

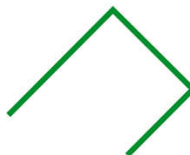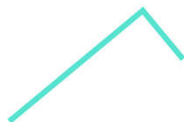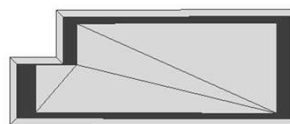Global floorplan Registered point cloud Global layout

2.2 Synthetic data

Input RGB-D images

Generated point clouds

Estimated local layout floorplans

Global floorplan   Registered point cloud   Global layout

Input RGB-D images

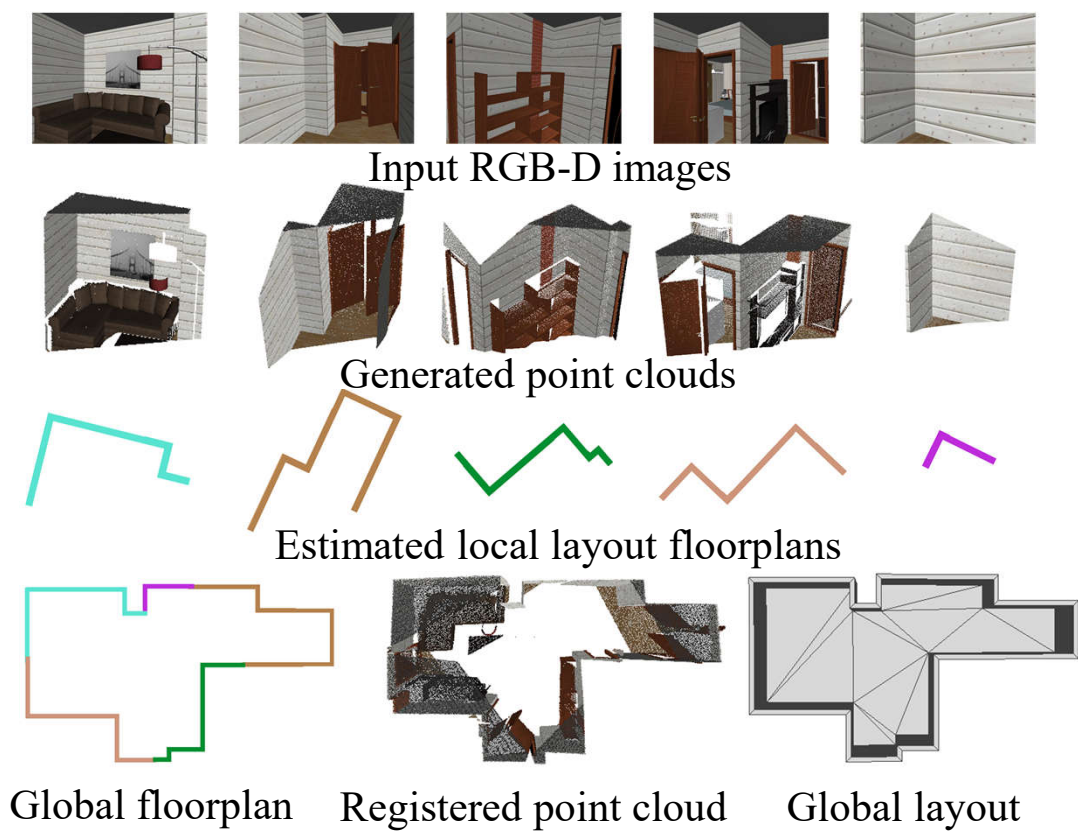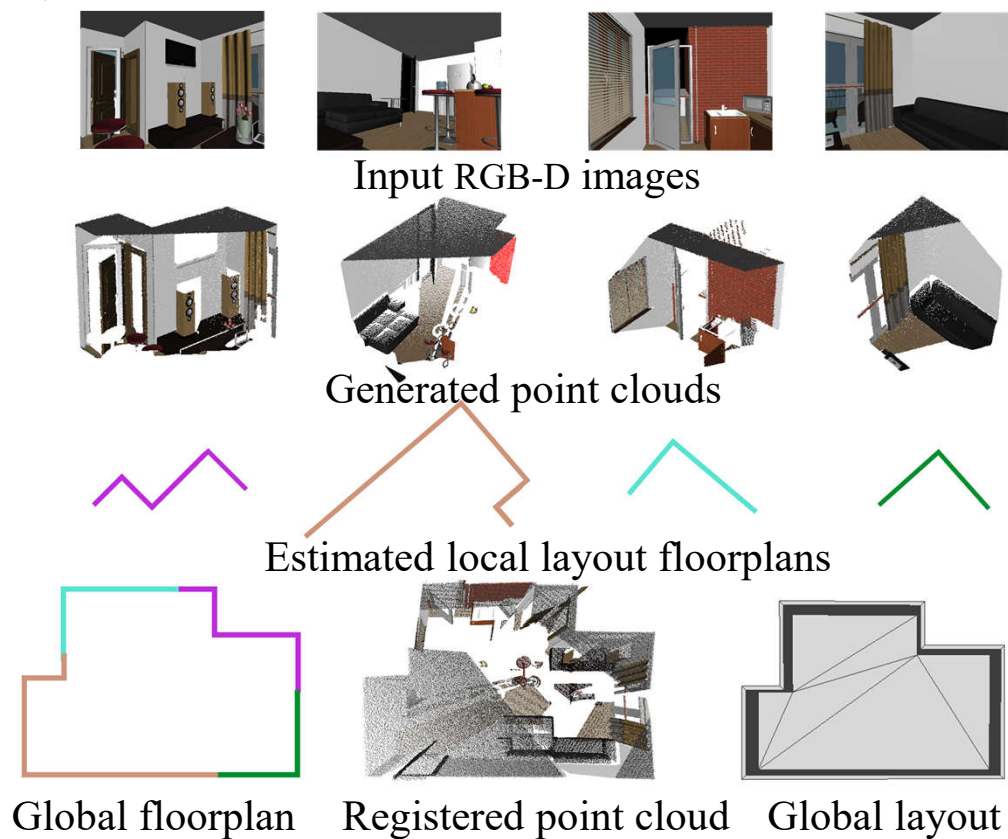Generated point clouds

Estimated local layout floorplans

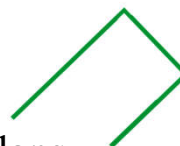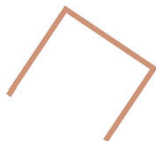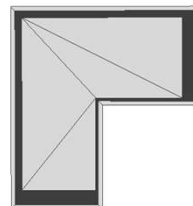Global floorplan   Registered point cloud   Global layout
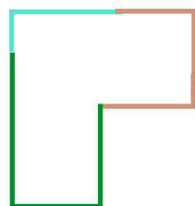
Input RGB-D images

Generated point clouds

Estimated local layout floorplans

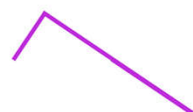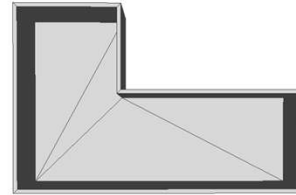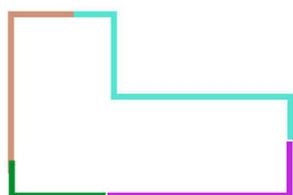Global floorplan   Registered point cloud   Global layout

Input RGB-D images

Generated point clouds

Estimated local layout floorplans

Global floorplan   Registered point cloud   Global layout