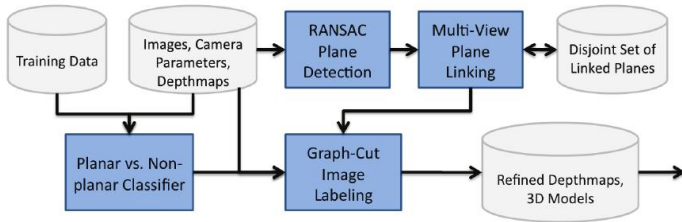


Piecewise Planar and Non-Planar Stereo for Urban Scene Reconstruction

D. Gallup, JM. Frahm and M. Pollefeys (CVPR 2010)



- ▶ Depth estimation in indoor and urban outdoor scenes
- ▶ Planarity assumptions are problematic in presence of non-planar objects
- ▶ Stereo method capable of handling more general scenes containing planar and non-planar regions
- ▶ Segmentation by multi-view photoconsistency and color-/texture-based classifier into piecewise planar and non-planar regions
- ▶ Standard multi-view stereo used to model non-planar regions
- ▶ Fusion of plane hypotheses across multiple overlapping views ensure consistent 3D reconstruction
- ▶ Tested with street-side sequences captured by two vehicle-mounted color-cameras