Global map construction

LiDAR scans → Pairwise alignment

IMU

GPS

Wheel odometry

Globally consistent point cloud

Manual Annotation

Global HD semantic map

Centimeter-level localization
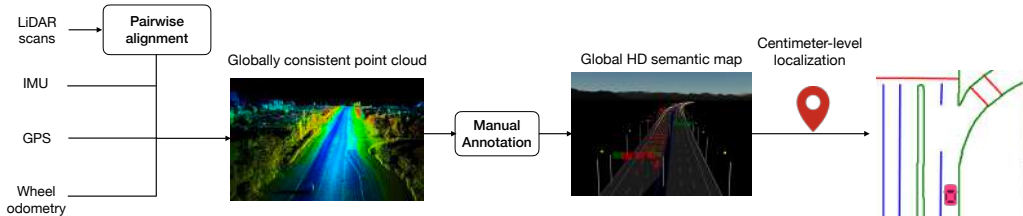
Local semantic map learning (Ours)

Surrounding cameras

LiDAR

and/or

HDMapNet

Local HD map