Abstract

The invention relates to a method for determining a position of a vehicle is provided. The method comprises the following steps: In a first step, a reference map is provided. The reference map comprises segmentations of a reference image with landmarks. In a second step, real time LIDAR data and a measurement image of a vehicle environment are captured. In a third step, segmentations of the measurement image and neighborhood graphs are determined to obtain a measurement map, wherein a segmentation is represented by a vertex and where a neighborhood graph comprises the vertex and edges containing information to identify neighboring vertices of the vertex. In a fourth step, segmentations of the reference image are compared with the segmentations represented by the vertices of the measurement image and the neighborhood graphs and segmentations contained in the reference image and in measurement image are determined. In a fifth step, estimating the vehicle's position with reference to the reference map during its movement along a road based on a result of the comparison is carried out.

(Figure 10)