

ABSTRACT

Systems and methods for identifying and positioning one or more objects around a vehicle are provided. The method may include obtaining a first light detection and ranging (LiDAR) point cloud image around a detection base station. The method may further include identifying one or more objects in the first LiDAR point cloud image and determining one or more locations of the one or more objects in the first LiDAR point image. The method may further include generating a 3D shape for each of the one or more objects; and generating a second LiDAR point cloud image by marking the one or more objects in the first LiDAR point cloud image based on the locations and the 3D shapes of the one or more objects.

(Fig. 5)