ABSTRACT

The present application relates to labeling methods and systems for 3D point cloud segmentation. The labeling method comprises steps of importing 3D point cloud data; determining a scenario of the 3D point cloud data; and if the scenario is that the 3D point cloud data includes no prior labeled data, adopting a 2D-image-based workflow to label the 3D point cloud data. In the 2D-image-based workflow, the 3D point cloud data is projected on 2D images to generate segmented masks under unsupervised image segmentation. The scenarios can comprise the 3D point cloud data includes sufficient labeled data and the 3D point cloud data includes insufficient labeled data. This present application also provides related processing steps. The labeling methods and systems can significantly reduce the time and manual effort for 3D point cloud semantic segmentation, allow an iterative process to conduct pre-labeling and re-labeling and increase accuracy at the same time.

Fig. 1 for publication