

Obtaining a point cloud data of a real-world scene, wherein a plurality of physical markers are provided within the real-world scene and have a three-dimensional structure with an uneven surface

Identifying each of the plurality of physical markers through a classification algorithm; and obtaining a pose of each of the plurality of physical markers and a position of each of the plurality of physical markers, as well as a relative relationship between the plurality of physical markers, through point cloud registration

Adjusting a size of a virtual content, a pose of the virtual content and a position of the virtual content based on the pose of each of the plurality of physical markers and the position of each of the plurality of physical markers as well as the relative relationship between the plurality of physical markers, and aligning a virtual marker within the virtual content with the plurality of physical markers through point cloud registration, so as to achieve an alignment of the virtual content on a surface of a physical object

Fig. 1



Fig. 2

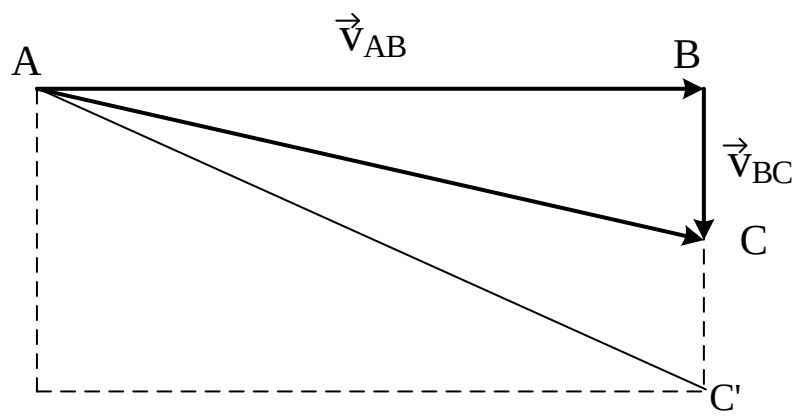


Fig. 3

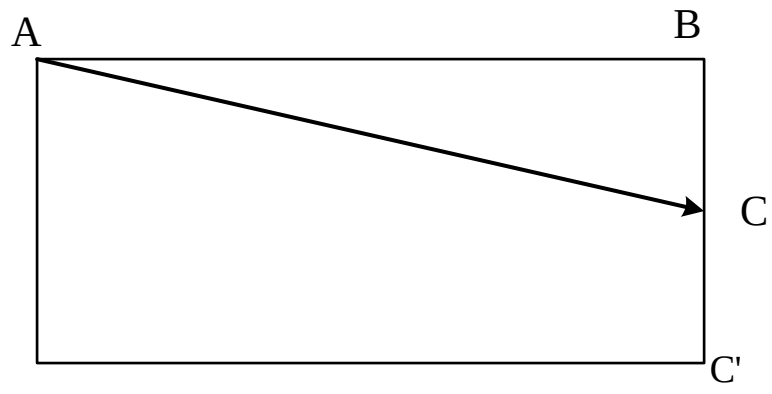


Fig. 4