

ABSTRACT

Methods and apparatuses of encoding a video stream using video point cloud coding include obtaining a source point cloud; obtaining a geometry-reconstructed point cloud, wherein the geometry-reconstructed point cloud is reconstructed using lossy coding; obtaining a target point included in the geometry-reconstructed point cloud; performing at least one of a forward K-dimensional (KD)-tree search to determine a first plurality of points of the source point cloud which are nearest neighbors to the target point, and a backward KD-tree search to determine a second plurality of points of the source point cloud for which the target point is a nearest neighbor; determining an average color value based on at least one of a first average color value of the first plurality of points and a second average color value of the second plurality of points; selecting a color value for the target point based on the average color value; and generating an encoded video stream based on the selected color value.