Abstract

A method for encoding and decoding, an encoder and decoder for a point cloud is disclosed. The method for encoding a point cloud to generate a bitstream of compressed point cloud data, wherein the point cloud's geometry is represented by an octree-based structure with a plurality of nodes having parent-child relationships by recursively splitting a volumetric space containing the point cloud into sub-volumes each associated with a node of the octree-based structure, comprising the steps of: Determining a coding mode, wherein the coding mode includes planar coding mode and angular coding mode; Obtaining coding context information for a present child node~~, wherein if the coding mode is the planar coding mode, coding context information includes planar context information, wherein planar context information of the present child node is determined according to the occupancy pattern of the present parent node and the occupancy pattern of at least one neighboring parent node positioned directly next to the present parent node; and if the coding mode is the angular coding mode, the coding context information of a present child node includes planar information of the present parent node and the occupancy of the vertical parent neighbor adjacent to the present parent node~~. At last entropy encoding the occupancy of the present child node based on the determined coding context information to produce encoded data for the bitstream.

Fig. 1