



## Systems, Methods, And Media For Hierarchical Progressive Point Cloud Rendering

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### The Invention

In accordance with some aspects, systems, methods and media for hierarchical progressive point cloud rendering are provided. In some aspects, a method for point cloud rendering is provided, the method comprising: rendering a first image based on point cloud data; requesting point cloud points, first synthetic point cloud points, and an octant of a second synthetic point cloud that intersects a new viewing frustum; reprojecting points used during rendering of the first image into frame buffer objects (FBOs) of different resolutions; replacing reprojected points if a received point corresponding to the same pixel is closer to the camera; determining that a pixel in the highest resolution FBO is unfilled; copying a point that originated in a lower resolution FBO to the gap in the highest resolution FBO; and when the highest resolution FBO is filled, rendering a second image based on the contents.

### Additional Information

#### For More Information About the Inventors

- [Kevin Ponto](#)

#### Tech Fields

- [Information Technology : Computing methods, software & machine learning](#)
- [Information Technology : Image processing](#)

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