

LARGE SCALE CONSTRAINT DELAUNAY TRIANGULATION FOR VIRTUAL GLOBE RENDERING

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ABSTRACT:

A technique to create a Delaunay triangulation for terrain visualization on a virtual globe is presented. This method can be used to process large scale elevation datasets with billions of points by using little RAM during data processing. All data is being transformed to a global spatial reference system. If grid based elevation data is used as input, a reduced TIN can be calculated. Furthermore, a level of detail approach for large scale out-of-core spherical terrain rendering for virtual globes is presented using the previously created TIN.

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