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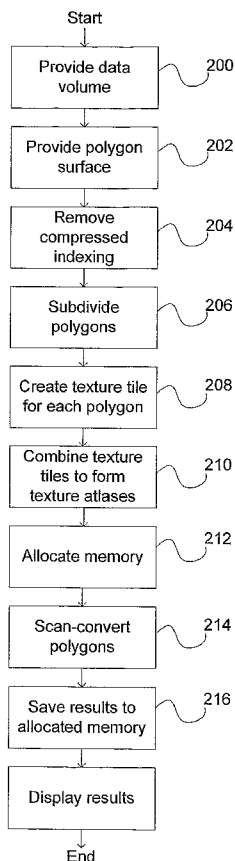
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(54) Title: SYSTEM AND METHOD FOR APPLYING ACCURATE THREE-DIMENSIONAL VOLUME TEXTURES TO ARBITRARY TRIANGULATED SURFACES



(57) Abstract: Systems and methods for displaying volume data on an arbitrary three-dimensional polygonal surface are disclosed. For each polygon in the polygonal surface, a two-dimensional texture tile is created and these texture tiles are combined to form texture atlases. Each texture atlas is allocated a specific amount of memory in a texture cache. Each polygon in the polygonal surface may be scan-converted and the resulting texels may be placed in the texture cache. Voxels that do not intersect any polygon in the polygonal surface may not be scan-converted. This method may result in reduced use of texture cache.

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