The Development and Implementation of a Combined Solid Geometry ray tracer with tree based solid textures

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Abstract

Combined Solid Geometry allows the internals of objects to be viewed, by manipulation of the functions of a CSG tree Coupling this nature with solid textures means that the internals of objects can be viewed This dissertation aims to investigate the effect of using solid textures that are based in a tree format by implementing a ray tracer with both combined solid geometry and tree based solid textures The design and implementation of the system are described within along with testing the system with a scene file format developed for the system The dissertation concludes with a discussion of the system and further additions that could be made

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