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AN AUTOMATED PERSPECTIVE-PROJECTED VIEW MODULE FOR PIXEL-BASED CSG RENDERERS

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ABSTRACT—The generation of 3D solid objects, and more generally solid geometric modelling, is very important in Computer Aided Design (CAD). This paper presents a simple but effective algorithm for automated display of perspective views of Constructive Solid Geometry (CSG) scene models. This algorithm can be implemented as a module in such a way that it is easily integrated, without any modification, to the present systems of "pixel-based Z-Buffer" CSG renderers. An implementation of the algorithm for such a system is also given in the paper.

Key Words: CSG, Pixel-based renderers, Z-buffer, Parallel projection, Perspective projection.