
An Iterated Algorithm for Implicit Surfaces Rendering

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ABSTRACT

In computer graphics, implicit surfaces are easy to generate geometric form, but difficult to render. We present a point-based rendering algorithm for high-quality rendering of implicit surface. Its implementation is simple. It can render arbitrary implicit surfaces, but the speed is slow. Towards the implicit surfaces, one variable can be expressed in term of the other two, the method can be used to render the surfaces efficiently. Furthermore, it can also be used to removal the hidden surface using a z-buffer and to create shadows using a shadow buffer.

Keywords: Implicit Surfaces, Iterated Function System, z-Buffer, Shadow buffer.