Gradient based Volume Visual Attention Maps in Ray Casting Rendering

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Abstract

This paper presents a method to naturally enhance spatial regions in ray casting volume rendering using a spatial importance measure inferred from the user's visual attention focus. This work presents three improvements over a former work of the author on Volume Visual Attention Maps in Ray-Casting rendering. These contributions are: a more accurate and realistic volume visual attention map definition, a watershed pre-segmentation guided visualization enhancement and the use of a generic two-dimensional transfer functions combined with the importance measure as opposed to the one-dimensional functions used in the previous work.

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