

An environmental radiation interaction modeling in dynamic scene simulation software

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Received 6.09.2023; revised 21.09.2023; accepted 27.09.2023

A path tracing method support to the existing dynamic 3D scenes simulator has been developed. This method allows obtaining physically correct images taking into account multiple interactions of electromagnetic waves with bodies. The results of several scenes calculations and a performance assessment of hardware-accelerated path tracing in the visible wavelength range are presented.

Keywords: modelling, photodetector, 3D, scene, ray tracing, path tracing, GPU, Vulkan.

DOI: 10.51368/2307-4469-2023-11-5-433-445

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