

Enhancing depth perception of purely absorptive media.

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We present empirical studies that consider the effects of stereopsis and simulated aerial perspective on depth perception in translucent volumes. We consider a purely absorptive lighting model, in which light is not scattered or reflected, but is simply absorbed as it passes through the volume. A purely absorptive lighting model is used, for example, when rendering digitally reconstructed radiographs (DRRs), which are synthetic X-ray images reconstructed from CT volumes. Surgeons make use of DRRs in planning and performing operations, so an improvement of depth perception in DRRs may help diagnosis and surgical planning.