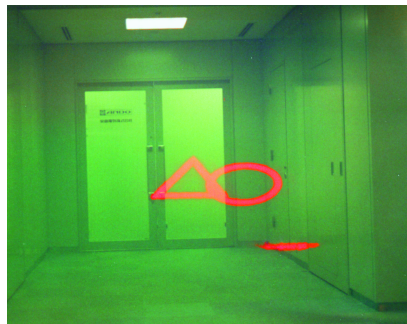
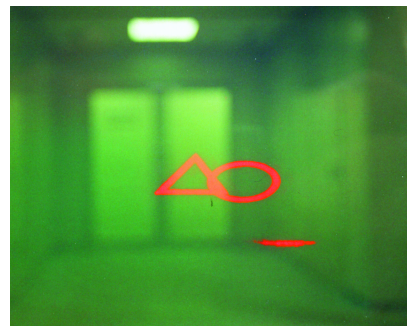


This new stereoscopic display uses a holographic optical element (HOE) to provide a Maxwellian view, which converges the coherent parallel rays at the center of the human eye and projects the rays directly on the retina. Direct retinal projection does not rely on the eye's crystalline lens, so the virtual object can be seen at any convergence. Conventional binocular stereoscopic displays

(head-mounted displays, for example) disassociate accommodation and convergence, because they have a fixed focal length. This project's stereoscopic retinal projection overcomes that defect. In addition, the HOE grating that provides the holography effect is very efficient in both transparency and diffraction, so users can see the real world and virtual objects at the same time.



Focus to real world



Defocus to real world

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Display and observer