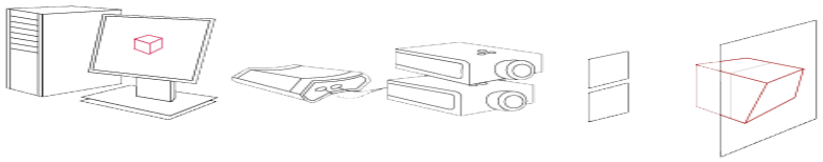
THE CENTER FOR THE DIGITAL GLOBE @ university of missouri-columbia

brown bag lunch seminar, wednesday, april 18

Affordable Virtual Reality Technology for Design Communication

Virtual reality (VR) indicates computer-generated interactive 3D environments. Two typologies of VR systems are immersive VR and Desktop –i.e. non-immersive VR. While both VR systems share the core concept of VR, 3D computer models enhanced with real-time interactive functionality, immersive systems require special equipment enabling stereoscopic 3D images, such as head-mounted displays (HMD) or projection walls but desktop VR (non-immersive VR) only require the desktop computer monitor.

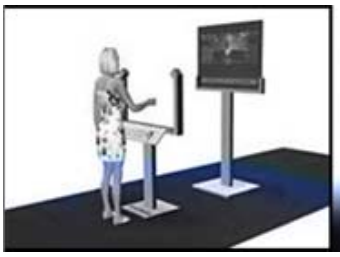
Immersive VR systems tend to provide a higher sense of Presence. The sense of presence is the defining experience for virtual reality (Steuer, 1992). "Presence", the sense of "being there" in a mediated environment, has been applied to describe the user experience when interacting with advanced media interfaces such as virtual environments. Immersive systems, e.g., large stereoscopic screen based VR, are very expensive when purchased as a package:$40,000~$50,000 per wall. The same system was far more affordable when parts are purchased separated.



standard hardware <$3,000	software/ converter <$2,000	standard LCD/DLP projectors < $2,000	polarized filter	special screen < $1,500	additional cost: projector stacker ($1000), polarized glasses ($10/ea), filters ($50/ea)

The affordable VR system will be utilized for multiple interdisciplinary studies currently in progress. On-going projects that will be further developed to adopt the VR system include architectural walk-through simulation, furniture market research, commercial interior design and customer behavior study.

www.vr-solution.com



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