VR without Attachments

Dan Sandin  
Director, Electronic Visualization Laboratory  
School of Art and Design  
University of Illinois at Chicago  
dan@uic.edu

Abstract

One of the continual criticisms of VR is that one has to put on gear. In the case of head-mounted displays one has to put on a helmet or visor, and in the case of projection-based displays one has to put on stereo glasses and usually a head tracking device. Advancements in camera based tracking and auto-stereo makes it possible to walk up to a display and have a VR experience “in your face” without wearing apparatus, or putting on glasses. This presentation will review camera tracking and auto stereo methods in general and describe in detail the methods used to create the Varrier™ auto stereo VR system developed at EVL. Auto-Stereo in the Varrier™ system is implemented using 35 LCD panels with barrier strips. Camera tracking is based on neural net face recognition algorithms.