

Stereoscopic Display Technology for Visualizing Vascular Structures

Abstract. The analysis of morphometric data of the vasculature of any organ requires appropriate visualization methods to be applied due to the vast number of vessels that can be present in such data. In addition, the geometric properties of vessel segments, i.e. being rather long and thin, can make it difficult to judge on relative position, despite depth cues such as proper lighting and shading of the vessels. Virtual environments that provide true 3-D visualization of the data can help enhance the visual perception. Ideally, the system should be relatively cost-effective. This presentation discusses various stereoscopic display systems, ranging from high-end CAVE-type display systems to inexpensive Linux-based virtual environments, and their utilization for visualizing vascular structures.