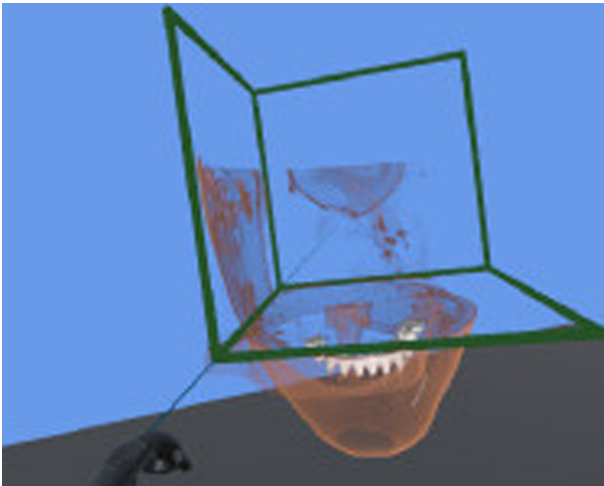


An Interaction Metaphor for Enhanced VR-based Volume Segmentation

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The segmentation of medical models is a complex and time-intensive process required for both diagnosis and surgical preparation. Despite the advancements in deep learning, neural networks can only automatically segment a limited number of structures, often requiring further validation by a domain expert. In numerous instances, manual segmentation is still necessary. Virtual Reality (VR) technology can enhance the segmentation process by providing improved perception of segmentation outcomes and enabling interactive supervision by experts. But inspecting how the progress of the segmentation algorithm is

evolving, and defining new seeds requires seeing the inner layers of the volume, which can be costly and difficult to achieve with typical metaphors such as clipping planes. In this paper, we introduce a wedge-shaped 3D interaction metaphor designed to facilitate VR-based segmentation through detailed inspection and guidance. User evaluations demonstrated increased satisfaction with usability and faster task completion times using the tool.