

Abstract:

In our laboratory we designed a cone-shaped, seamless and wide projection screen for psychophysical experiments in virtual reality (VR) to investigate the integration of head and eye movements in scene perception and navigational tasks. Our goal was to establish a low cost projection unit with a large field of view (FOV) in horizontal and vertical direction where no edges disturb the visualization. Here we present the engineering and computational considerations to establish such a setup in combination with a psychophysical evaluation and some results for different implementations.