

A platform for developing and fine tuning adaptive 3D navigation techniques for the immersive web

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Navigating through a virtual environment is one of the major user tasks in the 3D web. Although hundreds of interaction techniques have been proposed to navigate through 3D scenes in desktop, mobile and VR headset systems, 3D navigation still poses a high entry barrier for many potential users. In this paper we discuss the design and implementation of a test platform to facilitate the creation and fine-tuning of interaction techniques for 3D navigation. We support the most common navigation metaphors (walking, flying, teleportation). The key idea is to let developers specify, at runtime, the exact mapping between user actions and

virtual camera changes, for any of the supported metaphors. We demonstrate through many examples how this method can be used to adapt the navigation techniques to various people including persons with no previous 3D navigation skills, elderly people, and people with disabilities.