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Comparing the Effect of Virtual Reality and Sound on Landscape Perception

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Abstract : This paper presents preliminary results of exploratory empirical research investigating the effect of viewing 3D landscape visualizations in virtual reality compared to a computer monitor, and how sound impacts perception. Five landscape types were paired with three sound conditions (no sound, generic sound, realistic sound). Perceived realism, preference, recreational value, and biodiversity were evaluated in a controlled laboratory environment. Results indicate that sound has a larger perceptual impact than display mode regardless of sound source across all perceptual measures. The results are considered to assess how sound can impact landscape preference and spatiotemporal understanding. The paper concludes with a discussion of the impact on designers, planners, and the public and targets future research endeavors in this area.

Keywords : landscape experience, perception, soundscape, virtual reality
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