Subjective testing of the performance of reverberation enhancement using virtual reality environments

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ABSTRACT

Various systems for the purpose of performing subjective audiovisual tests have been evaluated. Auralizations and visualizations of two different halls in the Göteborg University School of Music have been made using CATT-Acoustic and VR-Creator/EON Studio. These simulations have been used in a subjective test for the purpose of evaluating the visual influence on room acoustical parameters, the realism and emotional parameters in a hall equipped with a reverberation enhancement system. The results show that depending on the room and type of stimuli, perceived room size, auditory source width and distance to sound source, are clearly influenced by the visual impression.

Keywords

Cross-modal interaction, auralization, virtual reality, reverberation enhancement, subjective tests