

عنوان مقاله:

Room Acoustic Reproduction by Spatial Room Response Rendering

محل انتشار:

دومین کنفرانس بین المللی آکوستیک و ارتعاشات (سال: 1391)

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خلاصه مقاله:

Spatial room response rendering is a recent technique to reproduce the acoustics of an enclosed space in a spatial form. In this technique the original sound field is not precisely reproduced but based on psychoacoustics concepts for human localization and physics of sound, the original sound field is analyzed, and a kind of sound field is synthesized that is perceptually corresponded to the original one. To reach this goal, the room response is first measured and then desired response is synthesized. In this method, the loudspeaker system is not limited to a specific structure and any loudspeaker setup can be used for reproduction. In this paper, we report the results of applying spatial room response rendering technique to measured data of a room. In this work, an Exponential Sine Sweep (ESS) was used as excitation signal that ranges all audio frequencies, B-format microphone technique was used for the first time for room response measurement, and reproduction setup is based on three full band loudspeakers assembly. Time dependency of arrival direction and diffuseness of the measured room responses are analyzed and based on the results of this analysis, a multichannel response is synthesized for the loudspeaker setup

کلمات کلیدی:

Spatial rendering; acoustic reproduction; B-format microphone technique

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