

12. Expanding a Sound Environmental Presentation System

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Since sound environment performance is generally presented in the form of numerical values, the ordinary public often has difficulty envisioning the various aspects of this performance. Against this backdrop, we developed a system that predicts, creates, and reproduces the performance of the acoustic environment as actual sounds based on design specifications. We upgraded the developed system to a new cloud-based system that can predict real-world acoustics. The system hardware consists merely of a mobile computer and headphones. This system also corrects the acoustic characteristics of microphones and headphones based on experiments and performs correction processing between the sound recording and the processed predicted playback audio in the cloud server.

The upgrade significantly improved system processing speeds and portability, allowing use anywhere with access to the Internet. The system allows on the spot audio predictions based, for example, on specifications changed at a meeting. Comparing the predicted audio to actual sounds demonstrates the system's accuracy.

Key words: sound environment, performance evaluations, cloud system, mobile computers, presentation