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An Optimized Method for Capturing Multidimensional Acoustic Fingerprints

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An optimized method for the creation and modeling of authentic "acoustic fingerprints" of an arbitrary acoustical space is presented. The methodology is intended primarily for experienced recording engineers who possess the necessary elements (a loudspeaker, typical sound recording equipment, and knowledge of microphone placement) for the discussed room sampling method. Listening tests performed by experienced Tonmeisters provided results which supported the extension of a well-known acoustical method to yield a new generation of simulation tools for use in music and film postproduction studios. New software and a "spider microphone" were developed to further facilitate the process. Underlying practical hints for room sampling, the presentation will include a "virtual acoustic tour" through famous German space in multichannel format, as well as a preview of the coming generation of devices for complex sound field simulation.