A method for generating sound zones with different acoustic properties in a room is presented. The method is an extension of the two-dimensional multi-zone sound field synthesis technique recently developed by Wu and Abhayapala; the goal is, for example, to generate a plane wave that propagates in a certain direction within a certain region of a room and at the same time suppress sound in another region. The method is examined through simulations and experiments. For comparison a simpler method based on the idea of maximising the ratio of the potential acoustic energy in an ensonified zone to the potential acoustic energy in a quiet zone is also examined.

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