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Potential and Benefit of Audible Noise Maps

Genuit, Klaus, Fiebig, André and Marla, Philipp
HEAD acoustics GmbH
klaus.genuit@head-acoustics.de

The importance of several (psycho-)acoustic parameters to noise evaluation and noise rating was demonstrated in numerous studies. However, in conventional noise maps neither information about further acoustic parameters nor comprehensive auralization options are available. In the context of the European research project "Quiet City Transport" the development of a traffic noise synthesizer was initiated, which deals with the idea of generating time signals representing specific traffic scenarios. On the basis of such generated time signals various acoustical parameters can be calculated and in consideration of sound propagation effects the noise for certain receiver positions can be determined. The advantage of noise maps providing audible examples of noise exposure in important immission points would be that experts and decision makers can listen to the environmental noise and can base their decisions with respect to required noise mitigation measures on a more significant basis. Of course, several criteria like accuracy, uncertainty, practicability, feasibility, interpretability of the maps must be critically discussed before considering the implementation of more extensive auralization tools in noise maps. The presentation will show some case study results. Moreover, the benefit of advanced noise maps will be highlighted and realization impediments will be discussed.

Number of words in abstract: 195

Keywords: Noise Maps - Psychoacoustics - Environmental Noise

Technical area: Soundscape

Special session: Sound scaping and sound masking

Presentation: Oral presentation preferred (Invited paper)

Special equipment: Video-projector (beamer)

Registration: 169090425 - Genuit Klaus - 0 0 not paid