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Chair: G. Brambilla

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Development of a synthesis tool for soundscape design

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Road traffic noise is often a dominant sound source in urban settings. By means of traffic management measures and implementation of noise mitigation actions it is intended to improve the environmental noise situation, which means reduced sound pressure levels at relevant immission places. However, a soundscape is understood as a sonic environment with emphasis on the way it is perceived. In other words, this concept implies much more than only sound pressure levels. For example, hearing experiences contribute to the perception of location-related noise significantly.

To allow for the listening to environmental noise, where e.g. the effect of planned noise “protection” measures can be heard, a synthesis tool was designed. The development of the tool for the auralization of simulated traffic scenarios was done within the research project Quiet City Transport. Since the tool considers only road traffic noise so far, it covers only one aspect of soundscapes. However, a prospect of this technology is to derive psychoacoustic maps, which could improve the planning reliability in the context of the redesign of cities and their road traffic situations. Thus, it could be a helpful tool, which enables urban planners to consider the aspect of noise right from the beginning.

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