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Title:

Psychoacoustics, the long way to be considered into international standards

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Abstract:

For several decades the A-weighted sound pressure level has been used for the evaluation of sound. But sound character is determined by the spectral composition and the temporal patterns. For this reason, the discipline of psychoacoustics has established itself, which can provide more differentiated analyses describing the sound character. With the help of psychoacoustics parameters such as loudness, sharpness, tonality, roughness, fluctuation and impulsiveness, the auditory impression of sound events can be viewed in a more differentiated way than just with the A-weighted sound pressure level. The first standards were developed for stationary loudness DIN 45632 and ISO 523. In the meantime, we have standards by ECMA-418-2 describing different psychoacoustical parameters based on a hearing model like tonality, roughness and fluctuation strength. The international standard ISO 12913 "Soundscape" describes this relationship of perceived sound quality considering the context.