

DAGA 2020

16th – 19th of March 2020

Place:

Hannover, Germany

Title:

Application of Psychoacoustic Tonality for Product Sound Development

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Abstract:

The perception of tonal sounds is one of the most important psychoacoustic sensations for product sound quality. In the past, a lot of work has been carried out to automatically quantify tonal sound events. The psychoacoustic tonality is a method for the quantification of tonal sounds, which is based on a hearing model which emulates the processing of human hearing. It is standardized in the ECMA-74 standard (since June 2018).

In this paper, the results of the psychoacoustic tonality are validated by comparison with the results of listening tests for different signal types. The application of the psychoacoustic tonality according to the ECMA-74 standard is described. For several examples, it is shown how the psychoacoustic tonality can be used for product sound development and how the results can be interpreted.