

ACOUSTICS 2020 / Virtual Conference

5. – 6. + 8. – 9. October 2020

Title: Tools for data collection in Soundscape applications

Authors: Frederik Gast (HEAD acoustics GmbH), Andreas Herweg (HEAD acoustics GmbH)

Abstract:

Currently smart city concepts are mainly technological concepts, which aim to provide a highly efficient city management to urban dwellers. What should not be disregarded, is that a smart city concept should also ensure a high quality of life. Important key features like the acoustic environment should not be overlooked, since noise is a major stressor for human health. Soundscape analysis and application is a proven method of providing an improved acoustic environment for urban dwellers.

This paper aims to show the results of an exemplary soundscape study according to the standardized concepts and methods according to ISO 12913-2 with focus on the supporting tools for quantitative data collection. As specified in ISO 12913-2, quantitative data consist of perceptual data (questionnaires), psychoacoustic indicators (e.g. loudness, sharpness) and physical indicators (sound levels) that are collected by applying the soundwalk method. Recent developments in tools for assessment of the acoustic environment (binaural recordings, psychoacoustic analyses and level analyses) and the collection of perceptual data (handheld devices with specific questionnaire) will be presented. This paper presents the design and application of a Soundscape data acquisition campaign designed to fulfill the normative requirements in ISO 12913-2 (Annex C) followed by a sample findings summary report.