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**A comparison between two methods for speech transmission  
quality assessment with noise simulation at receiver's side**

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Two auditory experiments are presented that were designed in order to compare two different methods for the assessment of speech quality when noise at listener's side is present: (1) Headphone presentation with samples pre-recorded over a head and torso simulator, and (2) test participants located in a noisy environment, rendered by a 4.1 loudspeaker system. Real-world types of background noise were employed as well as a variety of user terminals.

The correlation between corresponding overall quality scores amounts to  $r = 0.9$ . Hence, a headphone presentation can replace a loudspeaker noise simulation in principle, leading to the consequence that a simpler experimental set-up is sufficient for assessing the speech quality when noise is present at the receiver's side. However, there exist certain differences between both quality scores. For example, in most cases clean wide-band (50-7000 Hz) and standard narrow-band (300-3400 Hz) speech are rated slightly lower if the samples are presented over a headphone and noise is simultaneously present. Since the separation between speech and noise is potentially easier when the noise is played back over loudspeakers, participants may mainly judge the speech rather than the overall quality, leading to higher scores for the clean channel conditions.