

## Comparison of Double Talk Measurement Methods

*J. Reimes, G. Mauer, H.-W. Gierlich, HEAD acoustics GmbH*

In conversations via telecommunication devices, double talk situations are currently one of the most challenging tasks for speech signal processing. Especially for mobile devices, the requirements for echo attenuation increased over the last years. This leads to a dramatically decrease of double talk capability of terminals, which can cause loss of syllables or words. Thus there is a strong demand for measuring the impact of double talk control on transmitted speech.

In this contribution, two widely-used analyses are presented and compared.

The classical ITU-T P.340 measurement which is based on test signals similar to speech. In conjunction with ITU-T recommendation P.502, an instrumental analysis is then applied to derive an attenuation score.

A rather new approach based on real speech measurement coming from the 3GPP standard TS26.132. It describes the measurement setup as well as the calculation of double talk and even echo performance metrics.

Furthermore, a test series of 32 devices is presented regarding the double talk metrics. The conducted measurements cover several application scenarios (wide- and narrowband, hand-set/hands-free). Additional analyses are then applied to these results to find correlations between both methods.

Find more event abstracts in our >> [abstracts archive](#) <<

HEAD acoustics GmbH  
Ebertstraße 30a  
52134 Herzogenrath, Germany