

Advanced Testing of Wideband Terminals

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Communication is migrating towards wideband transmission (50 Hz – 7 kHz). Terminals and networks are developed in order to provide a significant step towards higher speech quality. At the same time, also standardization bodies like ETSI, GCF and the DECT Forum are working on new specifications for terminals.

At this stage, network provisioning and wideband terminal testing often only considers the speech codec implementation. It is typically disregarded that speech quality is mainly determined by the acoustic interfaces and the implemented signal processing.

In order to setup appropriate speech quality measurements for wideband terminals, existing narrowband and wideband test specifications were reviewed and analyzed. Advanced tests such as double talk performance measurements and quality tests in the presence of background noise have only recently been established for narrowband terminals. They need to be re-considered and established for wideband terminals, too, in order to provide high quality terminals already during market launch. Furthermore wideband requirements can typically not be extrapolated from the narrowband case. This contribution discusses current wideband standards and the development of new speech quality tests and requirements for mobile and fixed wideband terminals.

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