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1 *Speech intelligibility (SI) is disturbed in particular by surrounding noise and reverberation. A live feedback about the intelligibility can improve the communication, e.g., in a video conference.*

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SI-LIVE DEMO

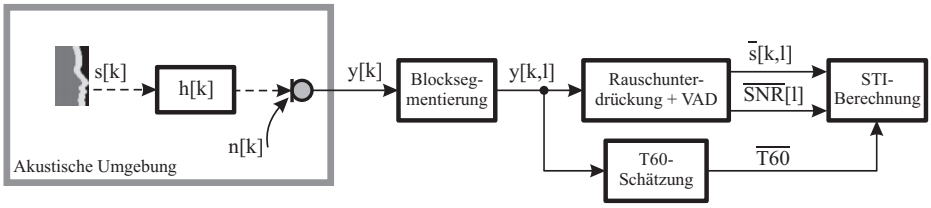
IMPROVED COMMUNICATION THROUGH DIRECT SPEECH INTELLIGIBILITY FEEDBACK

In real-time communication situations background noise, echoes and reverberation disturb the speech intelligibility. Particularly in a telecommunication,situation the speaker is not aware of low intelligibility at the receiving end. Without technical support the listener needs to make constant inquiries which can considerably disturb the communication.

The developed SI live demo illustrates a way to continuously estimate and visualize the speech intelligibility. Such a system is beneficial, for example, in conference systems by pointing out acoustically problematic conditions during the communication.

Technical background

The speech transmission index (STI) forms the basis for SI-Live's estimate of the speech intelligibility. It assesses the influence of disturbing noise and reverberation on speech intelligibility. Since both of these dimensions are generally unknown, they must be estimated from the microphone signal. Therefore the signal is divided into short time segments. In each segment, the energy portions of speech and noise are estimated. Additionally, an estimate of the room reverberation time is computed. This information is combined in the calculation of the STI and subsequently visualized.



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