

Overall End-to-End Conversational Quality Prediction

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At DAGA 2020 we presented the results of an auditory conversational test conducted with experts and naïve subjects using commercial wireless phones. These phones have been specifically manipulated to cover a wide range of possible impairments. Thus, the auditory results reflect overall end-to-end conversational quality for single disturbances on one side, on both sides, the combination of multiple disturbances and the mutual interaction between the terminals.

Instrumental conversational speech quality tests were carried out on the same phones covering a wide range of test conditions to characterize the performance. These tests focused on perception-based parameters (instrumental MOS scores). The auditory results were then used to motivate an approach to predict end-to-end conversational quality from these instrumental results. The complexity of this task arises from the mutual influence of disturbances from the phones used on both ends and the perceptual weighting of disturbances by subjects in the conversational context. This motivates a two-stage approach for the prediction model. This idea is discussed in the contribution together with the correlation of auditory and predicted end-to-end conversational quality results.