ENHANCEMENT OF SPEAKER IDENTIFICATION USING SID−USABLE SPEECH (ThuAmPO1)

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Abstract :

Most present day Speaker Identification (SID) systems focus on the speech features used for modeling the speakers without any concern for the speech being input to the system. Knowing how reliable the input speech information is can be very important and useful. The idea of SID−usable speech is to identify and extract those portions of corrupted input speech, which are more reliable for SID systems, thereby enhancing the speaker identification process. In this paper, usability in speech, with reference to speaker identification is presented which is called SID−usable speech. Here the SID system itself is used to determine those speech frames that are usable for accurate speaker identification. Two novel approaches to identify SID−usable speech frames are presented which resulted in 78% and 72% correct detection of SID−usable speech. It is also shown that SID performance can be quantified by comparing the amount of speech data required for correct identification. The amount of SID−usable speech as input was approximately 30% less than entire input data with a considerable enhancement in SID performance.

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