عنوان مقاله:

Using Long-Term Speech Information to Improve a Voice Activity Detector based on the Statistical Likelihood Ratio Test

محل انتشار:

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خلاصه مقاله:

In this paper the characteristics of a voice activity detector (VAD) based on the statistical likelihood ratio (LR) are investigated. The application of long-term speech information to the VAD decision parameter has been tested & found to be beneficial for the VAD robustness. Also, the noise estimation procedure used in other papers has been further improved by the application of a dynamic time varying smoothing factor. The proposed algorithm resulted in significant improvements in terms of speech/nonspeech detection accuracy over the other existing methods, specifically at low SNRs, at the cost of some delay. The proposed algorithm is compared to different standard methods, including AMR1, AMR2 and AFE as well as the VAD based on the smoothed likelihood ratio that is reported to have advantages over the existing standards. Objective tests conducted, based on speech/non-speech discrimination, .indicated the performance superiority of the proposed VAD over the other methods mentioned above

کلمات کلیدی:

Voice Activity Detection, Speech Enhancement, Likelihood Ratio Test