

Subband Coding and Glottal Closure Instant (GCI) Using SEDREAMS Algorithm

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Abstract : In modern telecommunication applications, Glottal Closure Instants location finding is important and is directly evaluated from the speech waveform. Here, we study the GCI using Speech Event Detection using Residual Excitation and the Mean Based Signal (SEDREAMS) algorithm. Speech coding uses parameter estimation using audio signal processing techniques to model the speech signal combined with generic data compression algorithms to represent the resulting modeled in a compact bit stream. This paper proposes a sub-band coder SBC, which is a type of transform coding and its performance for GCI detection using SEDREAMS are evaluated. In SBCs code in the speech signal is divided into two or more frequency bands and each of these sub-band signal is coded individually. The sub-bands after being processed are recombined to form the output signal, whose bandwidth covers the whole frequency spectrum. Then the signal is decomposed into low and high-frequency components and decimation and interpolation in frequency domain are performed. The proposed structure significantly reduces error, and precise locations of Glottal Closure Instants (GCIs) are found using SEDREAMS algorithm.

Keywords : SEDREAMS, GCI, SBC, GOI

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