

# **Entropy based Voice Activity Detection for VoIP**

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## **Abstract**

*Voice Activity Detection (VAD) is used to detect the presence of speech in an audio signal. VAD plays an important role as a preprocessing stage in numerous audio processing applications. In Voice over IP (VoIP) and mobile telephony applications, VAD can reduce bandwidth usage and network traffic by transmitting audio packets only if speech is detected. VAD for VoIP can save bandwidth by filtering the frame that does not contain speech. VAD algorithm is used to identify the voice and silent region of a speech. This paper uses an information theoretic measure, called spectral entropy for differentiating silence from speech zone. The performance of the system has been tested on signals with varying levels of SNRs in different environments. The result reveals that this system can fairly detect speech and non-speech events in noisy backgrounds.*