A Speed / Music Discrimination Approach for Radio Recording

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Abstract

This paper presents a methodology for speech or music classification over broadcast digital audio signals. In feature extraction, only a single feature named spectral entropy is employed. The spectral features of recorded audio stream are processed by means of shorter basis. Classification framework is based on an efficient region growing technique that bears its origins in the field of image segmentation. The efficiency of this classification approach is investigated over a range of real audio streams and generated data sets consisting of news from internet radio stations such as BBC, United Nations and music experts extracted from CDs. These datasets include a number of male and female speakers and music clips of different genres: pop, classic and rock. The results indicate that this system can be used in segmentation and classification of speech and music audio data with accuracy reaches 97%. The system is implemented with Mat lab programming language.