EXPERIMENTS ON VIETNAMESE FOLK SONGS CONTENT-BASED SEARCHING BASED ON PITCH ESTIMATION

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TÓM TẮT:

Feature extraction in content-based song searching is required not only to efficiently represent the musical information but also to reduce the redundant information. It leads to the need of choosing the feature vector of music signal that should be close as much as possible with the musical sounds source and the human auditory perception models. Pitch represents excitation source of periodic musical signal. Human are sensitive with the pitch changes rather than that of other acoustic features. Therefore, pitch is an efficient feature in content-based music retrieval. In this paper, we experiment state-of-the-art pitch estimation methods and apply them in a Vietnamese folk song searching system for comparison. The experimental results show that the Cepstral-based method outperforms all other methods. Therefore, we suggest that pitch estimated by the Cepstral-based method is appropriate feature vector in Vietnamese folk song content-based searching in which each song has many word versions but same melody.