Abstract

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a fuzzy self-adaptive audio watermarking using local characteristics of audio signals

In this paper, a novel fuzzy self-adaptive digital audio watermarking scheme is proposed based on local audio features. A method for performing automatic segmentation based on features related to rhythm, timbre, and harmony is presented. A new watermark embedding scheme, based on fuzzy adaptive embedding strength, is used to embed watermark. Listening tests and simulation results show that the algorithm is robust for common digital audio processing methods as attacks that the quality of the audio is retained. Experimental results show that the proposed scheme is inaudible robust against common signal attacks.