FEATURE REGION SELECTION BASED ON SIMULATED ATTACKING FOR EFFICIENT DIGITAL IMAGE WATERMARKING

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ABSTRACT

This paper proposed a new approach towards detecting feature region for efficient digital image watermarking. The non-overlapping feature regions which can resist most of the predefined attacks are selected. Initially, the Harris- Laplacian detector is used to extracts the features from the cover image. The primary feature region set is formed from extracted regions based on their corner response. The watermark is embedded into the extracted primary features, the simulated attacking is performed over these regions in order to checks their robustness against predefined attacks using BER. Minimal primary feature set which can resists the most predefined attacks is selected with the help of, a track-with-pruning procedure. Primary feature set is then extended by adding auxiliary feature regions in it to enhance its resistance capability against undefined attacks. A multi-criteria optimization strategy such as genetic algorithm is adopted for this purpose.

KEYWORDS: Feature, Genetic Algorithm, Multi-Criteria Optimization, BER, Simulated Attacks