

Performance Evaluation of RDWT-SVD and DWT-SVD Watermarking schemes

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ABSTRACT

Digital image watermarking protects content by embedding a signal (i.e., owner information) into the host image without noticeable degradation in visual quality. To develop any image watermarking scheme, there some important requirements should be achieved such as imperceptibly, robustness, capacity, security, and, etc. Generally, the watermarking scheme based on wavelet transform domain shows an advantage in human perception and good imperceptibility and robustness. Due to this fact, this paper presents two blind image watermarking schemes based on DWT-SVD and RDWT-SVD. To evaluate their performance, these schemes are exposed to different geometric and non geometric attacks. Although, DWT-SVD and RDWT-SVD showed robust against all attacks, RDWT-SVD is better than DWT-SVD, especially for geometrical attacks.

Keywords: Digital watermarking, Discrete Wavelet Transform (DWT), Redundant Discrete Wavelet Transform (RDWT), Singular Value Decomposition (SVD).