Abstract

As the popularity of digital media is growing, and world is becoming smaller, all due to the internet connectivity and WWW phenomena, the copyright protection of intellectual properties have become a necessity for prevention of illegal copying and content integrity verification. So, to achieve these requirements, a hybrid digital image watermarking scheme based on discrete wavelet transform (DWT) and singular value decomposition (SVD) proposed approach in this paper. To increase and control the strength of the watermark, a scale factor value is used. Our approach, the watermark is not embedded directly on the wavelet coefficients but rather on the elements of singular values of the cover image with modifying three level Discrete wavelet transform (DWT) HL and LH sub bands. Experimental results are provided in terms of Peak signal to noise ratio (PSNR) and Normalized cross correlation (NCC) to demonstrate the effectiveness of the proposed algorithm against various attacks.

References


Index Terms

Computer Science Image Processing
Keywords
Watermarking  Wavelet Transform  Singular Value Decomposition (svd)  Peak Signal To Noise Ratio (psnr)
Normalized Cross Correlation (ncc)