A Review on Digital Image Watermarking Techniques: An Intellectual and Sophisticated Analysis to Find Out the Best Implementable Scheme

Abstract

With the advent of internet and communication transmitting abilities, cyber-crime and piracy has increased in a tremendous rate leading to widely accepted claim that digital data is highly vulnerable and requires extremely secure procedures for data availability throughout the network connections. Due to this increasing demand for enhanced security measures, Digital watermarking provides the most efficient solution for securing copyrights and reducing vulnerability among the digital data transmission scenarios. This paper introduces the most reliable and widely acceptable techniques for Digital Watermarking on images and focuses on providing the conclusion regarding the best technique to be implemented for most secure mechanism. For this conclusion, I have implemented certain statistical comparison measures against performance and robustness capabilities of the techniques in order to find most reliable implementation and eventually provides conclusive remarks for future techniques to be invented.

References

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ownerships with invisible watermarking techniques: Limitations, attacks and implications.

IEEE J. Selected Areas Commun, 1998


**Index Terms**

Computer Science

Image Processing

**Keywords**

LSB (Least Significant Bit)  DCT (Discrete Cosine Transform)  DWT (Discrete Wavelet Transform)

PSNR (Peak-to-Signal Noise Ratio)

NCC (Normalized Cross Correlation)

SSIM (Structural Similarity Index Measure)

MAE (Mean Absolute Error)
RGB (Red-Green-Blue)