An Adaptive Scaling Factor for Multiple Watermarking Scheme

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Abstract:
This paper presents an adaptive scaling factor for multiple watermarking scheme. Multiple watermarks are embedded in the red and green components with lowest variance of the cover image. DCT is applied to each selected block for transforming image pixels to DCT coefficients. This experiment examines DCT coefficients in the middle frequency to obtain adaptive scaling factor for embedding a watermark. The proposed algorithm used the impact of selected DCT coefficients to imperceptibility and robustness for generating t adaptive scaling factor. Arnold transform is used to improve the security and secrecy of the embedded watermark image. The experimental results reported that the proposed scheme gives better invisibility performance for multiple watermarks compared to existing schemes.

Keywords: Adaptive Scaling Factor; DCT; Embedding Scheme; Extracting Scheme; Multiple Watermarks.

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