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Abstract

In order to improve the robustness and imperceptibility of the algorithm, a new embedding and extracting method with DWT-SVD is proposed. The approximation matrix of the third level of image in DWT domain is modified with SVD to embed the singular value of watermark to the singular value of DWT coefficient. The proposed embedding and extracting method was employed to accelerate the hybrid DWT-SVD cryptography and to avoid the leak of watermark. This hybrid technique leads to optimize both the fundamentally conflicting requirements. The experimental results show both the good robustness under numerous attacks and the high fidelity. The time needed to perform the program is greatly decreased.

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Index Terms

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Keywords

Discrete Wavelet Transform, SVD, PSNR, MSE