Robust Digital Image Watermarking Technique using Image Normalization and Discrete Cosine Transformation

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Abstract

In recent days the computer communication and the usage of multimedia data is enormous over the Internet, so protection of these data from malicious attacks and signal processing operations are very important. A robust watermarking system must be developed to withstand attacks such as rotation, scaling and translation technique (RST attacks). In this paper, a robust watermarking technique using DCT transformation technique and normalization procedure is proposed. The image normalization is just used for calculating the affine transform parameters so that the watermark embedding and detection is performed in the original coordinates system. The results assure that the proposed algorithm is robust against various other types of attacks also such as salt & peeper, low-pass filter, high-pass filter, Gaussian noise, Speckle noise and perform much better for geometrical attacks e.g. rotation, scaling and the combination of these attacks, translation.

References
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Index Terms

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Keywords

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Image normalization

Discrete Cosine Transformation