

学术探讨

基于DWT和RSA的变强度可见数字水印算法

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摘要 提出了一种基于离散小波变换(DWT)和RSA加密的变强度可见数字水印算法。该算法在小波参数选择中,使水印图像的嵌入强度依主图像特征而变化,计算嵌入因子值时考虑并利用了拉伸系数的值,加快了计算速度;同时用RSA对小波系数进行加密,使合法用户能控制水印强度。实验表明该算法是有效的,并具有较好的鲁棒性。

关键词 [离散小波变换](#) [RSA](#) [可见数字水印](#)

分类号

Visible digital watermarking algorithm with intensity adjustable based on DWT and RSA

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Abstract

In this paper, a visible digital watermarking algorithm based on DWT and RSA is proposed, whose watermarking intensity can be adjusted. In the choice of parameter of the algorithm, the embedding degree of watermarking image depends on the change of features of host image, and the scaling coefficient is taken into account and used when computing the value of embedding factor, which can improve the speed of computation. The wavelet coefficients are encrypted with RSA algorithm, so the legal users with secret keys can control the intensity of watermarking. The experimental results have shown the algorithm is effective and has the strong robustness.

Key words [DWT](#) [RSA](#) [visible digital watermarking](#)

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