

网络、通信、安全

## DCT域基于PSNR的扩频水印算法

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收稿日期 2008-1-17 修回日期 2008-4-14 网络版发布日期 2009-2-28 接受日期

**摘要** 数字水印技术是信息隐藏和版权维护的一种有效方法。在先前的研究基础上提出了DCT域中如何根据水印图像与原始图像间的PSNR来估计水印的多重水印嵌入强度, 并由此提出一个基于PSNR的扩频水印强度的估计公式。实验结果表明, 提出的嵌入强度估计公式误差小, 具有一定的准确性, 算法具有一定的鲁棒性。

**关键词** [数字水印](#) [嵌入强度](#) [峰值信噪比](#) [扩频](#)

分类号

## Algorithm of spread spectrum watermarking based on PSNR in DCT domain

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### Abstract

Digital watermarking techniques have been considered as an effective solution of information hiding and the protection of copyright. This paper analyses how to estimate the embedding strength of multi-watermarking according to the PSNR of the watermarked digital image so as to exert reasonable control of the watermarking embedding, and presents a Spread Spectrum Watermarking formula of the embedding strength based on PSNR. The experimental results show that the formula of the embedding strength has minor errors, and the proposed scheme has good robustness.

**Key words** [digital watermarking](#) [embedding strength](#) [Peak Signal to Noise Ratio \(PSNR\)](#) [Spread Spectrum](#)

DOI: 10.3778/j.issn.1002-8331.2009.07.035

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