

图形、图像、模式识别

## 时域变换的JPEG2000感兴趣区编码方法

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**摘要** 针对时域提升方法在低码率下边框效应明显且感兴趣区与背景区质量相差较大的问题, 提出一种基于时域变换的方法用于JPEG2000感兴趣区编码。将原始图像分为基于感兴趣区和基于背景区的两幅图像, 分别以不同的输出码率进行JPEG2000编码, 在解码端将两个图像重新组合。该方法可以作为没有ROI编码功能的JPEG2000编解码系统的补充。实验结果表明, 与时域提升法比较, 该方法不仅明显减小了边框效应, 而且在ROI区、BG区及整个图像的PSNR均有所提高。

**关键词** [感兴趣区](#) [图像编码](#) [JPEG2000](#) [时域变换](#)

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## Time-domain transform method for JPEG2000 ROI encoding

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### Abstract

Since the time-domain upscaling method will strengthen the border under the low bit rate significantly, and make quality much difference between Region of Interest (ROI) and background, this paper proposes a method based on time-domain transform for JPEG2000 ROI encoding. The original image is divided into two images based on the areas of interest and the background. Then both images are encoded into JPEG2000 in different output rates respectively. Finally, the two images are combined at the decoding part. This method also can be a supplement for the JPEG 2000 encode and decode system without ROI encode function. The experiment results show that, compared with time-domain method, this method not only significantly reduces the effects of borders, and ROI, BG and the PSNR area of the entire image are improved.

**Key words** [Region of Interest \(ROI\)](#) [image encoding](#) [JPEG2000](#) [time-domain transform](#)

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