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基于三维Gabor变换的视频水印算法

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Abstract

Watermarking technique is a method by hiding copyright information into covering signals to discourage unauthorized copying. Because the profiles of two-dimension Gabor base functions are similar to those of human visual cortical cell receptive field and the middle frequency of visual channels has octave relationship, a video watermarking algorithm is proposed based on spatio-temporal multi-channel model using 3D Gabor transform in this paper. Experimental results indicate that the Gabor domain watermarks have greater robustness and imperceptibility.

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摘要

水印技术是把版权信息隐藏于载体信号中达到版权认证的一种版权保护技术.利用Gabor基函数波形类似人视觉皮层简单细胞的感受野波形的特性,结合视觉通道中心频率具有对数频程关系的特点,从视觉系统时-空多通道模型角度出发,提出一种三维塔式Gabor变换视频水印算法.实验表明,该水印算法具有较好的鲁棒性和不可感知性.

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