

论文

基于IFS系统的快速分形编码算法研究

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摘要:

基于Jacquin提出的IFS系统,本文提出了一种新的分形编码匹配策略. 这种新的匹配策略使编码时间大幅度缩短,有效地克服了目前分形编码技术的缺点. 实验表明,本文提出的这一新的策略可使编码时间缩短80%左右. 如果把本文提出的匹配算法与三行邻域搜索算法相结合,则编码时间进一步缩短,达99.30%左右,而且峰值信噪比下降很少. 实验结果还表明:该匹配策略在提高编码速度和重构图像质量方面同时具有优势,有着广泛的应用前景.

关键词:

RESEARCH ON IFS-BASED FAST FRACTAL CODING ALGORITHM

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Abstract:

Based on Jacquin's Iterated Function System, a new fractal coding matching strategy is proposed in this paper. The coding time can be reduced greatly by the new strategy. The disadvantage of present fractal coding technique can be overcome effectively. Experimental results show that the coding time can be reduced approximately by 80% by the new matching strategy. If combined with the 3-line neighborhood searching algorithm, the new matching strategy can further reduce the coding time approximately by 99.30%, with few dropping of PSNR. Experimental results also show that the new matching strategy has obvious advantage in increasing the coding speed and improving the quality of the reconstructed image, and it has wide application prospect.

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