Adaptive Partition and Hybrid Method in Fractal Video Compression*

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ABSTRACT

Fractal image compression is a relatively recent image compression method. Although it does not work as good as the state-of-the-art compression technology, its main advantage that the decompressing algorithm is very simple，makes it suitable for the situation of one encoding and many decoding, such as video on demand, archive compression, etc. There are two basic fractal compression methods, namely the cube-based and the frame-based methods, being commonly used in the industry. However there are advantages and disadvantages in both methods. This paper discusses the two basic fractal and other algorithms extend from them. Experimental results show that the algorithm based on adaptive partition can obtain a much higher compression ratio compared to the algorithm based on fixed partition while the qualities of decompressed images are similar, and the hybrid algorithm improves the compression ratio and the quality of decompressed images.

Keywords: Fractal, video compression

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