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JPEG false contour reduction using error diffusion.

Summary: This study presents an approach to effectively suppress the annoying false contour inherently introduced in a JPEG compressed image. The false contour is mainly caused by the discrepancy between the original DCT coefficient prior quantization in the encoder and the inverse quantization coefficient in the decoder. In this study, the error diffusion with the optimized error kernels is involved to compensate the quantization errors to the pixels in the neighboring blocks. As documented in the experimental results, the proposed method has been proven to significantly reduce the false contour in a JPEG image.

Keywords: analysis of algorithms; JPEG; digital halftoning; false contour; error diffusion
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