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The limitations of JPEG compression

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ABSTRACT. The JPEG (*Joint Photographic Experts Group*) compression standard is based on the Discrete Cosine Transform. This transform was chosen for efficiency, but has the major disadvantage that it does not localize the frequency components in space. Because of that, the image has to be partitioned prior transform, and the margins of the blocks become visible at high compression ratios. This problem is solved in the JPEG 2000 standard, which uses the Discrete Wavelet Transform.

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