A Study of Deblocking Effect Using Linear Filter Technology

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ABSTRACT

Block-Based Discrete Cosine Transform has been wisely applied on compression standard of still image or video. However, at low bit rates the reconstructed images generally suffer from visually annoying artifacts as a result of very coarse quantization. For better vision quality and effect, there are many techniques developed to reduce the blocking effect. In general, post-processing at the decode side is very much desired, because it causes the least change to the compression and transmission scheme. In this thesis, according to the pixel variability of 8x8 blocks, we proposed an algorithm to reduce blocking effect. We distinguish image pixels into high activity region and low activity region according to the degree of blocking effect. We will do nothing for high activity region, and using adaptive linear filter for low activity region. As result, there will have good result on vision or statistics objectivity. We demonstrate the method would reduce blocking effect and enhance the human vision quality

Keywords : blocking effect ; DCT ; linear filter ; post-processing

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