Abstract

With increasing demand for applications in multimedia, mobile communications and computer networks, the field of image coding attracts many researchers. Accomplishment of higher compression ratio while retaining good image quality is needful in the present demanding environment. Many multimedia applications are demanding for low disk memory requirement, faster and good perceptual quality for images/video. In this paper, authors have reviewed abundant attempts made by researchers to fulfill the requirement of lossy to lossless image coding. One of the best choices for image coding was DCT which is replaced by DWT. Authors have presented state of art for various methods in lossy to lossless coding domain. With the advancement in research in the fields namely filter banks and lifting based wavelet transforms, image coding with filter banks is currently best suitable method in all aspects.

References

- Wen-Jun Zhang Song-Yu Yu Hong-Bin Chen, "A new adaptive classified transform
- W. Sweldens "The lifting scheme: A construction of second generation
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- W. Sweldens, "The lifting scheme: A new philosophy in biorthogonal wavelet
Hall, 1992.
- D. Esteban and C. Galand, "Applications of quadrature mirror to split band voice
- J. D. Johnston, A filter family designed for use in quadrature mirror filter banks,
"Proc. of Intl. Conf. on Acoust. Speech, Signal Processing, Denver, CO, pp. 291(294,
1980).
- M. J. Smith and T. P. Barnwell, "Exact reconstruction techniques for tree
- M. Vetterli and D. Le Gall, "Perfect reconstruction filter banks: some properties
{1071, July 1989}.
- D. Le Gall, and A. Tabatabai, "Sub-band coding of digital images using symmetric
short kernel filters and arithmetic coding techniques," Proc. of Intl. Conf. on Acoust.,
Speech, Signal Processing, pp. 761{764, 1988}.
- R. L. de Queiroz and K. R. Rao, "Time-varying lapped transforms and wavelet
- R. L. de Queiroz and H. S. Malvar, "On the asymptotic performance of
- X. Gao, T. Q. Nguyen, and G. Strang, "On factorization of M channel paraunitary
- M. Ikehara and Y. Kobayashi, "A novel lattice structure of M channel paraunitary
- T. Suzuki, Y. Tanaka, and M. Ikehara, "Lifting-based paraunitary filter banks for
- Y. -J. Chen, S. Oraintara, and K. S. Amaratunga, "M-channel lifting-based design
of paraunitary and biorthogonal filter banks with structural regularity," in Proceedings of
ISCAS &apos;03, Bangkok, Thailand, May 2003.
- S. Iwamura, Y. Tanaka, and M. Ikehara, "An efficient lifting structure of
biorthogonal filter banks for lossless image coding," in Proc. of ICIP &apos;07, San
- Taizo Suzuki , Masaaki Ikehara, and Truong Q. Nguyen,"Generalized
Block-Lifting Factorization of M-Channel Biorthogonal Filter Banks for Lossy-to-Lossless Image
- P. Hao and Q. Shi, "Matrix factorizations for reversible integer

Index Terms

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Keywords

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