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IJCA Proceedings on International Conference
and workshop on Emerging Trends in Technology (ICWET 2012)

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icwet2012 - Number 12

Year of Publication: 2012

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{bibtex}icwet1095.bib{/bibtex}

Abstract

The Rapid progression in modern internet technology has provoked people to communicate and express by sharing images, video, and other forms of online media. The better image retrieval techniques is increasing rapidly. Vector Quantization (VQ) is one of the lossy image compression techniques. VQ is more efficient than scalar quantization in terms of distortion. VQ comprises of three stages: Codebook Generation, Image Encoding and Image Decoding. The key component of VQ is the codebook generation. The performance of VQ depends on the quality of the codebook generated. The performance of five different codebook generation techniques namely the Linde, Buzo, and Gray (LBG), Kekre's Proportionate Error Algorithm

(KPE), Kekre's Fast Codebook Generation (KFCG), Kekre Error Vector Rotation algorithm (KEVR) and Kekre's Efficient Fast Algorithm (KEFA) for Vector Quantization have been analyzed. In this paper various global codebook generation algorithms for color images are presented.

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Index Terms

Emerging Trends in

Computer Science

Technology

Keywords

Vector Quantization Clustering CodeVector MSE PSNR Global Codebook