Abstract

In this paper, an image compression using singular value decomposition (SVD) transform is presented. The SVD decomposes the image into two eigenvector matrices and a one singular value diagonal matrix. The compression is achieved by selecting some singular values and their associated eigenvectors. The proper selection of the retained singular values is the critical issues in image compression based SVD transform. The SVD transform is applied to the entire image, and also the image is divided into blocks with the SVD applied to each block. The objective of this paper is to study and discuss the methods used to select the singular values that achieve an acceptable image quality with a reduced size.

References


Index Terms

Computer Science  Image Processing
Keywords

Singular Value Decomposition, Image Compression, SVD