Encryption Image via Mutual Singular Value Decomposition

Authors : Adil Al-Rammahi

Abstract : Image or document encryption is needed through e- government data base. Really in this paper we introduce two matrices images, one is the public, and the second is the secret (original). The analyses of each matrix is achieved using the transformation of singular values decomposition. So each matrix is transformed or analyzed to three matrices say row orthogonal basis, column orthogonal basis, and spectral diagonal basis. Product of the two row basis is calculated. Similarly the product of the two column basis is achieved. Finally we transform or save the files of public, row product and column product. In decryption stage, the original image is deduced by mutual method of the three public files.

Keywords : image cryptography, singular values decomposition
Conference Title : ICDIP 2015 : International Conference on Digital Image Processing
Conference Location : Paris, France
Conference Dates : January 23-24, 2015