Abstract

To secure digital images transmitted through communication networks, we have used a block based digital image watermarking scheme based on singular value decomposition (SVD). Traditional SVD watermarking already exists for embedding watermark on the image as a whole. In the proposed approach, the original image is divided into blocks, and then the watermarks are embedded in the singular vector domain of each block separately instead of using singular values. This segmentation and watermarking process makes the algorithm more secure as we can embed many watermarks using blocked based approach. Watermark detection is implemented by extracting the watermark from the watermarked blocks. The proposed method is encouraging as far as imperceptibility and robustness are concerned.

Index Terms

Computer Science
Keywords
Digital communication  Block based watermarking  Gray Images  Singular Value Decomposition