Abstract

With the help of various image editing tools available, it has become easier to alter an image in such a way that it does not leave behind any clues. Copy–Move forgery or also known as Region Duplication Forgery is a type of image forgery in which a part of digital image is copied and pasted to another part of same image. Since the copied and pasted image comes from the same image, it becomes difficult to detect the forgery. Generally the intention behind Copy-Move forgery is to hide important objects in an image. In this paper, a hybrid wavelet transform based forgery detection method is proposed. Hybrid Wavelet transforms is generated from basic orthogonal transforms. Hybrid wavelet transforms combines other orthogonal transforms such as hybrid of Discrete Cosine Transform (DCT), Walsh Transform. Both DCT and Walsh transforms are orthogonal. They can be used to generate Hybrid Wavelet Transform. This paper proposes generating a Hybrid Wavelet Transform (DCT-Walsh Hybrid Wavelet Transform) from DCT and Walsh transforms and used to detect copy-move forgery. The image is divided into overlapping blocks. On each block, DCT-Walsh Hybrid wavelet transform is applied. From each block discriminative features are extracted from coefficients. These feature vectors are lexicographically sorted and block matching step is applied to find duplicated blocks.
Region Duplication Forgery Detection using Hybrid Wavelet Transforms

References


Index Terms

Computer Science

Security
Region Duplication Forgery Detection using Hybrid Wavelet Transforms

**Keywords**

Copy –Move Forgery  Copy –Move Attack  Discrete Cosine Transform  Walsh Transform  Orthogonal Transforms  Wavelet Transforms