Abstract

A method for establishing the identity of an individual is essential in all transactions whether they are commercial or personal. The ability to establish identity with certainty can prevent fraud or forgery. In the midst of an electronic revolution, this remains a major concern in ecommerce, telecommunications, healthcare, and security. In this paper, we present a novel method for biometric image watermarking using the biorthogonal wavelet transform and authentication of the recovered signature from the image data. In proposed approach the offline signature, which is a biometric characteristics of owner is embedded in second level detailed coefficients of discrete wavelet transform of cover image. The novelty of the proposed scheme is that, it also goes a step further wherein it extracts the features of recovered signatures and does the template matching with features of signature data base.
Reference

- Anil K Jain, Umut Uludag, “ Hiding Biometric data,” IEEE transaction on pattern analysis
and Machine intelligence, vol. 25, no.11, pp.1494-1498, November 2003
- Lindsay I Smith,” A tutorial on Principal Component Analysis” Feb.26, 2002

**Index Terms**

Computer Science Image Processing

**Key words**

Biometric watermarking Biorthogonal wavelets
discrete wavelet transform

template matching

Hough transform

Principal component analysis