Abstract

Multimedia security and copyright protection have become wide interest due the explosion of data exchange in the Internet and the extensive use of digital media. We propose an image watermarking scheme based on visual cryptography in discrete wavelet transform. A complete survey of the current image watermarking technologies was done and has been noticed that majority of the existing schemes are not capable of resisting all attacks. We propose the idea to use different parts of a single watermark into different regions of the image for generation of the owner’s share from the low frequency subband of the original image based on the binary watermark, and comparing the global mean value of pixels in the same subband and the local mean of the same subband, and generation of the identification share based on comparing the global mean and the local mean of the low frequency subband of the controversial image. These two shares after stacking can reveal the copyright ownership. Experiments are conducted to verify the robustness through a series of experiments.

**Index Terms**

Computer Science  
Security

**Keywords**

Digital watermarking  visual cryptography  global mean  local mean.