2005 數位生活與網際網路科技研討會, 國立成功大學, 2005 年 6 月 2-3 日

A Steganography Method Based on DWT Features

Chen, Po-Yueh; Lin, Hung-Ju

Abstract

In this paper, we proposed a novel stegangraphy method utilizing the features obtained from Discrete Wavelet Transform (DWT). Applying a secure coding scheme, the secret messages are embedded into the three high frequency sub-bands of DWT coefficients. Since the portion which human eyes are sensitive to, the low frequency sub-band, remains unaltered, the image quality after secret messages embedding is increased. According to different needs of embedding capacity, we explain the embedding method in three cases. In addition to high embedding capacity and image quality, the proposed approach provides respectable security as well. Because the original secret messages are arithmetically manipulated before embedding, they would not be recovered directly from the Least Significant Bits of coefficients in any sub-band.

Key words：DWT;Security;Steganography