



HIERARCHICAL FRAGILE WATERMARKING SCHEME FOR IMAGE AUTHENTICATION

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ABSTRACT—In this paper, a simple hierarchical fragile watermarking scheme for image authentication is proposed. The important features and parity bits of an image are embedded by modifying the pixel value of the host image. Once an image is tampered by other users or corrupted by transmission, the parity bits and important features can be used to detect and recover the image. The method is effective because the detection and recovery is hierarchical structured such that the accuracy of damaged location and the quality of recovered image can be ensured and enhanced. Experimental results demonstrate the effectiveness of the proposed method.

Key Words: Fragile watermarking, Discrete Wavelet Transform, Image authentication, Tamper recovery.