

Image Watermark Embedding Method Based on Security Service Secure

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Abstract: To solve the problem of privacy leakage and response latency in outsourced image watermark embedding in cloud computing, an efficient and privacy-preserving watermark embedding method for outsourced digital images was proposed by introducing edge computing technology. We had proposed a perturbing encryption method with homomorphism to ensure the information security and the correctness of discrete wavelet transformation in the encrypted domain. In addition, the framework was designed to guarantee the safety of singular value decomposition that edge server could not recover the original image matrix. The experimental results show that the proposed method is superior to similar secure watermarking schemes in terms of encryption/decryption time and ciphertext expansion. The proposed method enables the watermarking operation to be performed in an unsafe outsourced environment while achieving a watermarking effect similar to the plaintext equivalent

Keywords: privacy leakage