



HIERARCHICAL SECRET IMAGE SHARING METHOD USING JPEG 2000 CODESTREAM SYNTAX (WedAmOR3)

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★ Abstract :

This paper proposes a hierarchical secret sharing method for image data. In the conventional secret sharing scheme (SSS), secret data is reconstructed only if more shares are gathered and combine than a pre-decided number, k . Though large k is makes a strong security feature, it makes trouble with handling a lot of shares to reconstruct the original data. If it allows us to brows contents of secret image data roughly, then it relieves us from the troublesome management of the secret data. Therefore, in order to improve usability, we propose the new SSS using JPEG 2000's hierarchical representation of image information. This method can control the number of the reconstructed frequency sub-bands of image information by the number of combined shares. It can also control the precision of pixel values and reconstructed region in the image. This paper shows the feasibility and efficiency of the proposed method by computer simulations.