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Abstract
2003, Wu and Tsai proposed a data-hiding scheme based on the differencing method. The major goal of this scheme is that the secret information can be embedded in cover image of grayscale by using differencing method because the human eyes are not able to detect the difference between cover-image and stego-image. Unfortunately, the eavesdropper can extract secret information easily if the eavesdropper knows the transmitter uses this method because the Wu-Tsai scheme lacked for secure environment. To improve the above disadvantage, a robust data-hiding scheme is proposed based on RSA and differencing technique in this paper. Therefore, there are three following advantages in this proposed scheme: 1. we use the shuffle method to protect secret information in the stego-image, 2. this scheme can improve the drawback in the high frequency in the Wu-Tsai scheme, 3. it can increase embedded data quantity in the same image. 2004, Wu-Liu proposed a data hiding method to embed secret information for binary image. There are three steps, finding the best hide pixels, shuffling and using odd-even
mapping method to achieve the secret information in their scheme. The characteristic of Wu-Liu scheme is difficult to judge the difference between cover-image and stego-image by human eyes. In order to protect the secret data to be stolen or modified by the attacker, the shuffling method of Wu-Liu scheme can not publish for everyone. Recently, a improvement shuffling method in the Wu-Liu scheme is proposed by Kuo {it et. al.}. However, Kuo {it et al.} still use the odd-even apping method to embed a little secret information in this improvement scheme. Now, we propose the differencing method to replaced odd-even mapping method in the KLC scheme. The advantage of this paper is not only to keep at least the same security but also to be able to embed more secret information in the same cover image.
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