

## Security System for Safe Transmission of Medical Image

**Authors :** Mohammed Jamal Al-Mansor, Kok Beng Gan

**Abstract :** This paper develops an optimized embedding of payload in medical image by using genetic optimization. The goal is to preserve region of interest from being distorted because of the watermark. By using this developed system there is no need of manual defining of region of interest through experts as the system will apply the genetic optimization to select the parts of image that can carry the watermark with guaranteeing less distortion. The experimental results assure that genetic based optimization is useful for performing steganography with less mean square error percentage.

**Keywords :** AES, DWT, genetic algorithm, watermarking

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