

Abstract

At present, the patient's medical pictures and records are widely used and transmitted through computer networks. However, it is difficult to find a secure network. Therefore, several methods were developed to protect patient images and medical records. One way is to enter the medical records into the appropriate medical images. In this study, the authors built a system that can help the process of hiding the text of medical records into medical images. The system consists of embedding process, and also extracting. In the embedding process, the method used is the vector quantization and graph coloring based on Genetic Algorithm. System test results show that this embedding scheme has good imperceptibility with average PSNR value 55,36 dB and text extracted from medical images also has an average accuracy of 100%.

Keywords: *Data Hiding, Medical Record, Medical Image, Graph Coloring, Genetic Algorithm, Vector Quantization*