Abstract

In this paper, the proposed work is about to store the patient information in the medical image itself that can be a CT scan or the MRI image. Medical records are extremely sensitive patient information and require uncompromising security during both storage and transmission. In the traditional way, the patient information and patient test reports are kept in different tables or databases or locations. But, this kind of data management can have some human oriented errors such as transfer of wrong report to a patient. Errors can be prevented by hiding the data in scan report itself. It will improve the reliability of the medical information system. In our paper the work is divided in two main stages, first to identify the ROI and RONI of the image. Here, the ROI is defined in terms of information part of medical image and RONI is defined in terms of non-information part of the MRI image. It will avoid the user to destroy the valuable information from the image. Watermark is encrypted by using RSA. The second stage is about to hide the image in RONI. A DWT based approach is used to hide such information.

Index Terms

Computer Science

Image Processing
Keywords

ROI (Region of Interest)  RONI (Region of Non Interest)  IWT (Integer Wavelet Transform)  DWT

(IWT with Arnold Transform)

DWT with RST (DWT with RSA Subtraction and Threshold).