

THE APPLICATION OF WAVELETS IN MEDICAL IMAGE WATERMARKING

Rui Shen, Pouria Tohidi, Shuwen Wei

Johns Hopkins University

ABSTRACT

1. INTRODUCTION

As the amount of patient data becomes increasingly larger in the hospital system, it is important to find an efficient way to store and manage the data. Traditionally, the patient data is stored separately from the corresponding medical scanned image like CT images, MRI images and so on. However, mistakes may sometimes happen when a doctor tries to extract the corresponding patient data to match a certain medical scanned image. Furthermore, the confidentiality is not always good when the hospital system is attacked by the hostile people, which may finally lead to the leakage of patient information.

One simple solution is to embed the patient information into the corresponding scanned medical images. Watermarking, as originally used for image authentication, becomes a powerful tool in hiding the patient information into the medical scanned image.

In this paper, we proposed a watermarking method in wavelets domain to embed the patient data into the corresponding medical scanned image. First, we introduce the algorithm to encode the patient information into the medical image and also decode it from the image.

2. METHODS

3. RESULTS

4. CONCLUSION

5. REFERENCES