

EE 338:- Application Assignment

Binary Image Watermarking using Wavelet Transform

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1 Abstract

With recent advancements in information technology, we have seen a growing need for data protection and security measures due to increased threats of piracy and copyright infringements. **Digital watermarking** is a method for embedding data into digital multimedia content. Being a cost-effective solution for tackling piracy and copyright infringement issues, it can also be employed for other purposes such as **source tracking**, **broadcast tracking** and **hidden communication**. In this assignment, we aim to implement **binary image watermarking** using wavelet domain of the multimedia content, for instance an audio signal. We propose to hide the binary image in the wavelet domain of a multimedia signal, preferably an audio signal using **wavelet transformation** and retrieve the image later on by comparing the mean of the corresponding detail coefficients calculated before and after hiding the image.

2 References

- [1] M. Wu and B. Liu, Watermarking for Image Authentication, *Proceedings of IEEE International Conference on Image Processing*, 1998, vol.2, pp. 437-441
- [2] Yang and Alex C. Kot, Pattern-Based Date Hiding for Binary Images Authentication by Connectivity-Preserving, *IEEE Trans. On Multimedia*, vol. 9, no. 3, pp. 475-486, April 2007