

Blind Watermarking Technique for Grey Scale Image Using Block Level Discrete Cosine Transform (DCT)

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Abstract. This paper presents a robust watermarking technique to copyright an image. Proposed technique is totally based on DCT and is different from most of the available techniques. We are embedding block-wise watermark against the noise, filtering and cropping attack. Before embedding the watermark for any host image we must calculate the gain factor. According to our approach gain factor will vary for two different host images. The experimental results show that in addition the invisibility and security, the scheme is also robust against signal processing.

Keywords: Blind watermarking, DCT, IDCT, encrypted watermark, digital watermark.

1 Introduction

As with the spread of multimedia over the internet, we are facing lots of issues in copyrighting multimedia contents as a digital duplicate copy can be very easily generated hence resulting in failure to protect ownership of content. In this paper we will be emphasizing & providing a mechanism to protect the ownership of digital images by invisible watermarking. Watermarking is a process of adding some additional information within the image that would be having authenticity of the image and can be retrieved to check its ownership. Watermarking can be visible or invisible, in visible watermarking the copyright text or image is overlapped over visual section of image whereas in invisible watermarking all the data used to copyright image is stored/embedded in the image data itself so as it cant be seen to a normal user but can be retrieved by its owner. This type of watermarking is very useful & is in practice to protect ownership of image. We use different types of algorithms to implement the same but there is no algorithm which could provide robustness to all the attacks, So we would consider to provide robustness for some specific attacks. Using this algorithm we try to achieve invisible digital watermarking that it should be almost unperceable by ordinary human senses also it should provide security from removing it by an unauthorized user. There should be any password mechanism to access or modify this secure information. unobtrusive, readily extractable robust, unambiguous, innumerable Techniques for watermarking as available today can be divided into two