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Invisible Watermarking for Image Security and Tamper Detection

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Abstract

Digital images travel widely across the internet and copyright protection of these images/digital artwork has become a huge threat in the recent past. The images online mostly could be re-distributed and re-published without the owner's permission. The ready availability of free cost image processing tools and applications, copyright manipulation can be easily done. This is known as copyright infringement. Therefore, to protect digital images from copyright infringement and to claim ownership, visible and invisible watermarking is a solution. These approaches are not very new. However, visible watermark can be eliminated from the image. Invisible watermark is the best option to obtain monetary compensation against infringements. There are very few commercial applications which are developed for invisible image watermarking and tampering detection. The existing solutions have proposed various techniques methods with more robust watermark which has certain limitations like degradation of the image quality. The proposed system is to provide a solution to embed watermark to high-resolution colored (1024X1024) images along with tampering detection.

Key Words: Invisible Image Watermarking, DWT-DCT Watermarking, Image Tampering Detection, Robust Invisible watermarking