A ROBUST WATERMARKING SCHEME CAPABLE OF PROTECTING AND AUTHENTICATING IMAGES USING CONTOURLET TRANSFORM

A PROJECT REPORT

Submitted by

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in partial fulfillment for the award of the

degree of

BACHELOR OF ENGINEERING

IN

ELECTRONICS AND COMMUNICATION ENGINEERING

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MAY 2023

ABSTRACT

In the last two decades, it has been observed that remarkable advancements in digital media communication. It has a lot of advantages and business potential as it needs no physical media and transport. But digital media can also create several big problems for media owners due to unauthorized use, ease of replication, and equivalence of works in digital form. They can easily lose their business and property. Thus owners need strong protection of their media content against unauthorized use.

In the direction of attaining greater robustness against various signal processing operations, this paper proposes a new image watermarking scheme in multiple transform domains. Firstly, the host image is decomposed using Discrete Wavelet Transform (DWT) and the lower frequency subband is obtained. This subband is further decomposed using two-level Contourlet Transform(CT) wherein the first level approximate subband is used to evaluate the optimized modification parameters and the second level detail subband is used for watermark embedding. In counterpart of embedding, the watermark bits are extracted based on the guiding factor. Experimental results show higher robustness against various attacks without compromising the image quality.