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RESEARCH ARTICLE

ROBUST WATERMARKING SCHEME AGAINST GEOMETERICAL ATTACKS

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Abstract— In the age of e-media where everything is accessed through the internet it becomes very important to protect the privacy and the copyright of the data and the information which is shared through the internet. This digital way of communicating had raised the issue of protection of the rights of owners of the content that is distributed in electronic form. One of the ways to deal with this issue is Watermarking Technique. The Research of this thesis is to develop such watermarking method so that the image retains its robustness while undergoing different geometric attacks. In this scheme the host image is divided into its RGB components and binary watermarks are embedded into them at different regions. The watermark is a binary image, embedded into host image by altering LSB values of the selected regions. In this only 10 cases are considered for performing OR and AND operations on extracted watermark, only that watermark will be selected based on highest NC value of extracted watermarks. In order to evaluate the performance of proposed algorithm, MSE (Mean Square Error), RMSE (Root MSE), PSNR (Peak Signal Noise ratio) parameters are used. The proposed scheme is found robust against various geometric attacks like cropping, Rotation and salt & pepper noise.

Key Terms: - RGB; watermark; PSNR; MSE; RMSE; NC

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