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Digital Watermarking Using Fractional Transform and (k,n) Halftone Visual Cryptography (HVC)

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Abstract : Development in the usage of internet for different purposes in recent times creates great threat for the copy right protection of the digital images. Digital watermarking is the best way to rescue from the said problem. This paper presents detailed review of the different watermarking techniques, latest trends in the field and categorized like spatial and transform domain, blind and non-blind methods, visible and non visible techniques etc. It also discusses the different optimization techniques used in the field of watermarking in order to improve the robustness and imperceptibility of the method. Different measures are discussed to evaluate the performance of the watermarking algorithm. At the end, this paper proposes a watermarking algorithm using (k.n) shares of halftone visual cryptography (HVC) instead of (2, 2) share cryptography. (k,n) shares visual cryptography improves the security of the watermark. As halftone is a method of reprographic, it helps in improving the visual quality of watermark image. The proposed method uses fractional transformation to improve the robustness of the copyright protection of the method.

Keywords : digital watermarking, fractional transform, halftone, visual cryptography
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