Image orientation based watermarking technique in copyright protection

ABSTRACT

As a means of copyright protection, the use of watermarking has still not reached a significant level of reliability in applications to resolve infringement claims in the courts. This is because of two main obstacles. The first raises the need to consider original image quality as the main evidence over any other clues whereas the second denotes the lack of an adequate common measure that prove the superiority of one technique over another and then prevent improvement on efficiency and quality of algorithms. In seeking to address this problem, this research proposes a new image orientation watermarking technique based on the possession of the highest quality of the original image as the main evidence in copyright disputes and proposes a generic measure capable of scoring the performance of the different proposals. This design benefits Principal Component Analysis and Blind Noise Level Estimation to resemble a set of image transitions over resizing operations in response to owner signature. To deduce copyright, watermarked image besides its original coordinates are incorporated in copyright issues with the aid of two formulated parameters; Protection Requirement (PR) and Distance Decision (D) that are to serve as a protection requirement measure and a resolving parameter respectively. The design along its obtained results shows convincing validity results that are further explicated using ANOVA and linearity testing.