Abstract

With the advancement of handy and sophisticated image editing software, the alteration of digital images' contents has become rife in all senses and camouflaged enough for non-identification. A digital image is a copious source of data and information that can be used for corroboration of factual events; however, in the recent times, its authenticity has developed a questionable background. Various types of forgery have come into picture within the past years. To counteract these forgeries, equal efforts have been focused on to make systems, inclusive of techniques to detect the forgeries. Keeping the accuracy, precision and the time complexity in mind, this paper focuses primarily on Discrete Cosine Transformation Block Based Copy-Move Forgery detection technique. The algorithm evaluation using blocks of sizes 8x8 and 16x16 are compared and contrasted to get a vivid idea about the advantages and shortcomings of using either of these. 8x8 blocks detect even the slightest tampering accurately, due to the small size of blocks, but yield a large number of false matches. Whereas, 16x16 blocks significantly reduce the number of false matches, but also the accuracy since now the minute forgeries aren’t detected. The information, thus received, has served as grounds in this paper to provide
an improved algorithm, which combines the advantages of both the parts and then renders better results, comparatively.

References


Index Terms

Computer Science  Security

Keywords

DCT, Copy move forgery detection, Image processing, Image Forensics, Block based forgery
detection, image tampering, passive forgery detection.