Abstract

This report introduces two semi-fragile watermarking algorithms in details, including how they are deigned and implemented using Matlab. The first algorithm relies on embedding the watermark, which is a pseudo-random sequence of 0s and 1s, into the DCT domain of a greyscale image; this algorithm supports image restoration. The second algorithm, similar to the first one, still operates in the DCT domain but it only modifies coefficients instead of replacing them. The report discusses the characteristics and performance of the algorithms and suggests possible ways of optimising them at the end.

Keywords: Semi-fragile watermarking, DCT embedding, Localisation, Restoration