

## A Robust Approach to Authentication of Binary Image for Multimedia Communication

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### ABSTRACT

In recent years, digital watermarking techniques have been proposed to protect the copyright of multimedia data. Different watermarking schemes have been suggested for images, while there is little discussion about binary image. Basing on the analysis of the principle of digital watermarking and a spatial domain algorithm, we propose a watermarking algorithm---the discrete cosine transforms (DCT) to realize the authentication of binary image. The experiment results show that the DCT algorithm is feasible to binary image. Compared with the spatial domain algorithm, the watermarked image by the DCT almost has no distortions and is robust to common signal distortions, including geometric manipulations.

**Keywords:** Digital watermarking, Binary image, DCT, Authentication, Robust, Multimedia Communication.