

## **SECURE, ROBUST AND MORE EFFICIENT WATERMARKING FOR VIDEO USING SVD FOR PROTECTING RIGHTFUL OWNERSHIP**

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### **Abstract**

The fast growth and easy access of cyber world has drawn attention of research scholars to protect the manipulation and tampering in transmission of digital multimedia documents like text, images, audio and video. Thus serious problems like copying, distortion and claiming the ownership of multimedia documents need to be addressed. Watermarking is the most conventional method used for copyright protection of documents. Incurring from related fields like cryptography, communication theory, information theory etc., digital watermarking is proving its mark by providing powerful security measure in transmission of multimedia digital documents. This paper presents a Singular Value Decomposition (SVD)-based digital watermarking scheme. The algorithm proposed here takes care of ownership protection problem which is of great importance in today's digital world. The proposed algorithm for video watermarking handles the problem of false-positive detection and is more robust as it uses a block based approach. The algorithm makes use of Image watermarking scheme and shows how it can be extended to perform video watermarking. This algorithm removes the constraint on size of watermark as bigger watermarks can be embedded using block based approach as compared to the existing approaches [12] of embedding the watermark in the SVD of the host image of watermark. Analysis and results show that the proposed algorithm is more robust and more secure compared to existing watermarking schemes.

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