Abstract

Digital watermark is perceptually invisible information embedded in the video. This embedding is done by an encoder using a secret key. The watermark can carry information about owner or recipient of the video or the video itself or some additional information like video caption, date etc. The watermarked video may undergo possible changes by unauthorized users or attackers. Unintentional and malicious attacks are aimed to disable watermark detection.

Watermark embedding algorithm should be robust to such attacks. Watermark detection algorithm should decide whether watermark is present or absent in the video. If original video is used to make this decision, detector’s efficiency is increased and this system is termed as non-blind or private or non-oblivious watermarking system. Non-Blind watermarking is very expensive in terms of storage and not a practical solution. Blind or public watermarking algorithms not require original video for watermark detection. These algorithms are more practical but detector’s efficiency is low compared to one in private watermarking. In order to increase security of blind watermarking scheme it is desirable to use video dependent keys in
the process of watermark generation.

In this paper we discussed various video watermarking generation techniques and their challenges and used it for Video authentication. Experimental results show that same watermark can be used for authentication as well as copyright protection.

References

14. Lei Yang, Qian Chen, Jun Tian, Dapeng Wu, “Robust Track-and-Trace Video Watermarking,”


Index Terms

Computer Science

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Keywords

Singular Value Decomposition, Attacks, DCT, LSB