Key issues for watermarking digital images

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ABSTRACT

This paper discusses secure architecture and protocols for managing Intellectual Property Rights in distributed content databases in a close environment. This discussion has been conducted within the European project AQUARELLE.

This paper presents a short survey of watermarking technologies and focuses on functionalities offered by such techniques. We propose the terms of watermarking, fingerprinting and monitoring. For our implementation, we have worked with the Université catholique de Louvain (UCL). This work is joint work with Jean-Francois Delaigle.

Next we focus mainly on keys issues, and conclude that a trusted third party is needed to establish a verification service of watermarks. Next the DHWM key exchange is presented, based on the simple idea that watermarking and verification can be separated. This scheme uses the Diffie-Hellman key-exchange protocol. Next some hints on the implementation of the scheme and on its correctness are given.

Keywords: IPR protection, watermarking, Key exchange, Aquarelle, multimedia distributed system.

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