

Abstract

This final assignment enunciates the need for watermarking database relations to identify the unique characteristics of relational data and provide desirable properties of a watermarking system for relational data. A watermark can be applied to any database relation having attributes which are such that changes in a few of their values do not affect the applications.

Watermarking technique ensures that some bit positions of some of the attributes of some tuple contain specific values. The tuple, attribute within a tuple, bit positions in an attribute, and specific bit values are all algorithmically determined under the control of a private key known only to the owner of the data. This bit pattern constitutes the watermark. Only if one has access to the private key can the watermark be detected with high probability.

The analysis result shows that the proposed technique is robust against various forms of malicious attacks and updates to the data. Using an implementation running on database show that the performance of the algorithm allows for their use in a real world applications.

Keywords: watermarking, watermark, relational database, private key.