

Multimedia Encryption, Transmission and Authentication

Edited by

Othman Omran Khalifa, B.Sc., M.Sc., Ph.D.
International Islamic University Malaysia

Aisha-Hassan Abdulla, B.Sc., M.Sc., Ph.D.,
International Islamic University Malaysia

Teddy Surya Gunawan, B.Sc., M.Sc., Ph.D.,
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Chapter 20

Adaptive Digital Watermarking System for Authentication of Intellectual Properties

¹Rashidah F. Olanrewaju, ²Azizah Abd Manaf and ³Akram Zeki

¹Department of Electrical and Computer Engineering Department, Faculty of Engineering,

³Kulliyyah of Information and Communication Technology, International Islamic University
Malaysia, 50728 Kuala Lumpur, Malaysia.

²Advanced Informatics , UTM International Campus, Universiti Teknologi Malaysia., Kuala Lumpur, Malaysia

20.1. Introduction

Digital information offers wonderful opportunities and improvements to human life, especially with the advent of internet. Such opportunities and improvements pose a great concern to all multimedia industries, especially intellectual properties. The fact is that the current digital distribution and storage technologies are great threat of counterfeiting and piracy where unlimited number of perfect copies can be produce illegally. The concerns over protecting intellectual property have triggered significant research in digital watermarking to solve the problem of piracy and counterfeiting. Digital watermarking is imperceptibly altering a host media to embed message or marks about the host carrier itself, it hides message about an image, audio, text, video clip, or other work of media within that work itself , in such a way that is robust, secure and imperceptible to human observer, but can be detected algorithmically. This feature makes it useful in various applications such as authentication, copy control, copy right protection etc. The principal advantage is that the content is inseparable from the watermark. A typical watermark embedder is shown in Figure 1.0

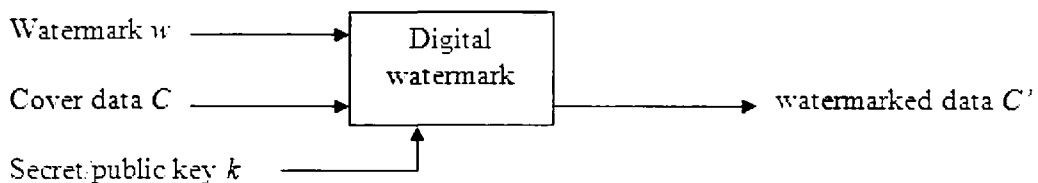


Figure 1.0: Generic digital watermarking scheme