I am delighted to write the Foreword to this book, as its scope and content provide commercial and government enterprises with the essential ingredients for implementing and managing secure multimedia distribution.

The recent advances in the technology, especially in the computer industry and communications, allowed a potentially enormous market for distributing digital multimedia content through the Internet. However, the proliferation of digital documents, multimedia processing tools, and the worldwide availability of Internet access have created an ideal medium for copyright fraud and uncontrollable distribution of multimedia content. Now a major challenge is the protection of the intellectual property of multimedia content in multimedia networks.

To deal with the technical challenges, two major multimedia security technologies are being developed:

1. Multimedia encryption technology to provide end-to-end security when distributing digital content over a variety of distribution systems.
2. Multimedia watermarking technology as a tool to achieve copyright protection, ownership trace, and authentication.

This handbook provides answers to many challenging questions dealing with designing modern secure multimedia distribution systems. It addresses a variety of issues related to the protection of digital multimedia content, digital right management systems, video watermarking and authentication techniques, and various applications.

The handbook is comprised of 27 chapters divided into 3 sections. Section I, Secure Systems, introduces fundamental concepts applied for digital right management. Section II, Key Techniques, includes chapters on multimedia encryption, watermarking, and authentication techniques. Section III, Typical Applications, includes chapters that describe various application of multimedia protection schemes.

I recommend this handbook to researchers and practitioners in the field, and for scientists and engineers involved in designing and developing systems for the protection of digital multimedia content. The Handbook can also be used for graduate students in the area of multimedia security.

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