1. Record Nr. UNINA9910809007903321

Titolo	The handbook of MPEG applications : standards in practice / / editors, Marios C. Angelides and Harry Agius
Pubbl/distr/stampa	Chichester, West Sussex, U.K. : , : J. Wiley, , 2011 [Piscataqay, New Jersey] : , : IEEE Xplore, , [2010]
ISBN	0-470-97474-5 1-283-85859-2 0-470-97458-3 0-470-97459-1
Descrizione fisica	1 online resource (551 p.)
Altri autori (Persone)	AngelidesMarios C AgiusHarry
Disciplina	006.6/96
Soggetti	MPEG (Video coding standard) MP3 (Audio coding standard) Application software - Development
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes index.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	List of Contributors -- MPEG Standards in Practice -- 1 HD Video Remote Collaboration Application (Beomjoo Seo, Xiaomin Liu, and Roger Zimmermann) -- 1.1 Introduction -- 1.2 Design and Architecture -- 1.3 HD Video Acquisition -- 1.4 Network and Topology Considerations -- 1.5 Real-Time Transcoding -- 1.6 HD Video Rendering -- 1.7 Other Challenges -- 1.8 Other HD Streaming Systems -- 1.9 Conclusions and Future Directions -- References -- 2 MPEG Standards in Media Production, Broadcasting and Content Management (Andreas U. Mauthe and Peter Thoma) -- 2.1 Introduction -- 2.2 Content in the Context of Production and Management -- 2.3 MPEG Encoding Standards in CMS and Media Production -- 2.4 MPEG-7 and Beyond -- 2.5 Conclusions -- References -- 3 Quality Assessment of MPEG-4 Compressed Videos (Anush K. Moorthy and Alan C. Bovik) -- 3.1 Introduction -- 3.2 Previous Work -- 3.3 Quality Assessment of MPEG-4 Compressed Video -- 3.4 MPEG-4 Compressed Videos in Wireless Environments -- 3.5 Conclusion -- References -- 4 Exploiting

MPEG-4 Capabilities for Personalized Advertising in Digital TV (Mart<U+0083>in Lpez-Nores, Yolanda Blanco-Fernndez, Alberto Gil-Solla, Manuel Ramos-Cabrer, and Jos J. Pazos-Arias) -- 4.1 Introduction -- 4.2 Related Work -- 4.3 Enabling the New Advertising Model -- 4.4 An Example -- 4.5 Experimental Evaluation -- 4.6 Conclusions -- Acknowledgments -- References -- 5 Using MPEG Tools in Video Summarization (Luis Herranz and Jos M. Mart<U+0083>inez) -- 5.1 Introduction -- 5.2 Related Work -- 5.3 A Summarization Framework Using MPEG Standards -- 5.4 Generation of Summaries Using MPEG-4 AVC -- 5.5 Description of Summaries in MPEG-7 -- 5.6 Integrated Summarization and Adaptation Framework in MPEG-4 SVC -- 5.7 Experimental Evaluation -- 5.8 Conclusions -- References -- 6 Encryption Techniques for H.264 Video (Bai-Ying Lei, Kwok-Tung Lo, and Jian Feng) -- 6.1 Introduction -- 6.2 Demands for Video Security -- 6.3 Issues on Digital Video Encryption -- 6.4 Previous Work on Video Encryption.
6.5 H.264 Video Encryption Techniques -- 6.6 A H.264 Encryption Scheme Based on CABAC and Chaotic Stream Cipher -- 6.7 Concluding Remarks and Future Works -- Acknowledgments -- References -- 7 Optimization Methods for H.264/AVC Video Coding (Dan Grois, Evgeny Kaminsky, and Ofer Hadar) -- 7.1 Introduction to Video Coding Optimization Methods -- 7.2 Rate Control Optimization -- 7.3 Computational Complexity Control Optimization -- 7.4 Joint Computational Complexity and Rate Control Optimization -- 7.5 Transform Coding Optimization -- 7.6 Summary -- References -- 8 Spatiotemporal H.264/AVC Video Adaptation with MPEG-21 (Razib Iqbal and Shervin Shirmohammadi) -- 8.1 Introduction -- 8.2 Background -- 8.3 Literature Review -- 8.4 Compressed-Domain Adaptation of H.264/AVC Video -- 8.5 On-line Video Adaptation for P2P Overlays -- 8.6 Quality of Experience (QoE) -- 8.7 Conclusion -- References -- 9 Image Clustering and Retrieval Using MPEG-7 (Rajeev Agrawal, William I. Grosky, and Farshad Fotouhi) -- 9.1 Introduction -- 9.2 Usage of MPEG-7 in Image Clustering and Retrieval -- 9.3 Multimodal Vector Representation of an Image Using MPEG-7 Color Descriptors -- 9.4 Dimensionality Reduction of Multimodal Vector Representation Using a Nonlinear Diffusion Kernel -- 9.5 Experiments -- 9.6 Conclusion -- References -- 10 MPEG-7 Visual Descriptors and Discriminant Analysis (Jun Zhang, Lei Ye, and Jianhua Ma) -- 10.1 Introduction -- 10.2 Literature Review -- 10.3 Discriminant Power of Single Visual Descriptor -- 10.4 Discriminant Power of the Aggregated Visual Descriptors -- 10.5 Conclusions -- References -- 11 An MPEG-7 Profile for Collaborative Multimedia Annotation (Damon Daylamani Zad and Harry Agius) -- 11.1 Introduction -- 11.2 MPEG-7 as a Means for Collaborative Multimedia Annotation -- 11.3 Experiment Design -- 11.4 Research Method -- 11.5 Results -- 11.6 MPEG-7 Profile -- 11.7 Related Research Work -- 11.8 Concluding Discussion -- Acknowledgment -- References -- 12 Domain Knowledge Representation in Semantic MPEG-7 Descriptions (Chrisa Tsinaraki and Stavros Christodoulakis).
12.1 Introduction -- 12.2 MPEG-7-Based Domain Knowledge Representation -- 12.3 Domain Ontology Representation -- 12.4 Property Representation -- 12.5 Class Representation -- 12.6 Representation of Individuals -- 12.7 Representation of Axioms -- 12.8 Exploitation of the Domain Knowledge Representation in Multimedia Applications and Services -- 12.9 Conclusions -- References -- 13 Survey of MPEG-7 Applications in the Multimedia Lifecycle (Florian Stegmaier, Mario D<U+008a>oller, and Harald Kosch) -- 13.1 MPEG-7 Annotation Tools -- 13.2 MPEG-7 Databases and

Retrieval -- 13.3 MPEG-7 Query Language -- 13.4 MPEG-7 Middleware -- 13.5 MPEG-7 Mobile -- 13.6 Summarization and Outlook -- References -- 14 Using MPEG Standards for Content-Based Indexing of Broadcast Television, Web, and Enterprise Content (David Gibbon, Zhu Liu, Andrea Basso, and Behzad Shahraray.) -- 14.1 Background on Content-Based Indexing and Retrieval -- 14.2 MPEG-7 and MPEG-21 in ETSI TV-Anytime -- 14.3 MPEG-7 and MPEG-21 in ATIS IPTV Specifications -- 14.4 MEPG-21 in the Digital Living Network Alliance (DLNA) -- 14.5 Content Analysis for MPEG-7 Metadata Generation -- 14.6 Representing Content Analysis Results Using MPEG-7 -- 14.7 Extraction of Audio Features and Representation in MPEG-7 -- 14.8 Summary -- References -- 15 MPEG-7/21: Structured Metadata for Handling and Personalizing Multimedia Content (Benjamin K<U+008a>ohncke and Wolf-Tilo Balke) -- 15.1 Introduction -- 15.2 The Digital Item Adaptation Framework for Personalization -- 15.3 Use Case Scenario -- 15.4 Extensions of MPEG-7/21 Preference Management -- 15.5 Example Application -- 15.6 Summary -- References -- 16 A Game Approach to Integrating MPEG-7 in MPEG-21 for Dynamic Bandwidth Dealing (Anastasis A. Sofokleous and Marios C. Angelides) -- 16.1 Introduction -- 16.2 Related Work -- 16.3 Dealing Bandwidth Using Game Theory -- 16.4 An Application Example -- 16.5 Concluding Discussion -- References -- 17 The Usage of MPEG-21 Digital Items in Research and Practice (Hermann Hellwagner and Christian Timmerer).
17.1 Introduction -- 17.2 Overview of the Usage of MPEG-21 Digital Items -- 17.3 Universal Plug and Play (UPnP): DIDL-Lite -- 17.4 Microsoft's Interactive Media Manager (IMM) -- 17.5 The DANAE Advanced MPEG-21 Infrastructure -- 17.6 MPEG-21 in the European Projects ENTHRONE and AXMEDIS -- 17.7 Information Asset Management in a Digital Library -- 17.8 Conclusions -- References -- 18 Distributing Sensitive Information in the MPEG-21 Multimedia Framework (Nicholas Paul Sheppard) -- 18.1 Introduction -- 18.2 Digital Rights Management in MPEG-21 -- 18.3 MPEG-21 in Copyright Protection -- 18.4 MPEG-21 in Enterprise Digital Rights Management -- 18.5 MPEG-21 in Privacy Protection -- 18.6 Conclusion -- Acknowledgments -- References -- 19 Designing Intelligent Content Delivery Frameworks Using MPEG-21 (Samir Amir, Ioan Marius Bilasco, Thierry Urruty, Jean Martinet and Chabane Djeraba) -- 19.1 Introduction -- 19.2 CAM Metadata Framework Requirements -- 19.3 CAM Metadata Model -- 19.4 Study of the Existing Multimedia Standards -- 19.5 CAM Metadata Encoding Using MPEG-21/7 -- 19.6 Discussion -- 19.7 Conclusion and Perspectives -- References -- 20 NinSuna: a Platform for Format-Independent Media Resource Adaptation and Delivery (Davy Van Deursen, Wim Van Lancker, Chris Poppe, and Rik Van de Walle) -- 20.1 Introduction -- 20.2 Model-Driven Content Adaptation and Packaging -- 20.3 The NinSuna Platform -- 20.4 Directions for Future Research -- 20.5 Discussion and Conclusions -- Acknowledgments -- References -- 21 MPEG-A and Its Open Access Application Format (Florian Schreiner and Klaus Diepold) -- 21.1 Introduction -- 21.2 The MPEG-A Standards -- 21.3 The Open Access Application Format -- References -- Index.

Sommario/riassunto

This book provides a comprehensive examination of the use of MPEG-2, MPEG-4, MPEG-7, MPEG-21, and MPEG-A standards, providing a detailed reference to their application. In this book, the authors address five leading MPEG standards, focusing not only on the standards themselves, but specifically upon their application (e.g. for broadcasting media, personalised advertising and news, multimedia collaboration, digital rights management, resource adaptation, digital

home systems, and so on); including MPEG cross-breed applications. In the evolving digital multimedia landscape, this book provides comprehensive coverage of the key MPEG standards used for generation and storage, distribution and dissemination, and delivery of multimedia data to various platforms within a wide variety of application domains. It considers how these MPEG standards may be used, the context of their use, and how supporting and complementary technologies and the standards interact and add value to each other. Key Features: . Integrates the application of five popular MPEG standards (MPEG-2, MPEG-4, MPEG-7, MPEG-21, and MPEG-A) into one single volume, including MPEG cross-breed applications . Up-to-date coverage of the field based on the latest versions of the five MPEG standards . Opening chapter provides overviews of each of the five MPEG standards . Contributions from leading MPEG experts worldwide . Includes an accompanying website with supporting material (www.wiley.com/go/angelides_mpeg) This book provides an invaluable reference for researchers, practitioners, CTOs, design engineers, and developers. Postgraduate students taking MSc, MRes, MPhil and PhD courses in computer science and engineering, IT consultants, and system developers in the telecoms, broadcasting and publishing sectors will also find this book of interest.