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Region-based Motion Compensation; 3.4 Image model; 3.4.1 Predictive Image Coding; 3.4.2 Transform Coding; 3.4.3 Quantisation; 3.4.4 Reordering and Zero Encoding; 3.5 Entropy Coder; 3.5.1 Predictive Coding; 3.5.2 Variable-length Coding; 3.5.3 Arithmetic Coding
3.6 The Hybrid DPCM/DCT Video CODEC Model3.7 Conclusions; 3.8 References; 4 The MPEG-4 and H.264 Standards; 4.1 Introduction; 4.2 Developing the Standards; 4.2.1 ISO MPEG; 4.2.2 ITU-T VCEG; 4.2.3 JVT; 4.2.4 Development History; 4.2.5 Deciding the Content of the Standards; 4.3 Using the Standards; 4.3.1 What the Standards Cover; 4.3.2 Decoding the Standards; 4.3.3 Conforming to the Standards; 4.4 Overview of MPEG-4 Visual/Part 2; 4.5 Overview of H.264 / MPEG-4 Part 10; 4.6 Comparison of MPEG-4 Visual and H.264; 4.7 Related Standards; 4.7.1 JPEG and JPEG2000; 4.7.2 MPEG-1 and MPEG-2 4.7.3 H.261 and H.2634.7.4 Other Parts of MPEG-4; 4.8 Conclusions; 4.9 References; 5 MPEG-4 Visual; 5.1 Introduction; 5.2 Overview of MPEG-4 Visual (Natural Video Coding); 5.2.1 Features; 5.2.2 Tools, Objects, Profiles and Levels; 5.2.3 Video Objects; 5.3 Coding Rectangular Frames; 5.3.1 Input and Output Video Format; 5.3.2 The Simple Profile; 5.3.3 The Advanced Simple Profile; 5.3.4 The Advanced Real Time Simple Profile; 5.4 Coding Arbitrary-shaped Regions; 5.4.1 The Core Profile; 5.4.2 The Main Profile; 5.4.3 The Advanced Coding Efficiency Profile; 5.4.4 The N-bit Profile
5.5 Scalable Video Coding5.5.1 Spatial Scalability; 5.5.2 Temporal Scalability; 5.5.3 Fine Granular Scalability; 5.5.4 The Simple Scalable Profile; 5.5.5 The Core Scalable Profile; 5.5.6 The Fine Granular Scalability Profile; 5.6 Texture Coding; 5.6.1 The Scalable Texture Profile; 5.6.2 The Advanced Scalable Texture Profile; 5.7 Coding Studio-quality Video; 5.7.1 The Simple Studio Profile; 5.7.2 The Core Studio Profile; 5.8 Coding Synthetic Visual Scenes; 5.8.1 Animated 2D and 3D Mesh Coding; 5.8.2 Face and Body Animation; 5.9 Conclusions; 5.10 References; 6 H.264/MPEG-4 Part 10
6.1 Introduction

Sommario/riassunto

Following on from the successful MPEG-2 standard, MPEG-4 Visual is enabling a new wave of multimedia applications from Internet video streaming to mobile video conferencing. The new H.264 'Advanced Video Coding' standard promises impressive compression performance and is gaining support from developers and manufacturers. The first book to cover H.264 in technical detail, this unique resource takes an application-based approach to the two standards and the coding concepts that underpin them.Presents a practical, step-by-step, guide to the MPEG-4 Visual and H.264 standards for video com