MPEG-4 Facial Animation. The Standard, Implementation and Applications

Description: One of the more revolutionary parts of the MPEG-4 International Standard is the Face and Body Animation, or FBA: the specification for efficient coding of shape and animation of human faces and bodies. This specification is a result of collaboration of experts with different backgrounds ranging from image coding and compression to video analysis, computer graphics, as well as speech analysis and synthesis, all sharing a common interest in computer simulation of humans. This book concentrates on the animation of faces.

Features include:

- Sets the MPEG-4 FA specification against the historical background of research on facial animation and model-based coding and provides a brief history of the development of the standard itself.
- Comprehensive overview of the FA specification with the goal of helping the reader understand how the standard works, what the thinking is behind it, and how it is intended be used.
- Covers the implementation of the standard on both the encoding and decoding side. Presents several face animation techniques for MPEG-4 FA decoders, as well as architectures for building applications based on the standard.
- Brings together a collection of applications using the MPEG-4 FA specification.
- Includes a standard benchmark method for assessing the quality of MPEG-4 FA decoders.

The MPEG-4 FA specification is suitable for a wide range of applications not only in telecommunications and multimedia, but also in fields like computer animation and human–computer interfaces. This book will be a valuable companion for practitioners implementing applications based on the MPEG-4 FA specification and those who wish to understand the standard and its implications.

Contents:

List of Contributors.
Author Biographies.
Foreword.
Preface.

PART 1: BACKGROUND.
The Origins of the MPEG-4 Facial Animation Standard (Igor S. Pandzic and Robert Forchheimer).

PART 2: THE STANDARD.
Face Animation in MPEG-4 (Jörn Ostermann).
MPEG-4 Face Animation Conformance (Eric Petajan).

PART 3: IMPLEMENTATIONS.
MPEG-4 Facial Animation Framework for the Web and Mobile Applications (Igor S. Pandzic).
The Facial Animation Engine (Fabio Lavagetto and Roberto Pockaj).
Extracting MPEG-4 FAPS from Video (Jörgen Ahlberg).
Real-Time Speech-Driven Face Animation (Pengyu Hong, Zhen Wen and Thomas S. Huang).
Visual Text-to-Speech (Catherine Pelachaud).
Emotion Recognition and Synthesis Based on MPEG-4 FAPs (Nicolas Tsapatsoulis, Amaryllis Raouzaiou, Stefanos Kollias, Roddy Cowie and Ellen Douglas-Cowie).
The InterFace Software Platform for Interactive Virtual Characters (Igor S. Pandzic, Michele Cannella, Franck Davoine, Robert Forchheimer, Fabio Lavagetto, Haibo Li, Andrew Marriott, Sotiris Malassiotis, Montse Pardas, Roberto Pockaj and Gael Sannier).

PART 4: APPLICATIONS.

Model–based Coding: The Complete System (Haibo Li and Robert Forchheimer).

A Facial Animation Case Study for HCI: The VHML–Based Mentor System (Andrew Marriott).

PlayMail ? Put Words into Other People?is Mouth (Jörn Ostermann).

E–Cogent: An Electronic Convincing aGENT (Jörn Ostermann).

alterEGO: Video Analysis for Facial Animation (Eric Petajan).

EPTAMEDIA: Virtual Guides and Other Applications (Fabio Lavagetto and Roberto Pockaj).

Appendix 1: Evaluating MPEG–4 Facial Animation Players (Jörgen Ahlberg, Igor S. Pandzic and Liwen You).

Appendix 2: Web Resources.

Index.


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