

Contents

vii *Conference Committee*
ix *Introduction*

DAVIC, MPEG-2, AC-3

- 3 **Use of MPEG transport stream in TV systems**
S. Narasimhan, General Instruments Corp.
- 24 **AC-3 audio coder**
C. Todd, Dolby Labs.
- 36 **MPEG-2 and JPEG on ATM**
A. Jalali, LDDS WorldCom
- 48 **DAVIC activities**
H. Fujiwara, Graphics Communication Labs. (Japan)

HDTV WORLDWIDE

- 71 **Activities to develop digital SDTV/HDTV standards in Korea**
C. Ahn, Y. H. Kim, S. G. Park, J.-W. Yang, Electronics and Telecommunications Research Institute (Korea); J. Y. Nam, Gueimyung Univ. (Korea)
- 88 **Grand alliance HDTV**
E. D. Petajan, AT&T Bell Labs.
- 106 **Development and standardization of HDTV**
Y. Ninomiya, NHK/Japan Broadcasting Corp.
- 130 **Multiresolution coding for video-based service applications**
H. Gharavi, Loughborough Univ. of Technology (UK)

INTEROPERABILITY, MULTIMEDIA

- 149 **Motion estimation for video coding standards**
H.-M. Hang, National Chiao Tung Univ. (Taiwan)
- 178 **Interconnectivity testing in Japan for equipment based on ITU-T recommendations for audiovisual services**
T. Koga, NEC Corp. (Japan)

- 206 **Multimedia teleconferencing with H.324**
D. Lindberg, H. S. Malvar, PictureTel Corp.
- 233 **Comparison of the H.263 and H.261 video compression standards**
B. Girod, E. Steinbach, N. Färber, Univ. Erlangen-Nürnberg (FRG)
- 252 **MPEG-4 status and directions**
R. Talluri, Texas Instruments Inc.
- MPEG-2**
- 265 **MPEG-2 video decoding on programmable processors: computational and architectural requirements**
W. Lee, Y. Kim, Univ. of Washington
- 288 **MPEG-2 4:2:2 profile @ main level: an emerging high-quality video compression standard**
T. Naveen, C. Horne, A. Tabatabai, D. Messing, R. Eifrig, Tektronix, Inc.
- 309 **Compression of stereoscopic video using MPEG-2**
A. Puri, R. V. Kollarits, B. G. Haskell, AT&T Bell Labs.
- 335 **MPEG impact to industries and standardization fields**
H. Yasuda, NTT Information and Communications Systems Labs. (Japan)

Conference Committee

Conference Chair

K. R. Rao, University of Texas/Arlington

Session Chairs

- 1 DAVIC, MPEG-2, AC-3
Craig Todd, Dolby Laboratories
- 2 HDTV Worldwide
Eric D. Petajan, AT&T Bell Laboratories
- 3 Interoperability, Multimedia
Raj Talluri, Texas Instruments Inc.
- 4 MPEG-2
Ali Tabatabai, Tektronix, Inc.

Introduction

These proceedings from the Critical Reviews conference on Standards and Common Interfaces for Video Information Systems are the collected contributions from researchers active in developing and formulating the international standards related to video/audio and speech. The international character of these proceedings is evident in the participation from Germany, Japan, Korea, Taiwan, UK, and the USA. Another interesting feature is the representation from industry, academia, and research institutes.

I am indebted to the speakers for their timely and invaluable contributions. I appreciate their efforts to produce these important papers. Also, the support and cooperation from SPIE made my task as chair very pleasant.

K. R. Rao