

# TELEVISION—MERGING MULTIPLE TECHNOLOGIES

## CONTENTS

Foreword	
Frank J. Haney.....	vii
Preface	
Clyde D. Smith.....	ix
Opening Address — 24th Television Conference	
Frank J. Haney.....	1
High Definition TV — The Television Standard(s) of the Future	
Scott D. Elliot.....	8
Video HDTV, Film and Print	
David Scammell.....	33
35mm — The Next 100 Years — 3 or 4 Perf, 24 or 30 FPS, An Available Solution for the Dilemma	
Don McLendon, Pat Coakley, Bob Jones, Ken McLendon, and Mike Casper.....	38
Experiences of an HDTV Production Facility	
Hiroshi Tanaka and Laurence J. Thorpe.....	53
Experience with a Prototype High Definition Multi Effects Unit in Electronic Video Production	
Dave Hedley and John Richards.....	86
A 1/2-Inch Cassette HDTV VTR	
Shigeo Kizu, Naoki Endo, and Keisuke Ogi.....	102
Stereoscopic HDTV: Experimental System and Psychological Effects	
Ichiro Yuyama and Sumio Yano.....	127
Plant Philosophy and Systems Concepts for Television at the Kennedy Space Center	
Charles T. Brown.....	142
Optimization of Video Image Acquisition and Display, and Radiation Exposure Reduction in the Cardiac Catheterization Laboratory	
Joel E. Gray, Merrill A. Wondrow, David R. Holmes, and Paul Julsrud.....	185
HDTV for Computer Workstations	
Charles A. Poynton.....	197
Infrared Imaging — Television in the Dark	
James B. Van Anda and Charles L. Carter III.....	204
Acceptance and Use of the SMPTE Medical Imaging Test Pattern for Television and Hard-Copy Recording Cameras	
Joel E. Gray, Kenneth G. Lisk, Walter Anderson, John H. Harshbarger, Ronald Schwenker, and Robert A. Uzenoff.....	218

A Computer Controlled Audio Mixing System for Video Post Production Craig J. Birkmaier .....	229
A Standard for Interactive Video Leonardo Chiariglione, Didier LeGall, Hiroshi Yasuda, and Hans-Georg Musmann .....	246
GENESYS™ HDTV Technologies Expand Existing NTSC Service Richard Gerdes .....	250
Using True Stereo Noise for Audio Equipment Evaluation John P. Bisset .....	258
Matrix Conversion for Improvement of Vertical-Temporal Resolution in Letter-Box Wide-Aspect TV Norihiro Suzuki, Masahiro Kageyama, Kazuo Ishikura, Yasuhiro Hirano, Hiroshi Yoshigi, and Takahiko Fukinuki .....	265
Multi-dimensional Testing with Zone Plate Generators John Horn .....	284
If Progressive Scanning is So Good — How Bad is Interlace? Laurence J. Thorpe and T. Hanabusa .....	300
QDA — The Progressive-Scan Alternative for High-Definition Electronic Production Standards Kerns H. Powers and S. Merrill Weiss .....	340
Motion Estimation and Its Applications to HDTV Transmission and Up-Conversion Using DATV Graham Thomas .....	350
A HDTV Sync Pulse and Test Pattern Generator for 1050/59.94/2:1 and 525/59.94/1:1 Winfried Deckelmann and Martin Sietz .....	361
HDTV Digital VTR at 1.2Gb/s and Consideration on Common Image Format Yoshizumi Eto and Masuo Umemoto .....	371
Construction and Design Considerations for the Post-Production Facility at the Disney/MGM Studios John McMahan .....	383
The Integrated Digital Production Suite Ken Carson .....	390
Sustained Plasmatic Ionic Light, A Revolutionary Concept for Television Lighting Paul Costa .....	397
Interfacing Video to Graphics Workstations Dave Knierim .....	415
Optical Fiber: The 1990s Adaptive Television Transmission Medium C. Robert Paulson .....	424
Down to Earth: Optical Fiber Digital Television Networks Grant F. Lenahan .....	431