

TABLE OF CONTENTS

January - December 2001 Volume 110

January

Message from the President	JOHN L. MASON	3
35th SMPTE Advanced Motion Imaging Conference, Washington, DC, February 8-10, 2001		6
An Advanced M/E Architecture for Today's Production Environment	Mark A. Narveson	12
A New Film Scanning Machine for Film in a Digital World	DAVID CORBITT	18
Strategic Implications for Future Content Management Systems	JOHN D. LITKE	23
Evaluating Video Servers	AL KOVALICK	28
High-Definition Cabling and Return Loss		
.STEPHEN H. LAMPEN, MARTIN J. VAN DER BURGT, AND CARL W. DOLE		34
The Technological Art of Simulation	GRAHAM WHITEHEAD	39

February

Letter from the Editorial Vice-President	EDWARD P. HOBSON	69
143rd SMPTE Technical Conference and Exhibition, New York City, November 4-7, 2001		73
35th SMPTE Advanced Motion Imaging Conference, Washington, DC, February 8-10, 2001		75
SMPTE Techology Committee on Digital Cinema—DC28: A Status Report	R. M. RAST	78
A Pragmatic Approach to Data Networks in Media Production	S. J. OWEN	85
Management and Control of Receivers in a Satellite Distribution Network	MARTY STEIN	89
Using Reference Test Objects: From Camera Setup Through Post-Production	DAVID F. E. CORLEY	94
TrueCircuit Technology	CARSTEN BAUMANN AND YENDO HU	98
Tunable Optical Band-Pass Filter for Video-Routing Networks Using Dense Wavelength Division Multiplexing	YOSUKE ENDO, TAKA AKI SAITO, AND MIKIO MAEDA	103

March

Message from Sections Vice-President	RENÉ VILLENEUVE	123
143rd SMPTE Technical Conference and Exhibition, New York City, November 4-7, 2001		126
SMPTE All-Day Seminar at NAB2001		177
Curved Color Separation Spaces for Blue Screen Matting	YASUSHI MISHIMA	131
High-Performance Electro-optic Camera Prototype	STEPHEN A. STOUGH AND WILLIAM A. HILL	140
Interactive Television Content Authoring	PAUL MITCHELL	147
Analog Video 101 and 102 for All	WAYNE MCLACHLAN	151

April

Report of the Engineering Vice-President	WILLIAM C. MILLER	200
Report of the Engineering Director, Television	PETER SYMES	205
SMPTE I23 Committee on Television Image Technology	DAVID BANCROFT	206
SMPTE P-3 Technology Committee Activity Report	B. W. PINKSTON	207
SMPTE D27 Data Essence Technology Committee	JOHANN SAFAR	207
C24 Committee on Video Compression Technology	DAVID FIBUSH	208
L6 Committee on MP Laboratory Services Technology	ALAN J. MASSON	208
SMPTE V16 Technology Committee	NEIL NEUBERT	209
35th SMPTE Advanced Motion Imaging Conference Special Report		210
143rd SMPTE Technical Conference and Exhibition, New York City, November 4-7, 2001		215
Balancing the Technologies in Digital Cinema Systems		
.STEVEN A. MORLEY, K. S. THYAGARAJAN, AND CHRIS IRVINE		220
The Technology of Enhanced Color Saturation: Kodak Ektachrome 100D color reversal film/5285	DAVID L. LONG	228
Storage Area Networks in Video Applications	MITCHELL SEIGLE	236
Genlock and Timing Regeneration for Multiple Formats of High-Definition Video and Digital Cinema	MICHAEL POIMBOEUF	240
Methods to Improve Moving Picture Quality of PDPs Affected by Dynamic False Contour Artifacts		
.T. YAMAMOTO, ET AL.		248

May

Message from the Executive Director	FREDERICK C. MOTTS	275
143rd SMPTE Technical Conference and Exhibition, New York City, November 4-7, 2001		277
A Multiframe Rate Compression-Free Video Recorder for Universal DTV Mastering in High Resolution	DAVID J. BANCROFT	283
Removal of Spatial and Temporal Alias Artifacts in Format Conversion and Display	WILLIAM E. GLENN	290
On Scanning Format and MPEG-2 Coding Efficiency	E. B. BELLERS AND G. DE HAAN	293
Serving Up Data for Enhanced DTV Programs	GOMER THOMAS	299
Archival Video Status?	JIM WHEELER	304

June

Message from the Financial Vice-President	ROBERT B. KISOR	347
SMPTE Committee on Audio Technology, A12	RONALD E. UHLIG	350
SMPTE Committee on Networks and File Management, N26	HANS HOFFMAN	351
143rd SMPTE Technical Conference and Exhibition, New York City, November 4-7, 2001		352
SMPTE 2001 Conference and Exhibition, Sydney, Australia, July 9-13, 2001		356
Compression of Moving Pictures for Digital Cinema Using the MPEG-2 Toolkit		
.....	MICHAEL W. BRUNS AND JAMES T. WHITTLESEY	359
A Wireless Digital Television Camera		
.....	C. CLARKE, M. MACCORMACK, J. MITCHELL, P. MOSS AND J. ZUBRZYCKI	365
Integrating PC-based Editing, Compositing, and Graphics Systems into the Digital Studio		
.....	B. LAMBORELLE, A. LEGAULT, J. MATEY, AND T. MATTIOLI	372
Considerations for Moving to a Video Server-Based Facility	ROGER CROOKS	377
The Future of the Moving Image	GARY DEMOS	383

July

Message from the Executive Vice-President	GAVIN SCHUTZ	419
SMPTE at IBC 2001, Amsterdam, The Netherlands, September 13, 2001		421
143rd SMPTE Technical Conference and Exhibition, New York City, November 4-7, 2001		424
UMID Watermarking for Managing Metadata in Content Production		
.....	J. PELLY, D. TAPSON, J. STONE AND S. KEATING	429
A Platform for Constructing Distributed Asset Management Systems		
.....	S. BILOW, S. LIBERT, A. MURCHING, AND D. SLACK	436
Data Broadcasting Solutions for Broadcasters	BRETT JENKINS	444
How ATM Networks Meet Professional Broadcast Demands		
.....	JEAN CHATEL, DAVID MOUEN MAKOUA, AND LAURENT THEBAULT	449
Advanced Television Broadcasting in a Digital Broadband Distribution Environment		
.....	IAN OLIVER AND BRIAN HOLMES	457

August

Message from the Executive Director	FREDERICK C. MOTTS	501
SMPTE at IBC 2001, Amsterdam, The Netherlands, September 13, 2001		503
143rd SMPTE Technical Conference and Exhibition, New York City, November 4-7, 2001		504
A Multiformat HDTV Camera Head		
.....	P. CENTEN, T. MOELANDS, J. VAN ROOY, AND M. STEKELENBURG	510
Streaming Video with Storage Area Networks	GREG REITMAN	517
Audio-to-Video Delay—Watermarking Provides a Means of Automatic Correction	TOM TUCKER	523
A Motion Picture Machine Operator: 1900-2000	D. KARL MALKAMES	527
Metering for Multichannel Audio	JOHN EMMETT	532

September

Message from the Conference Vice-President	THOMAS M. JORDAN	567
36th SMPTE Advanced Motion Imaging Conference, Dallas, TX, February 7-9, 2002		569
143rd SMPTE Technical Conference and Exhibition, New York City, November 4-7, 2001		571
SMPTE Italian Section Conference, Milan, Italy, October 5-6, 2001		578
Images and Formats,	DAVID J. BANCROFT	579
The Stereoscopic Cinema: From Film to Digital Projection	LENNY LIPTON	586
Media Management for Audiovisual Digital Archiving		
.	A. D'ALESSIO, A. BERTINI, F. CIFERRI, G. FERRARI, AND M. STRAMBINI	594
Evolving Infrastructures for a Nationwide Data Broadcasting Service	DAVID BOROUGHS	598
Multichannel Sound in Television—Technical and Aesthetic Approach	KIMIO HAMASAKI	608

October

Greetings from New York	J. L. MASON AND F. C. MOTTS	644
Message from the Engineering Vice-President	WILLIAM C. MILLER	646
143rd SMPTE Technical Conference and Exhibition, New York City, November 4-7, 2001		656
36th SMPTE Advanced Motion Imaging Conference, Dallas, TX, February 7-9, 2002		664
ISO/TAC 36—Cinematography: International Standardization	CARLOS V. GIROD, JR.	666
IEC/TC100—Audio and Multimedia Equipment and Systems	MARK S. HYMAN	671
Mastering and Archiving Uncompressed Digital Video Test Material	CHARLES FENIMORE	726
The Commitment of SMPTE to Standardization	ALEX E. ALDEN	736
A Short History of Standardization in the SMPTE	GORDON E. CHAMBERS	739

November

Message from the SMPTE President	JOHN L. MASON	757
143rd SMPTE Technical Conference and Exhibition, New York City, November 4-7, 2001		760
Design Improvements for Motion Picture Film Projectors		
.	C. L. DUMONT, A. F. KURTZ, B. D. SILVERSTEIN, AND D. H. KIRKPATRICK	785
A Distributed Programming Environment Using IT-based Technology		
.	P. J. BRIGHTWELL AND P. N. TUDOR	792
The Pro-MPEG/AAF Association Material Exchange Format (MXF)	JAMES H. WILKINSON	798
An Object Server Supporting Metadata for Video Intensive Internet-Based Access		
.	CHRISTOPHER C. WOOLLARD	803

December

Message from the President	JOHN L. MASON	826
Message from the Executive Director	FREDERICK C. MOTTS	827
SMPTE Election Results		828
36th SMPTE Advanced Motion Imaging Conference, Dallas, TX, February 7-9, 2002		833
Evolution of Resolution in Film Scanners	PETER SWINSON	839
Implementing Digital Television in Australia	BOB GREENEY	843
Seamless Audio Splicing for ISO/IEC 13818 Transport Streams		
.	SEYFULLAH OGUZ AND SORIN FAIBISH	846
Surround: the Current Technological Situation	DAVID GRIESINGER	857