

140th SMPTE Technical Conference and Exhibit Pasadena Convention Center, Pasadena, CA October 28-31, 1998

With several broadcasters meeting the voluntary November 1998 digital activation deadline, SMPTE's DTV-driven 140th Technical Conference and Exhibit comes at an appropriate time. This year's event will be held at the Pasadena Convention Center in California on October 28-31, 1998 and follow the theme "DTV Reality Check—The First Year."

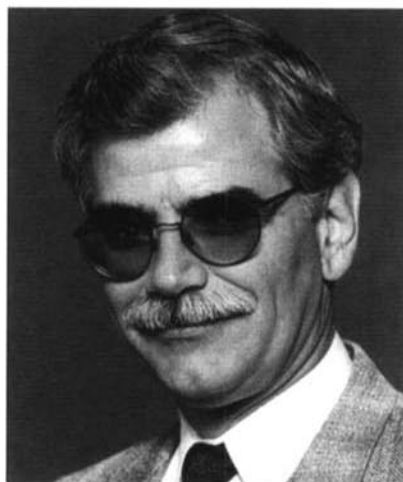
The conference will be supervised by John L. Mason, SMPTE Conference Vice-President, and Robert B. Kisor, SMPTE Editorial Vice-President. Kisor will oversee the program segment of the event and Mason will supervise all other nonprogram activities. Program Co-chairs Alan J. Masson, Eastman Kodak Co., and Alan A. Hart, Modern VideoFilm, have constructed a program consisting of ten papers sessions and an all-day seminar headed by Mark Schubin, technology consultant.

"October's conference will focus on the technologies that have made this great television system possible by presenting a program that spans the gamut from acquisition to transmission," said Hart. "Our goal is to provide answers to many of the questions and challenges faced by the engineers who are changing the basic television system for the first time in 50 years."

All-Day Seminar

The conference will kick off on Wednesday, October 28 with the all-day seminar titled "DTV—Proven Solutions."

"Given that the first 24 volunteer U.S. DTV stations aren't due to go on the air until November 1, DTV—Proven Solutions might seem to be jumping the gun by at least four days," said Schubin. "Nevertheless, there are already quite a few proven solutions in the world of digital television."



Robert B. Kisor
Editorial Vice-President



John L. Mason
Conference Vice-President



Mark Schubin
Seminar Chair



Alan A. Hart
Program Co-Chair



Alan J. Masson
Program Co-Chair

Schubin will discuss solutions to DTV that will not require "reinventing the medium." The first public report from the Top Down meetings of the Implementation Subcommittee of the Advanced Television Systems Committee will also be touched on. During these meetings, program suppliers, broadcasters, and manufacturers of consumer receivers and professional equipment attempted to work out all technical details involved with DTV.

Technical Presentations

Technical presentations begin on Thursday, October 29 and will feature selected papers from several industry professionals. Television's format change will bring forth significant opportunities which will be highlighted by the presentations through the exploration of film transfer technology, recording, distribution, transmission, and reception for the DTV reality according to Hart. The following papers will be presented over three days.

Thursday Morning October 29

Image Acquisition

Session Chair: *John Sprung*,
Paramount Pictures

Implementation of Intranet Scene
Preview for Feature Animation,
Leonard J. Reder and *Gene
Takahashi*, Warner Bros. Feature
Animation

New Technology on Fujicolor
Negative Film, *R. Nishimura*, *K.
Makino*, *Y. Mimaki*, and *S. Yamaryo*,
Fuji Photo Film Co., Ltd.

Kodak Motion Picture Films: The
Vision Continues, *Christopher E.
Wheeler* and *Michael E. Ryan*,
Eastman Kodak Co.

Digital Simulation of Film Images,
M. Bogdanowicz, *C. DuMont*, *T.
Maier*, and *N. Chu*, Eastman Kodak
Co.

A Verification System for
Cinematographer Image Generation
Tools, *Christopher Woollard*,
University of Greenwich

The Technology Council Analysis of
Traveling Matte Performance
Parameters: A Progress Report,
Bruno George, Consultant, and
Jonathan Erland, Composite
Components Co.

Contemporary DTV Acquisition—
The Standard, Technologies, and the
Creative, *Laurence J. Thorpe*, Sony
Electronics Inc.

Video Compression and Systems Interconnection

Session Chair: *Phil Livingston*,
Panasonic

Video compression was once the
ultimate compromise of quality, dis-
paragingly relegated to offline edit-
ing. Now it is the key to cost-effec-
tive news gathering, material servers,

high-end post-production, and the
crux of digital television delivery.
Computer networking and data trans-
fer technology that was once the
province of mainframe computer
users is now ubiquitous in enterprises
of every size. The current cost-effec-
tive techniques and hardware of that
industry are poised to revolutionize
the television infrastructure as we
know it. This day-long two-part
series of papers will focus on com-
pression and networking as they con-
verge to create the television system
of today and the near future.

Video Compression: The Case of the
Reluctant Reality, *Charles Hintz*,
California State University

Aspects of Digital HDTV Coding,
Gordon M. Drury, NDS Limited

Factors to Consider When Choosing
an MPEG-2 Encoder, *Neil Brydon*,
DiviCom, Inc.

MPEG Splicing, *Barry Hobbs*, NDS
Americas, Inc.

Fast Transcoding of Compressed
Bitstreams by Reusing Incoming
Motion Vectors, *Stuart Golin*,
Sarnoff Corp.

Bridging the Gap to DTV, *Jocelyn
Ouellet* and *Michael Robin*, Miranda
Technologies

Thursday Afternoon October 29

Transmission and Receiver Technology— Reception Realities

Session Chair: *Robert Seidel*, CBS
Television Network

WRAL-HD DTV Complete Field
Testing Report, *Luther H. Ritchie*,
WRAL-HD/Capitol Broadcasting Co.

DTV Transmitter Installation
Experience and Planning: A Report
From the Field, *David Sparano*,
Harris Broadcast Corp.

Optimization of DTV Signals Within
a Transmission Plant, *Brett Jenkins*
and *Ray Kiesel*, Comark

Beyond the Studio Walls, *Thomas
Ertel*, Artel Video Systems

Transmitter and Receiver
Technology—Latest Digital Tech-
niques, *Dan Shine* and *David
Glidden*, Microwave Radio
Communications

The Latest Technologies Used for
NHK's Hi-Vision Broadcasts,
Hiroyuki Tanaka, NHK

Globo TV's HDTV Experimental
Transmission, *P. H. Castro*, *A. E.
Silva*, and *L. Costa*, Globo TV
Network

Thursday Afternoon October 29

Video Compression and Systems Interconnection

Session Chair: *Phil Livingston*,
Panasonic

DTV: The Technical and
Operational Challenges, *Tim Jones*,
Turner Entertainment Group

Requirements on Video Server
Capacity, *John Cvetko* and *Ying Ki
Kwong*, Tektronix

The Futility of Mezzanine Routing
and Distribution, *Robin Wilson*,
DiviCom, Inc.

Wrappers and Metadata Progress
Report, *Oliver Morgan*, Avid
Technology Inc.

Advanced Television Systems
Consideration for Compression,
Gary Demos, DemoGraFX

Compatibility 1080P Display Using
1080I Compressed Transmission,
William E. Glenn, Florida Atlantic
University

Friday Morning, October 30

Telecine and Digital Electronic Post

Session Co-chairs: *Gary Morse*, Warner Bros., and *David J. Bancroft*, Philips Digital Video Systems

Transportation of Video in a Mixed Format Environment, *Brad Medford*, Pacific Bell/SBC

Networking Infrastructure for DTV, *Peter Owen*, Quantel Ltd.

Format-Independent Post-Production, *Bob Pank*, Quantel Ltd.

Digital Film Mastering in the Era of Digital Broadcasting, *C. Bradley Hunt*, *C. Risebury*, and *P. Swinson*, Cintel, Inc.

Presenting Widescreen and Standard Services Side by Side: The BBC Experience, *Ian Baker*, BBC

Transferring Film to 720-Line Progressive Video: A Pioneering Experiment, *Randall Hoffner*, ABC, Inc.

The Millennium Mastering Maze—Film in DTV, *David J. Bancroft*, Philips Digital Video Systems

Sound Post-Production and Transmission

Session Chair: *Chuck Meyer*, NVision

This session has a principal focus on multichannel sound production and transmission for DTV. A variety of topics will be presented ranging from improved studio techniques to using the digital telephone network for transmitting distribution and contribution quality audio. Enabling compression technologies will be discussed with application to storage, production, and distribution. Audio metadata will be described in

detail as well as its applications for production, distribution, and broadcast. System level design issues will also be discussed, focusing on actual implementations and facility design issues.

Improving Microphone Equalization for Dialog, *Tomlinson Holman*, TMH Corp. and University of Southern California Schools of Cinema-Television and Engineering

Discreet Multi-Channel Audio for Post and Broadcast, *John Knapton*, Audio Processing Technology Ltd.

Program Presentation Using the ATSC Audio System, *Steve Lyman* and *Stan Cossette*, Dolby Laboratories, Inc.

Metadata Issues for ATSC Audio, *Steve Lyman* and *Stan Cossette*, Dolby Laboratories, Inc.

Digital Telecommunications for Sound and Images—The State of the Art, *Tom Scott*, EDnet

5.1 Audio—The Final Frontier of DTV, *Joe Fedele*, Fedele & Associates

Friday Afternoon October 30

Film Laboratory and Theater Technology

Session Chair: *Joe Fineman*, Foto-Kem, Inc.

An Introduction to Kodak Vision Color Print Films, *James Merrill*, Eastman Kodak Co.

A Review of the Basic Principles of Developer Turbulation, *Kenneth D. Fowler*, Eastman Kodak Co.

Improvements in Laser Beam Technology for Subtitling on Polyester Prints, *Dimitri Balachoff*, Meuter-Titra Labs

Cinema Trends in Curved Screens and Projection Lens, *Glenn Berggren*, Cine-Consultant

The Embodiment of Perfection: Advancing Applications to the Linear Loop Motion Picture Projector, *David Drzewiecki*, Motion Process Co.

Servers and Video Data Management

Session Chair: *Richard A. Mizer*, Westport Media Resources

This session will address the broadcast industry's transition to a tapeless environment. A variety of interface and performance issues exist that SMPTE engineers take a leading role in solving. The papers presented will identify and address some of those issues. Papers will include:

Asset Management in the Digital News Environment, *Paul Stevens* and *Beth Rogozinski*, Silicon Graphics

Living with Video Servers in a Digital Broadcast Facility, *Michael Pusateri*, Disney Channel

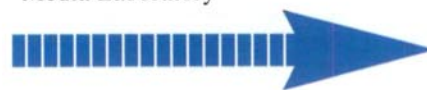
Right Sized Server Solutions: A Blueprint for Efficiency, *Allan Arthurs*, Quantel Ltd.

Open Broadcast Networking, *Chandy Nilakantan* and *Jonathan Claman*, SkyStream

Understanding and Using WAN Connectivity with Video Servers, *Al Kovalick*, Hewlett-Packard Co.

Management of Fibre Channel Based Storage Area Networks (SANs) for Post and Broadcast, *Harry Aine*, SAN Solutions, Inc.

Adding Hyperlinks to Digital Television, *V. M. Bove*, *J. Dakss*, *S. Agamanolis*, and *E. Chalom*, MIT Media Laboratory



Saturday Morning, October 31

Electronic Cinema— Progress Report: Movies as Data

Session Chair: *Garrett Smith*,
Paramount Pictures

Applications of DLPTM Technology
to Digital Electronic Cinema—A
Progress Report, *William Werner*
and *Scott Dewald*, Texas
Instruments, Inc.

Improving the Quality of Film to
Digital Transfers for Electronic
Cinema, *Matt Cowan* and *Loren
Nielsen*, Entertainment Technology
Consultants

Laser Projection, Sound Screen, and
Cyber Cinema—New Ways in
Cinema Technologies? *Christhard
DETER*, LDT, and *Werner
EYMANN*, EMC Dahlquist/EMC
LASERDREAMS

A DVB-Compliant Electronic
Cinema Solution, *W. Ruppel*, *S.
Breide*, Deutsche Telekom, and *M.
Dutka*, and *C. Moldrzyk*, Technical
University of Berlin

Component Serial Digital Video
Transport Over Wavelength-
Multiplexed Fiber Optic System,
Andrew Osmond and *Steven L.
Storozum*, Video Products Group,
Inc.

Making Digital Cinema Actually
Happen—What It Takes and Who's
Going to Do It, *Steven A. Morley*,
Qualcomm, Inc.

Test and Measurement

Session Chair: *David K. Fibush*,
Tektronix, Inc., and *Neil Neubert*,
JVC.

Test and measurement of modern
digital television systems require a
combination of traditional and newly
developed methods. This session
will include a number of papers on

picture quality assessment, a method
of stressing compressed systems, and
some techniques for uncompressed
HDTV measurements. Papers sched-
uled for presentation are:

Objective Picture Quality Measure-
ments: Expectations Today and
Tomorrow, *David K. Fibush* and
Mihir Ravel, Tektronix, Inc.

Perceptual Effects of Noise in
Digital Video Compression, *Charles
Fenimore* and *John Libert*, National
Institute of Standards and
Technology, and *Stephen Wolf*,
Institute for Telecommunications
Sciences

Equipment and Strategies for
Service Quality Monitoring in
Digital Television Networks, *J.
Baina* and *G. Goudezeune*, TDF

Assessing the Quality of Com-
pressed Pictures Using a Perceptual
Model, *Wilfried Osberger*, SCSN,
Queensland University of
Technology

The Revolution in Assessing and
Monitoring Video Image Quality,
Philip Corriveau, Communications
Research Center, and *Arthur
Webster*, U.S. Dept. of Commerce,
(NTIA/ITS)

Test Card "M"—Bitstreams for DVB
Test and Measurement, *Bruce Devlin*
and *Paul Walland*, Snell & Wilcox

Testing Applications in Uncom-
pressed HDTV Signals, *Jim
Waschura*, SyntheSys Research, Inc.

Equipment Exhibit

Floor space for this year's equip-
ment exhibit has been sold out as
many major companies are slated to
present their products and services
(see p. 903-906). Present and future
advancements for DTV and the
video age will be displayed. The
exhibit will run from Thursday to
Saturday, October 29-31, 1998.
Products will be displayed on
Thursday from 10 a.m. to 6 p.m.;
Friday from 10 a.m. to 6 p.m.; and
Saturday from 10 a.m. to 4 p.m.

Social Events

The Society's traditional social
events provide both a networking
forum and an opportunity to catch up
with old acquaintances. The Industry
Luncheon will be held on Thursday,
October 29 followed by the
Welcome Reception in the evening.
Friday's events include the Fellows
Luncheon and the Honors and
Awards Reception recognizing
excellence in the motion imaging
industry.

A two-day Partners Program will
be held from Friday to Saturday
October 30-31 for those interested in
exploring Pasadena culture. Partic-
ipants will visit the J. Paul
Getty Museum on Friday. The muse-
um houses permanent collections of
Greek and Roman antiques,
Renaissance and Baroque paintings,
and 18th century French decorated
arts. A walking tour of Old Pasadena
will be conducted on Saturday.

Registration and Housing

Conference registrations are still
being accepted. Simply fill out the
form provided in this month's
Journal and return it to SMPTE
Headquarters.

Housing arrangements can be
made through the following hotels in
Pasadena: Doubletree, Holiday Inn,
Pasadena Hilton, and the Ritz
Carlton Huntington Hotel. Confer-
ence discount rates will be applied to
the remaining rooms available.
Standard hotel rates will apply there-
after.

For More Information...

Be sure to log onto SMPTE's web
site for the latest conference infor-
mation ([http://www.smpite.org/conf/
pasadena.html](http://www.smpite.org/conf/pasadena.html)).

—*Jermaine Hall*



SATURDAY, OCTOBER 31