

# 137th SMPTE Technical Conference and World Media Expo

New Orleans Convention Center • New Orleans, La.  
September 6 to 9, 1995

The 137th Technical Conference and World Media Expo will focus on the changes surrounding television, film, telecommunications, and motion imaging, especially as the industry addresses more and more of the digitization processes. "Moving Images — Meeting the Challenges," featuring nearly a dozen sessions, two professional seminars, and several workshops, promises to be one of the most informative SMPTE events ever. The conference will take place September 6 to 9, 1995, at the New Orleans Convention Center in New Orleans, La.

## Technical Sessions and Seminars

The technical program, organized under the leadership of Cecil Smith, consultant, will feature papers on subjects ranging from the advances in image acquisition on film and tape and the challenges on new acquisition formats to presentations on multimedia authoring tools. The sessions are designed to provide a continuum taking you from gathering the images through production, distribution, and finally to the display. In addition, the Society will again sponsor a joint session and special workshop with the Association of Cinema and Video Laboratories (ACVL) on Friday, September 8. See the Program-at-a-Glance for an overview of session topics and seminar categories.

The following is a sampling of papers that have been submitted for consideration. Future editions of the *SMPTE Journal* and the official conference program will provide updates on the technical program.

## WEDNESDAY, SEPTEMBER 6 Morning Session

*Opening Session and Keynote Address*

## Afternoon Sessions

### *Capturing the Images*

**A New 3-CCD HDTV Camera for Field and Studio Use**, Neil Neubert, JVC Professional Products Co., Elmwood Park, N.J.; and Isao Takahashi and Takatoshi Kaneko, Victor Company of Japan, Ltd., Tokyo, Japan

**Digital Triaxial Transmission Provides Totally Digital Studio Camera System**, N. Murata, N. Sakuraba, F. Ukigaya, and Y. Eto, Hitachi Denshi, Ltd., Tokyo, Japan; and A. Delp, Hitachi Denshi America, Ltd., Woodbury, N.Y.

**Utilizing "Synthe-Vision" for Drama Production**, Masashi Kumagai, NHK TD Div., Shibuya-ku, Japan, and Kiyotaka Aoki, NHK Engineering Administration Dept., Shibuya-ku, Japan

**New Technology in Field Image Acquisition: Capturing the Images Directly to Disk Using Cam-Cutter™, an In-Camera, Disk-Based Recording and Editing System**, Peter Fasciano, Avid Technology, Inc., Tewksbury, Mass.

**A Digital Solution for Cost-Effective ENG**, R. Biesemeyer, J. Safar, and M. Higuchi, Panasonic Broadcast and Television Systems Co., Secaucus, N.J.

### *Multimedia Authoring Tools*

**Professional Video Under 32-Bit Microsoft Windows**, A. Legault, J. Lapierre, L. Dionne, and T. Cherna, Matrox Electronic Systems, Dorval, P.Q., Canada

**Video Applications in the Era of Computer Networks — Computer & Video = Multimedia?**, Norbert Gerfelder, Fraunhofer/IGD, Darmstadt, Germany

**Computer Images Implemented, Displayed and Re-edited in Post-**

**Production**, Reinhard E. Wagner, MAP TV & Video Post-Production, Cologne, Germany

**Converting PC Video Formats**, Nels Johnson, San Francisco Canyon Co., San Francisco, Calif.

## THURSDAY, SEPTEMBER 7

### Morning Sessions

#### *Putting the Bits in Order*

**Factors in Preserving Video Quality in Post-Production When Cascading Compressed Video Systems**, Katie Cornog, Avid Technology, Tewksbury, Mass.

**Editing Without Limits: Future Dream or Present Reality?**, Simon Bartlett, Quantel Ltd., Newbury, U.K.

**Nonlinear Editing and its Impact on the Post-Production Process**, C. P. Carbonara, M. F. Forpi, J. K. Barge, and V. Young, Baylor University, Waco, Tex.

**Designing Digital Production/Post-Production Plants for TV, HDTV and Multimedia Mastering Applications**, B. Bilbrey, Intelligent Resources, Arlington Heights, Ill.; D. Powell, Intelligent Resources, Cupertino, Calif.; and C. R. Paulson, OmniMedia Communications, West-borough, Mass.

**A Server-Based Post-Production System**, Bob Pank, Quantel Ltd., Newbury, U.K.

**High Resolution Film Scanners — Importing Scan Lists and EDLs**, Ronald E. Uhlig, Eastman Kodak Co., Rochester, N.Y.

**A Hybrid Editing Control System Using a RISC Technology Work-station**, Jay Coley, The Grass Valley Group, Grass Valley, Calif.

#### *Transporting the Images*

**A Study on the Distribution of Picture Quality for Digital TV Employing MPEG-2 Video Stand-**

ard, E. Nakasu, K. Aoki, R. Yajima, Y. Kanatugu, and K. Kubota, NHK, Tokyo, Japan

**Timing and Synchronization Using MPEG-2 Transport Streams**, David K. Fibush, Tektronix, Inc., Beaverton, Oreg.

**Stream-Based Computing and Future Television**, V. Michael Bove, Jr., and John A. Watlington, Media Laboratory, MIT, Cambridge, Mass.

**Optimizing the Digital Video Publishing Process: Coupling MPEG Encoding to Video Editing**, Mauro Bonomi and Jean-Georges Fritsch, Minerva Systems, Santa Clara, Calif.

**Moving Uncompressed Video Faster than Real-Time**, D. Deel, M. Friedmann, and H. Green, Prisa Networks, San Diego, Calif.

**Practical Implementation of an Optical Routing Network in Broadcast Stations**, C. Kamise and S. Ando, Fuji Television Network, Inc., Tokyo, Japan; and T. Shiozawa, N. Shimosaka, and M. Fujiwara, NEC Corp., Tokyo, Japan

**Testing in the Digital Era**, Konrad Finck, Advanced Audio Visual Systems (AAVS), Sioux Falls, S. Dak.

**Effects of ATM Transmission Errors on MPEG-2 Quality of Service**, Ji Zhang and Mike Perkins, DiviCom, Milpitas, Calif.

**Video Applications on LANs, CANs, MANs and WANs**, Richard A. Mizer, Pacific Bell, San Ramon, Calif.

## Afternoon Sessions

### *Image Storage*

**High-Density Compact Disc: System Requirements and Modulation**, Kees A. Schouhamer Immink, Philips Research Laboratories, Eindhoven, The Netherlands

**Disc Tape and Compression — The Tools for Future Image Storage Systems**, Juergen K. R. Heitmann, BTS, Weiterstadt, Germany

**W-VHS, A New HDTV Video Recording Format**, Neil Neubert, JVC Professional Products Co., Elmwood Park, N.J.

**Creating a Media Server Solution for the Video Industry**, Mary Louise

Bucher, Hewlett-Packard Co., Santa Clara, Calif.

**A New Digital Video Tape Recorder for Professional Applications**, Neil Neubert, JVC Professional Products Co., Elmwood Park, N.J.; and Hisashige Fujiwara, Victor of Japan, Hachioji, Japan

**A Dockable Digital Disk Recorder**, Mark J. Norton, Avid Technology, Inc., Tewksbury, Mass.

### *Manipulating Pixels: Film and Video Production and Post-Production (Part 1)*

**Dramatic Efficiency Improvements in Post-Production**, M. Inchalik, B. Hendy, and G. Kennel, Eastman Kodak Co., Rochester, N.Y.

**Intelligent Image Processing Improves Post-Production Efficiency**, David R. Cok, Eastman Kodak Co., Rochester, N.Y.

**A Scalable Parallel Video Processing Architecture Applied to High Definition Format Conversion**, Clarence J. Hau, Panasonic Technologies, Inc., Matsushita Applied Research Laboratory, Burlington, N.J.

**Pixel Manipulation: Even VTRs Do It!**, Stephen M. Mahrer, Panasonic Broadcast & Television Systems, Co., Secaucus, N.J.

**Manipulating the Pixels — What For?**, David Scammell, Quantel, Ltd., Newbury, U.K.

**Virtual Audio Sources in the Total Surround Sound System**, Tomislav Stanojevic, Minel Vision, Belgrade, Yugoslavia

## FRIDAY, SEPTEMBER 8

### Morning Sessions

#### *Delivering the Images*

**Digital Video and Audio Transmission Alternatives**, Keith Y. Reynolds, Grass Valley Group, Grass Valley, Calif.

**Transmission Test Using a 42-GHz-Band HDTV Digital FPU**, H. Tanaka, F. Sinoshita, H. Nakakita, H. Fujio, and H. Mizuno, NHK, Tokyo, Japan

**Delivering the Image Electronically**, Doyle Sturms, Alcatel Network Systems, Raleigh, N.C.; and Bob

Stewart, Pacific Bell, San Ramon, Calif.

**PBS Delivers Digital Compressed Video, Audio and Data**, C. Scott Birdwell, PBS, Alexandria, Va.

**Integrated Network Architecture**, M. Kerr et al., Southwestern Bell Telephone, St. Louis, Mo.

**Objective Assessment of Single and Concatenated Compression Codecs**, Chris J. Dalton, Independent Television Association UK, London, U.K.

### *Converting the Pixels: Film and Video Production and Post-Production (Part 2)*

**Better Images Through Improved ECN<sub>2</sub> Prebath Specifications**, P. Siva Prasad, Gemini Colour Laboratory, Madras, India

**Control of the Telecine Transfer Process**, A. Masson, W. Snyder II, C. Lurin, and M. Bogdanowicz, Eastman Kodak Co., Rochester, N.Y.

**Scanning the Old, Scanning the New**, Peter Owen, Quantel Ltd., Newbury, U.K.

### Afternoon Sessions

#### *Displaying Pixels*

**Analysis of Electronic Cinema Projection with Texas Instruments Digital Micromirror Device™ Display System**, Greg Hewlett and Bill Werner, Texas Instruments Inc., Dallas, Tex.

**The History of the Perfect Aspect Ratio**, Mark Schubert, Consultant, New York, N.Y.

**Progress Toward High-Quality Imaging in Consumer Products**, Craig V. Eggers, Toshiba America Consumer Products, Inc., Wayne, N.J.

#### *Processing the Pixels Joint SMPTE/ACVIL Session and Workshop*

**Shedding New Light on Darkroom Illumination**, J. P. Pytlak, L. H. Cox, M. R. Bernazzani, and M. Delettera, Eastman Kodak Co., Rochester, N.Y.

**Water Savings (The Nanofiltration Technique) and Silver Recovery (The Toulouse Electrolytic Cell)**, Alain Enon and Guy Manas, Eastman

Kodak Co., Rochester, N.Y.

**Environmental Process Development**, K. Cirulli, D. Harrington, E. Kurz, and F. Pettrone, Eastman Kodak Co., Rochester, N.Y.

**Work in Progress on Imbibition Release Prints Utilizing Digital Technology**, E. Delves, B. Richardson, and T. White, Chromax, Inc., Santa Barbara, Calif.

**A New Sound Camera Based on Laser Beam Exposure**, J. P. Monch and J. Ristow, Optronik GmbH Potsdam, Potsdam, Germany; and P. Stroetzel, Albrecht Studio Equipment, Potsdam, Germany

**New Type Fuji Color Intermediate Film**, Katsumi Makino and Noboru Sasaki, Fuji Photo Film Co., Ltd., Minami-Ashigara, Japan

### Professional Seminars

Two half-day seminars are expected to attract large audiences on Saturday, September 9. "Internet for the New User," an in-depth, interactive training program for computer users with an interest in the information superhighway, and "Video Compression and Concatenation" will run concurrently in the morning and be repeated in the afternoon.

### Session Chairs Named

According to Program Chairman Cecil Smith, the following industry professionals will be participating in the technical program as session chairs.

*Opening Session:* Peter Dare, Sony Electronics

*Capturing the Images:* Tom Bentsen, NASA

*Multimedia Authoring Tools:* Craig Birkmaier, Professional Productions and Promotions

*Putting the Bits in Order:* Linda Young, Du Art Film Labs

*Tracking Images:* Ron Uhlig, Eastman Kodak Co.

*Image Storage:* E. Hobson, Graham-Patten Systems

*Manipulating the Pixels:* Neil Feldman, Video Post and Transfer, Inc.

*Delivering the Images:* Tom Gurley, Advanced Television Test Center

*Converting the Pixels:* Rene Villeneuve, National Film Board of Canada

*Displaying Pixels:* Joe Kane, Joe Kane Productions

Frank Ricotta, Technicolor, Inc., will serve as the chair for the SMPTE/ACVL joint session. The seminar chairs are Charles Poynton, Sun Microsystems, Inc. ("Internet for the New User"), and James Wilkinson, Sony Electronics ("Video Compression and Concatenation").

### World Media Expo

Every conference registrant receives complimentary admission to the exhibit floor at World Media Expo. Jointly sponsored by the SMPTE, the National Association of Broadcasters (NAB) Radio Show, the Society of Broadcast Engineers (SBE), and the Radio and Television News Directors Association (RTNDA), the first World Media Expo last year attracted more than 400 exhibitors and nearly 18,000 industry executives. These four organizations are again joining forces to present another successful exhibit of the latest developments in both digital production and digital transmission technology.

### Exhibit Hours:

**Thursday, Sept. 7**  
9:00 a.m. - 6:00 p.m.

**Friday, Sept. 8**  
9:00 a.m. - 6:00 p.m.

**Saturday, Sept. 9**  
9:00 a.m. - 4:00 p.m.

### Cross-Over Registration

Through a special arrangement with SBE and the RTNDA, everyone registered for the full SMPTE Conference will receive a free pass to attend one papers session at both the SBE and RTNDA conferences.

### Social Activities

As always, the SMPTE Technical Conference will feature a variety of networking and social events outside of the technical sessions.

All full-conference registrants are invited to attend the SMPTE Honors and Awards Reception and Luncheon on Wednesday, September 6. John D. Abel, Ph.D., the NAB's executive vice-president of operations, will be the featured guest. His speech, "The Next Generation

Media: Where is Digital Taking Us? The National Information Infrastructure, Convergence, and Multimedia Broadcasting," will explain the opportunities for broadcasters as a result of the impending changes brought about by digital transmission and reception of broadcasting.

On Thursday, September 7, Fellows and Life Fellows (only) will be able to join in honoring those who have attained this distinguished level of membership in the Society at the annual Fellows Luncheon. Laurence J. Thorpe, vice-president of Broadcast Camera/HDVS for Sony Corp., is the guest speaker. Tickets for the Fellows Luncheon can be purchased using the Advance Registration form in this issue.

The annual SMPTE Gala Reception will be held on Friday evening, September 8, at the Hotel Inter-Continental and is included in the price of full-conference registration.

### Partners Program

Those accompanying conference attendees are invited to participate in the Partners Program currently under development by Partner/Visitor Information Chair Judi Fibush. The four-day program includes a daily breakfast, as well as lunch on three days. A sampling of the planned activities includes a walking tour of the French Quarter, a visit to two beautiful antebellum plantations, and a riverboat tour of New Orleans' finest bayou. On Wednesday, September 6, participants have the choice of attending the SMPTE Honors and Awards Banquet at the Convention Center or having lunch at Emeril's Restaurant. For a detailed itinerary, contact the SMPTE Marketing Department at (914) 761-1100.

### Event Locations

All technical sessions, workshops, and seminars are being held at:

**The New Orleans  
Convention Center  
900 Convention Center Blvd.  
New Orleans, LA 70130  
Phone: (504) 582-3027  
Fax: (504) 582-3088**

The location of the SMPTE Conference headquarters is:

**The Hotel Inter-Continental  
New Orleans  
444 St. Charles Avenue  
New Orleans, LA 70130**

**Advance Registration and  
Hotel Accommodations  
Deadline**

To register for the 137th SMPTE Technical Conference and World Media Expo, fax your registration form and credit card authorization to SMPTE at (914) 761-3115, or just send your completed registration form with check (made payable to SMPTE) or credit card authorization in U.S. funds to **SMPTE Registration, 595 W. Hartsdale Ave., White Plains, NY 10607**. Please do not send cash.

Please note that you can save \$50.00 if you register for the 137th SMPTE Technical Conference and World Media Expo prior to **August 7, 1995**. If you are not able to register before the advance registration deadline, you must register on-site. A surcharge will be added to all fees for on-site registration.

Blocks of rooms at the Hotel Inter-Continental have been reserved for SMPTE Registration. To obtain the special room rates, you must make and receive confirmation of your hotel reservation by **August 4, 1995**. After this date, rooms and rates are based upon availability and discounts may not apply.

All hotel arrangements must be made by contacting:

**Royal America/  
SMPTE Housing Bureau  
313 Washington St.  
Newton, MA 02158  
Tel: (800) 722-0504  
Fax: (617) 630-6900**

The Advance Registration and Housing Forms are in this issue for your use.

**SMPTE Travel Discounts To  
New Orleans**

Carlson Travel Network/Media Travel USA, the official travel agent for the 137th SMPTE Technical Conference and World Media Expo, is granting an exclusive SMPTE discount rate on United and Delta Airlines for travel to New Orleans. Also offered is a free beverage coupon with your United ticket purchase, plus complimentary \$100,000 flight insurance. A special SMPTE discount is also available for Alamo car rentals. To make reservations, call 800-283-8747.

**Shuttle Service**

Round trip shuttle service will be provided to and from the downtown hotels and the New Orleans Convention Center. Some of the hotels will provide limited shuttle service, including the Inter-

Continental, Windsor Court Hotel, Embassy Suites, Le Meridien, Chateau Sonesta, The Monteleone, Omni Royal Orleans, Doubletree New Orleans, Royal Sonesta New Orleans, and the Holiday Inn Crowne Plaza.

**Want to Know More?**

If you are interested in learning more about the 137th SMPTE Technical Conference and World Media Expo, you can do so in any of these three ways:

- **Call the SMPTE Fax-on-Demand Service at (301) 216-1850.** Fax-on-demand provides such documents as final registration and housing forms and details on hotels, airlines, car rentals, educational sessions, and SMPTE membership. Calls must be made from the touch-tone handset of a fax machine and a voice on the other end will tell you how to access one or more documents.

- **Contact SMPTE Headquarters at 595 W. Hartsdale Ave., White Plains, NY 10607, phone: (914) 761-1100, fax: (914) 761-3115.**

- **Watch your mail for additional details** published in the *SMPTE Journal* and *News and Notes*.

— Aileen Moroney



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DISCOUNTS TO NEW  
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Carlson Travel Network/Media Travel USA is offering an exclusive SMPTE discount rate for travel to the 137th SMPTE Technical Conference & World Media Expo in New Orleans. You must call SMPTE's official travel agency to receive specially discounted airfare on United and Delta. You'll also receive a free beverage coupon with your United ticket purchase, plus complimentary \$100,000 flight insurance. A special SMPTE discount is also available for Alamo car rentals in New Orleans.

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