



The Orlando skyline.

24th Annual SMPTE Television Conference

January 26–27, 1990, Lake Buena Vista, Fla.

The 24th Annual SMPTE Television Conference, to be held at Disney's Contemporary Resort in Florida on Friday, January 26, and Saturday, January 27, is just a few weeks away. If you haven't yet returned your advance registration form with payment, do it now; the deadline is December 25. This is a program you won't want to miss. The advance registration rate for members is \$150; members registering on-site will be charged \$175.00. The advance rate for nonmembers is \$175.00, or \$200.00 on-site.

Technical Program

Program Chairman Clyde D. Smith, Lockheed Space Operations Co., and Program Vice-Chairman Paul Montgomery, Tasp Group, Inc., have gathered 29 papers on the theme "Television — Merging Technologies" and divided them into four sessions: HDTV, Merging the Present with the Future (Parts I and II), and Merging Traditional Television with

Nontraditional Technologies (Parts I and II). The full program as of November 2 appears below.

Technical Sessions

Friday Morning, January 26

HDTV: Merging the Present with the Future (I)

HDTV: The Television Standard(s) of the Future, *Scott D. Elliot, University of Washington*

Video, HDTV, Film, and Print: Merging the Technologies and Mixed Media, *David Scammel, Quantel*

35mm: The Next 100 Years—3 or 4 Perf, 24 or 30 FPS, an Available Solution, *Donald C. McLendon, Bunch-McLendon Studio Inc.*

Experiences of an HDTV Production Facility, *Laurence Thorpe and Hiroshi Tanaka, Sony Corp.*

A Prototype High-Definition Multi-Effects Unit for Electronic Video Production, *John Richards, Sony Corp.*

A 1/2-Inch Cassette HDTV VCR, *Shigeo Kizu, Toshiba Research and Development Center*

Stereoscopic HDTV: An Experimental System and Its Psychological Effects, *Ichiro Yuyama and Sumio Yano, NHK*

Friday Afternoon

Merging Traditional Television with Nontraditional Technologies (I)

Television Systems at the Kennedy Space Center, *Charles T. Brown, NASA*

Optimization of Video Image Acquisition and Display, and Radiation Exposure Reduction in the Cardiac Catheterization Laboratory, *Joel E. Gray, Ph.D., Merrill A. Wondrow, David R. Holmes, M.D., and Paul R. Julsrud, M.D., Mayo Clinic*

Computer Interactive Video Systems in Nondestructive Evaluations and Safety Monitoring, *P. Imperali*

Infrared Imaging—Television in the Dark, *James van Anda and Charles*

Carter, Westinghouse Electro-Optical Systems

Acceptance and Use of the SMPTE Medical Diagnostic Imaging Test Pattern for Television and Hard-Copy Recording Cameras, *Joel E. Gray, Ph.D., Kenneth Lisk, Walter Anderson, Ph.D., John Harshbarger, Ronald Schwenker, and Robert Uzenoff, Mayo Clinic*

A Standard for Interactive Video, *L. Chiariglione, H. Yasuda, D. LeGall, and H. G. Musmann, CSELT-NTT Genesys Technologies Expand Existing NTSC Service, Richard C. Gerdes, Production Services, Inc.*

Using True Stereo Noise for Audio Equipment Evaluation, *John P. Bisset, Delta Electronics, Inc.*

Saturday Morning, January 27

HDTV: Merging the Present with the Future (II)

Improvement in Vertical-Temporal Resolution of a Letter-Box Method for Wide-Aspect TV, *Nurihiro Suzuki, Masahiro Kageyama, Kazuo Ishikura, and Yasuhiro Hirano, Central Research Laboratory, Hitachi, Ltd.*

Multidimensional Testing with Zone Plate Generators, *John Horn, Tektronix, Inc.*

If HDTV Progressive Scanning Is So Good, How Bad Is Interlace? *Laurance J. Thorpe, Sony Corp.*

The Progressive Scan Alternative for HDEP Standards, *Kerns H. Powers, Consultant*

Motion Estimation and Its Application to HDTV Transmission and Up-Conversion Using DATV, *Graham Thomas, BBC Research Dept.*

A HDTV Sync Pulse and Test Pattern Generator for 1050/59.94/2:1 and 525/59.94/1:1, *Winfried Deckelmann, BTS Broadcast Television Systems*

An HDTV Digital VTR at 1.2 Gb/s and Its Modifications to Common Image Formats, *Yoshizumi Eto, Masuo Umemoto, and Toshiaki Kawamura, Central Research Laboratory, Hitachi, Ltd.*

Saturday Afternoon

Merging Traditional Television with Nontraditional Technologies (II)

Construction and Design Considerations for the Videotape Post-Production Facility at the Disney/MGM Studios, *John McMahan, The Post Group at Disney/MGM*

Hotel Rates

Contemporary Resort

Tower	\$175.00
Garden	\$140.00
Suites	\$405.00- 730.00

Polynesian Resort

Garden	\$175.00
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Registration Rates

	Advance Rate	On-Site Rate
Member Registration w/Lunch	\$150.00	\$175.00
Nonmember Registration w/Lunch	175.00	200.00
Life Member w/Lunch	FREE	FREE
Life Fellow w/Lunch	FREE	FREE
Student Member	FREE	FREE
Student Nonmember	10.00	15.00
Spouses' Program	50.00	60.00
Get-Together Luncheon	35.00	40.00

The Integrated Digital Production Suite, *Ken Carlson, Digital F/X*

Sustained Plasmatic Ionic Light, A Revolutionary Lighting Concept for TV, *Paul Costa, Videssence*

Efficient Quality Control and Monitoring of Multiple Remote Sources, *Phil Shaw, NBC*

Interfacing Video to Graphics Workstations, *David Knierim, Tektronix*

Mobile Ground Station Survivability, *Howard C. Whetzel, HEW Associates*

Optical Fiber: The 1990's Adaptive Television Medium, *C. Robert Paulson, AVP Communication*

Down to Earth: Optical Fiber Digital Television Networks, *Grant F. Lenahan, Bellcore*

Special Activities

In addition to the technical presentations, several social activities are planned. The first such event is the Get-Together Luncheon, to which all registrants are invited. The luncheon will be held on Friday in the Gulf Coast and Pacific Rooms of Disney's Contemporary Resort.

Two evening receptions will be given for attendees. Sony will be the host for a cocktail party on Friday between 5:30 and 7:30 p.m.; the location has not been determined. Disney-MGM Studios will give a reception on Satur-

day from 5:30 to 7:30 p.m. at Sound Stage One in the new studio theme park. Buses will be available to take people to both functions, departing between 5:00 and 5:15 p.m. each evening from Disney's Contemporary Resort.

There will also be a Coffee Club on Friday and Saturday mornings in Disney's Contemporary Resort.

Spouses Program Co-Chairmen Nancy Walters and Kay Smith are planning some interesting activities including a behind-the-scenes Disney tour on Saturday. Those wishing to participate in the Spouses Program may do so by filling out the appropriate section on the advanced registration form or signing up on-site. The Spouses Program costs \$50.00 in advance, or \$60.00 on-site.

Local Arrangements Committee

The Local Arrangements Committee is working hard to complete the conference plans. The committee members are General Arrangements Chairman Dave Walters (Tektronix Inc.), Assistant Auditor Tom Belleman (Allied Film & Video), A/V and Projection Chairman Al LeBoeuf (Martin Marietta Aerospace), Display Chairman Jack Hammond (Hammond Broadcast Engineering Services), Membership Chairman Rob Ross (Florida Video Systems),

Post-Production Tutorial

January 25, 1990, Lake Buena Vista, Fla.

An all-day tutorial seminar on post-production will be held on Thursday, January 25, at Disney's Contemporary Resort. The topics to be covered are off-line editing, on-line editing, film-to-tape transfer, electronic graphics, and audio post-production.

The tutorial will take the point of view of the client and the producer and will be only technical enough to explain the processes used. Emphasis will be on creatively using the techniques and technology available for various post-production situations. The sessions will be instructional and will focus on applications rather than specific equipment.

A unique program has been prepared by Oliver Peters, Century III. Peters has more than 20 years' experi-

ence in broadcasting and teleproduction. He has worked at radio and television stations, post-production facilities and satellite networks.

A tentative list of speakers includes Oliver Peters (Century III), Harvey Kopel (Kopel Films, Inc.), Jerry M. Lewis (Century III), Michael Orsburn (Post Edge), Greg Sheldon (consultant), and John C. Burns, consultant.

Those wishing to attend should fill out the form for this seminar included in the conference registration package, and return it to SMPTE Headquarters, 595 W. Hartsdale Ave., White Plains, NY 10607 by December 25, 1989. A separate fee of \$30, which includes a box lunch, will be charged for Thursday's seminar.

Opening Films and Tape Chairman Jim Kelly (Allied Film & Video), PA and Recording Chairman Oliver Peters (Century III Teleproductions), Registration Chairman Dave Perrin (Fuji Photo Film USA, Inc.), and Spouses Program Co-Chairman Nancy Walters and Kay Smith.

Hotel Reservations

Rooms are available at Disney's Contemporary Resort and the Poly-

nesian Resort. Rates are per night, single or double occupancy. Children 17 and under may share a room with an adult at no additional charge. A 6% sales tax and 4% resort tax will be added. Hotel reservations must be made on the hotel registration card which you will receive from headquarters. This card should be received at the hotel by December 25th to get the special conference rate. **DO NOT MAIL HOTEL RESERVATION FORM TO SMPTE.**

Reduced-Rate Advance Registration

To avoid waiting in line, and to save money, register in advance by mail. An advance registration form will be sent from headquarters. It should be returned by December 25, 1989, with payment in U.S. funds to SMPTE Registration, 595 W. Hartsdale Ave., White Plains, NY 10607, for U.S. and other registrants.

Refunds

Refunds will be given (after the Conference) upon request in writing, by Friday, January 12, to SMPTE Headquarters. No refunds will be given in response to requests received after that date. All refunds are subject to a \$25.00 cancellation fee.

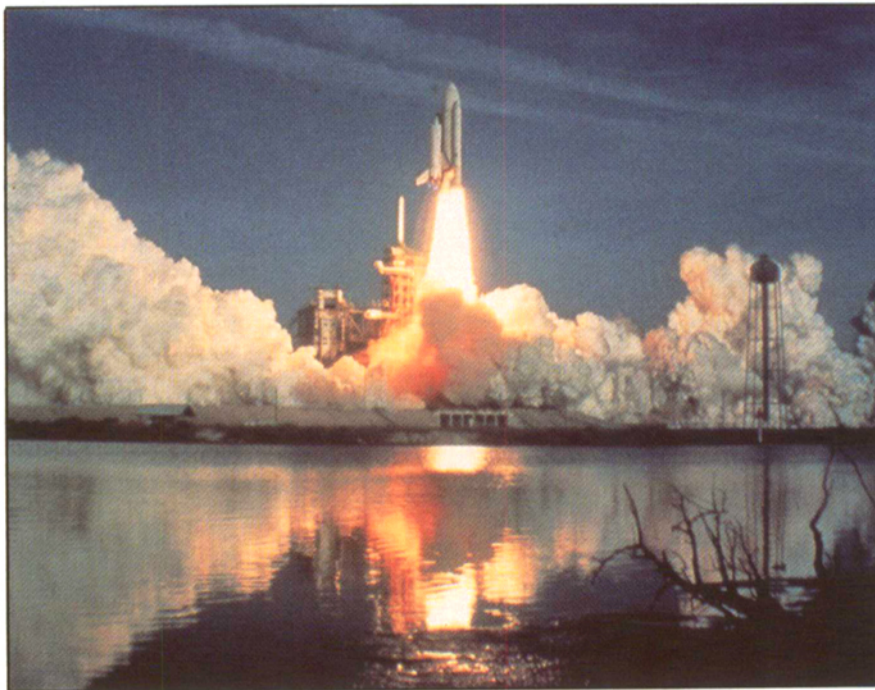
Special Airline Rates

To assist attendees with their flight plans, Delta Airlines, in conjunction with the SMPTE, is offering discounted airfares to and from Orlando during our conference. To take advantage of this service, call 1-800-241-6760 from 8:00 a.m. to 8:00 p.m., Eastern time, daily and ask for File #J0849.

Ground Transportation

Various car rental services are available at Orlando International Airport. Or take advantage of the Mears Motor Shuttle located outside the baggage claim area, \$12.00 one-way and \$21.00 round-trip.

— Nancy T. Engel



The Kennedy Space Center in Cocoa Beach is just an hour's drive from the conference headquarters at Disney's Contemporary Resort.



Society of Motion Picture & Television Engineers 1989 Conference

AUDIO CASSETTES

Held October 21-25 • Los Angeles



Tapes are **\$8.00** each • Please tapes desired • each represents one tape

Discounts listed on back page

SATURDAY SESSIONS

- 89SMPTE-1 **Conference Opening: Introduction, John Baptista, Welcoming Address, Maurice French, Engineering Report, Stan Baron, Keynote Address, J. Phillip Samper**
- 89SMPTE-2 **Honors and Awards Luncheon: Speaker, Karl Malden**

Archival Section

- 89SMPTE-3 **Paper #1: 100 Years of 35mm Film**
- 89SMPTE-4 **Paper #4: The Shape of Things to Come; Paper #5: Archiving the Obsolete**

Advanced Television I Section

- 89SMPTE-6 **Paper #6: The Historical Development and Standardization of the NTSC Color System, Paper #7: RF Transmission of Compatible ATV**
- 89SMPTE-7 **Paper #8: A 6-MHz NTSC Compatible Widescreen Television System with Pan-and-Scan Capability, Paper #9: Experiment with Second Generation EDTV System**
- 89SMPTE-8 **Paper #10: A 1050-Line Interlaced HDTV Format, Paper #11: A Digital Augmentation Approach to HDTV**
- 89SMPTE-9 **Paper #12: Robust Bandwidth-Efficient HDTV Transmission Formats, Paper #13: A Digital Audio Transmission System Using Quadrature Modulation of NTSC Television Carrier**

Computer Interactive Video/Graphics Section

- 89SMPTE-10 **Paper #14: Interactive NOVA: An Interactive Multimedia Production, Paper #15: Production Demands of Interactive CD-ROM Type Multimedia Systems**
- 89SMPTE-11 **Paper #16: Shooting for Interactivity, Paper #17: Personal Computer Video Recording**

- 89SMPTE-12, **Paper #19: Paintbox V-Series: An Integrated Approach to TV Graphics Systems**
- 89SMPTE-13 **Paper #20: Inside the "STAMP WIPE", Paper #21: A Real-Time Video Mapping and Manipulation System**

SUNDAY SESSIONS

Film Production Section

- 89SMPTE-14 **Paper #22: New Single Ended Metal Halide Lamps for ENG, EFP, and Film Production, Paper #23: Research and Development: A Foundation on Which to Build a Tradition**
- 89SMPTE-15 **Paper #24: The BKSTS and the Great British Film Industry, Paper #25: KeyCode Numbers on 35- and 16-mm Film**
- 89SMPTE-16 **Paper #26: The Colorful History of Motion-Picture Film, Paper #27: Aaton 35mm Camera**
- 89SMPTE-17 **Paper #28: A Century of Film in Australia, Paper #29: Fuji F-Series Survey**
- 89SMPTE-18 **Paper #30: The New 65mm-Camera System**

Advanced Television II Section

- 89SMPTE-19 **Paper #32: Plans for Testing Advanced Television Systems**
- 89SMPTE-20 **Paper #33: EUREKA!-The Way Toward a Single World Production Standard and Compatible Transmission Standards, Paper #34: Some New Adaptive Comb Filters for the Improvement of NTSC Video Images**
- 89SMPTE-21 **Paper #35: Selecting Appropriate HDTV Production Standards for North America: Making the Puzzle Pieces Fit, Paper #36: A Hierarchical Approach to HDTV Production Standards**

❑ 89SMPTE-22 Paper #37: Common Image Format for International Television Program Exchange, Paper #38: Quincunx Coding for Picture Memories

❑ 89SMPTE-23 Paper #39: Progressive Scanning: The Gateway to HDTV

Ancillary Services/Satellite/Fiber Section

❑ 89SMPTE-24 Paper #40: Closed Captioning in Real Time, Paper #41: Time-of-Air Closed Captioning for New Programs

❑ 89SMPTE-25 Paper #42: Data Services in the CBS Network Signal, Paper #43: Applications of the PBS Vertical Blanking Interval Data Delivery System

❑ 89SMPTE-26 Paper #44: Skycom, NBC's Satellite News Gathering System, Paper #45: The Development of DBS for the British Satellite Broadcasting System

❑ 89SMPTE-27 Paper #46: Applications of Studio Digital Video Transmission Over Fiber Optic Media, Paper #47: Studies on Systems for New Video Services within the European Community RACE Program

Film Production/Presentation Section

❑ 89SMPTE-28 Paper #48: Sixty Years of USC Cinema-Television, Paper #49: The History of Fujicolor Motion Picture Films

❑ 89SMPTE-29 Paper #50: The Science of Film Projection: Milestones from 1950-1990, Paper #51: Eastman EXR Color Negative Films: Technology and Performance

❑ 89SMPTE-30 Paper #52: A Condensed History of Frequency Response of Motion Pictures and Motion-Picture Theaters, Paper #53: Particle Transfer Roller (PTR)-A New Concept in Film Cleaning

❑ 89SMPTE-31 Paper #54: Ultra Star-The State of the Art In Projection Lenses

Advanced Television III Section

❑ 89SMPTE-32 Paper #55: High-Sensitive HDTV Camera Tube with the HARP Target, Paper #56: HDTV Camera Lens Requirements-From 525/625 TV Lines to HDTV: The Evolution of Optical Requirements for TV Cameras

❑ 89SMPTE-33 Paper #57: An HDTV 3-CCD Color Camera, Paper #57A: Fifty-three Years of British Television: The American Connection

❑ 89SMPTE-34 Paper #58: Digital Transmissions of Studio Quality HDTV Signals at 1.118 GBPs over Fiber-Optic Cable, Paper #59: PFWM Fiber-Optic Transmission System for HDTV

❑ 89SMPTE-35 Paper #60: HDTV Digital Frame Recorder, Paper #61: A European High-Definition Production Realized by SFP

❑ 89SMPTE-36 Paper #62: Large Screen HDTV Trinitron Monitor

Quality Control and Measurements Section

❑ 89SMPTE-37 Paper #63: Television Measurement Standards: Present and Future, Paper #64: Some Fundamental Limits on the Accuracy of NTSC TV Signal Measurements

❑ 89SMPTE-38 Paper #65: Matchman MkII Speeds up Video Camera Color Checking, Paper #66: Test Signal Generators: New Technology for the 1990s

❑ 89SMPTE-39 Paper #67: Microprocessor Control of Analog Test and Measurement Equipment, Paper #68: Instrumentation for Monitor Calibration

❑ 89SMPTE-40 Paper #69: Operational Consideration for Color Monitors, Paper #70: Quality Control of Off-Air Television

❑ 89SMPTE-41 Paper #71: PBS's Total Quality Program

MONDAY SESSIONS

Laboratory Technology Section

❑ 89SMPTE-42 Paper #72: A Method of Digital Chromatic and Density Slope Corrections in a Color Film Analyzer for Superb First Print Yields, Paper #73: Perception of Color

❑ 89SMPTE-43 Paper #74: Controlling Technology, Paper #75: The 300D Digital Video Color Film Analyzer: A Logical Use of the Best of Today's Technologies

❑ 89SMPTE-44 Paper #76: Colorfilm's Bulk Release Printing Facility, Paper #77: Frame Store in a Color Analyzer: A Necessity or a Gadget?

❑ 89SMPTE-45 Paper #78: Automation Systems Using Kodak's KeyCode, Paper #79: Bar Code Applications

TV Production I Section

❑ 89SMPTE-46 Paper #80: Application of Digital Processing in Color Cameras, Paper #81: The First Color Television Camera

❑ 89SMPTE-47 Paper #82: New Video Processing for New CCD Cameras, Paper #83: The Accordion Charge Transfer Mechanism: A New Development of the FT CCD Image Sensor

❑ 89SMPTE-48 Paper #84: History of Television Camera Tubes, Paper #85: A New High-Speed Camera System for Broadcast Use, Action Analyzer

❑ 89SMPTE-49 Paper #86: Movement-Compensated TV Standards Converter Using Motion Vector System, Paper #87: Highly Versatile Camera Mount for All Vehicles: Kinetic Support Systems VCM F189

TV Post Production Section

❑ 89SMPTE-50 Paper #88: Color Correction-A Digital Approach, Paper #89: S-VHS Signal Processing in Post-Production Systems

❑ 89SMPTE-51 Paper #90: The Link Editor-A New Concept in Film-Style Video Editing, Paper #91: A Real-Time, Object-Oriented, Nonlinear Editing System for Film and Video

❑ 89SMPTE-52 Paper #92: Desktop Computer Technology in the Post-Production Environment, Paper #93: Graphics and Component Editing for the 1988 Olympics

□ 89SMPTE-53 Paper #94: A Closed-Loop Digital Video Editing System, Paper #95: A Non-Linear Electronic Editing for Feature Films

□ 89SMPTE-54 Paper #96: A Complete Post Production System for All Video Formats, Paper #97: History of Electronic Video Editing

□ 89SMPTE-55 Fellows Luncheon

Laboratory/Sound Technology Section

□ 89SMPTE-56 Paper #98: The Digisync-A Multipurpose, Multiformat Counter/Calculator for Film Synchronizers, Paper #99: A Networked Automatic Plotting Densitometer System

□ 89SMPTE-57 Paper #100: Extended Range Cross-Modulation Testing, Paper #101: Technical Requirements of Theaters Playing Back Dolby Spectral Recording Photographic Sound Tracks

□ 89SMPTE-58 Paper #102: Management and Manipulation of Digital Audio in Mass Storage Environments, Paper #103: 3D Sound Fiction, Fantasy, and Fact: Benchmarks, Standards and Common Sense for Cinema and Video

□ 89SMPTE-59 Paper #104: A Practical Approach to the Preparation, in the Digital Domain, of Audio Material for Presentation to the Film or TV Rerecording Stage

TV Production II Section

□ 89SMPTE-60 Paper #105: A Single-Chip Transmission System for Digital Studio, Paper #106: Architectural and Acoustic Design of Temporary Broadcast Facilities

□ 89SMPTE-61 Paper #107: Plant Philosophy and Systems Concepts for NBC's Olympics Broadcast Center, Paper #108: New News Studios in NHK

□ 89SMPTE-62 Paper #109: EMPHASYS-Design and Interface to a Digital Encode System, Paper #110: The History of Color Picture Tubes and Some Future Projections

□ 89SMPTE-63 Paper #111: A Time Code User Bit Hierarchy for Multi-Disciplinary Applications, Paper #112: Getting More out of User Bits

Recording Section

□ 89SMPTE-64 Paper #113: A Personal History of Videotape Recording, Paper #114: Development of a Portable D-2 Videotape Recorder

□ 89SMPTE-65 Paper #116: A New 8-14 Modulation and Its Application to a Small-Format VTR, Paper #117: The Role of Image Data Compression in Professional Video Recording

□ 89SMPTE-66 Paper #118: An Introduction to Magneto-Optical Recording Paper #119: Recent Technical Developments in the S-VSH VCR for Broadcasting and Professional Applications

□ 89SMPTE-67 Paper #120: Archiving the Various Videotape Formats, Paper #121: Copyright Protection for TV Programming

TUESDAY SESSIONS

Film/Electronic Interface I Section

□ 89SMPTE-68 Paper #122: A Historical Survey of Contributions Made by Agfa-Gevaert to Film and Television, Paper #123: Film Images, Television, and Aspect Ratios

□ 89SMPTE-69 Paper #124: High-Performance CCD Telecine for HDTV, Paper #125: A Comparison of Color Negative Films and HDTV Cameras for Television Program Production

□ 89SMPTE-70 Paper #126: The FTV Colourscan Colour Correction, Transfer, and Conform System for Film-to-Videotape Projects, Paper #127: Film Applications of High-Definition Video

□ 89SMPTE-71 Paper #128: Electronic Editing of Theatrical Feature Films, Paper #129: Texture and Depth Enhancement for Motion Pictures and Television

Encoding/Decoding for Composite Video and Standards Conversion Section

□ 89SMPTE-72 Paper #131: Encoding/Decoding Techniques, *Sony Broadcast Ltd.*; Paper #132: Encoding/Decoding Techniques, *CDL*

□ 89SMPTE-74 Paper #134: Panel Discussion (with four previous speakers on Encoding/Decoding Techniques), Paper #135: Standards Conversion for HDTV-A Progress Report

□ 89SMPTE-75 Paper #136: Standards Conversion Techniques for Advanced TV, *IVC*, Paper #137: Standards Conversion Techniques for Advanced TV, *NHK Science and Technical Research Laboratories*

□ 89SMPTE-76 Paper #138: Eureka Project Standard Conversion Techniques for Advanced TV, Paper #139: Panel Discussion (with four previous speakers on Standards Conversion)

Film/Electronic Interface II Section

□ 89SMPTE-77 Paper #140: Applications of Machine Readable KeyCode in Film and Video Post Production, Paper #141: Developments in Telecine

□ 89SMPTE-78 Paper #142: High-Resolution Electronic Intermediate System for Motion-Picture Film, Paper #143: High-Resolution CCD Film Scanner for Special Effects Applications

□ 89SMPTE-79 Paper #144: 35mm Infrared Laxer Film Recorder for an Electronic Intermediate System, Paper #145: Pros and Cons of Editing Feature Films on Tape

Automation and Robotics Section

□ 89SMPTE-80 Paper #146: Improving Operational Efficiency, Paper #147: System Interface for the Library Management System at CBS

□ 89SMPTE-81 Paper #148: Traffic Interface Issues in Real-Time Automation, Paper #150: Roboped, the Design of a Free Roaming Robotic Pedestal

