



Welcome

SMPTE

## 129th SMPTE Technical Conference and Equipment Exhibit

October 31–November 4, 1987 Los Angeles Convention Center

The 129th Technical Conference and Equipment Exhibit of the Society of Motion Picture and Television Engineers will be held from Saturday, October 31, to Wednesday, November 4, 1987, at the Los Angeles Convention Center in downtown Los Angeles, Calif. More than 15,000 people are expected to attend.

The conference/exhibit is under the overall supervision of SMPTE Conference Vice-President Blaine Baker, MPL Film & Video, Inc., and Editorial Vice-President Howard T. La Zare, Deluxe Laboratories, Inc. The General Arrangements Chairman is Michael Chewey, Systems Unlimited. Frank J. Haney, Capital Cities/ABC, Inc., and Edward J. Burns, Eastman Kodak Co., are the Program Chairman and Program Vice-Chairman, respectively.

### **The SMPTE Conference: A Background**

The conference, consisting mainly of a papers program and an equipment exhibit, provides a worldwide forum for discussions and demonstrations of advanced motion-picture and television technology. Once a discreet gathering of film engineers, the conference has grown through the years to become a large and important international event. Today, it is seen as "the place to be" for engineers,

laboratory technicians, scientists, film and video equipment operators, and marketing and management people — in short, any professional who works on the technical side of motion pictures and television.

The SMPTE Technical Conference and Equipment Exhibit is held annually in the fall, usually around late October. The locale for the event alternates between the the West Coast and East Coast.

The conference is, essentially, a service that is provided by the Society to its individual and sustaining members. Anyone who registers for an SMPTE conference has an opportunity to take in one or more technical sessions, where his engineering peers describe new concepts in the technology of motion pictures and television. In addition, he can tour some 250 different equipment exhibits to see for himself what new products and systems are coming out of the manufacturing plants of major companies.

The papers program forms the basis for the conference. It is composed of a series of sessions which run concurrently from the beginning of the event through to the end. Each session focuses on a particular motion-picture or television topic, with the individual technical papers delivered one after another. Sometimes, a panel discussion by the authors is held at the conclusion of a session.

### **129th Conference Format**

The five-day meeting starts on Saturday morning, October 31, continues through the weekend, and concludes on the afternoon of Wednesday, November 4. Activities slated for Saturday include a welcoming address by SMPTE President M. Carlos Kennedy, Ampex Corp., the keynote speech by Daniel E. Slusser, Universal City Studios, the Honors and Awards Luncheon, and the opening of the equipment exhibit and papers program.

The schedule of events also includes the Welcoming Reception, the Fellows Luncheon, the SMPTE Banquet, an entertainment program for the spouses in attendance, and meetings of the Society's executive, engineering, editorial, administrative, and advisory committees. Additional information on these and other conference functions follows.

The exhibit will run for four days, concluding on Tuesday, November 3. The papers presentations however, will continue through Wednesday, November 4.

### **Registration**

Both advance and on-site registration are available for the conference. SMPTE members who register in advance qualify for a reduced rate from the Society (see box accompanying

this story). Their completed registration form (included here) and remittance must be received at SMPTE Headquarters, 595 W. Hartsdale Ave., White Plains, NY 10607, no later than September 25, 1987. Upon receipt of the materials, Headquarters will mail all credentials directly back to registrants. Persons registering in advance are urged to bear in mind that there will be no advance registration pickup desk at the conference this year.

Regular on-site registration at the Los Angeles Convention Center will begin on Saturday, October 31, at 8:00 a.m. The hours for on-site registration are as follows:

Saturday, Oct. 31....8 a.m.-6 p.m.  
 Sunday, Nov. 1.....8 a.m.-6 p.m.  
 Monday, Nov. 2.....8 a.m.-7 p.m.  
 Tuesday, Nov. 3.....8 a.m.-5 p.m.  
 Wednesday, Nov. 4....8 a.m.-1 p.m.

Daily registration will be available at the Los Angeles Convention Center during these hours.

Those who wish to avoid the long registration lines at the convention center may register for the conference on Friday, October 30, between 9:00 a.m. and 5:00 p.m., in the Santa Anita Room of the Westin Bonaventure Hotel, Los Angeles.

### Honors and Awards Luncheon

The annual luncheon is scheduled for Saturday, October 31, in Petree Hall of the LACC. A reception will be held at 11:30 a.m., followed by lunch and the awards presentations. The luncheon speaker will be Jean Firstenberg, the executive director of the American Film Institute.

SMPTE honors and awards recog-

### Program Committee

Editorial Vice-President ..... Howard T. La Zare  
 Program Chairman ..... Frank J. Haney  
 Program Vice-Chairman ..... Edward J. Burns  
 Topic Chairman (film and audio) ..... Frank R. Reinking  
 Topic Chairman (television) ..... Michael T. Fisher

### Arrangements Committee

Conference Vice-President ..... Blaine Baker  
 General Arrangements Chairman ..... Michael V. Chewey  
 Membership Chairman ..... John Aalto  
 Spouses Program Chairman ..... Judith Chewey  
 Luncheon Chairman ..... Craig Curtis  
 Video/Papers Facilities Chairman ..... Gus Dato  
 Registration Chairman ..... Fred Godfrey  
 Display Chairman ..... Julian D. Hopkinson  
 Security Facilities Chairman ..... Charles Kircher  
 Audiovisual and Projection Chairman ..... Don V. Kloepfel  
 Opening Films and Tapes Chairman ..... Ron Little  
 Transportation Chairman ..... Don McCroskey  
 Hospitality and Information Chairman ..... Georgia Ousey  
 Hotel Arrangements Chairman ..... Milt Shefter  
 PA and Recording Chairman ..... Richard J. Stumpf  
 Banquet and Entertainment Chairman ..... Louis F. Wolf  
 Assistant Auditor ..... Gordon C. Cory

nize both outstanding technical achievements in the industry and distinguished service to the Society.

The fee for the luncheon is included in the Member Weekly, Non-Member Weekly, Spouse, Life Member, and Life Fellow registrations.

### Welcoming Reception

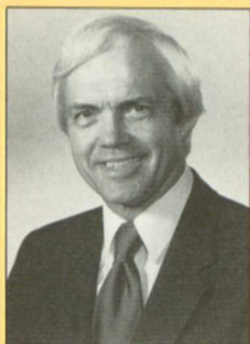
The reception will be held on Friday evening, October 30, in the California Ballroom of the Westin Bonaventure Hotel. Sponsored by Eastman Kodak Co., the Welcoming Reception provides a social setting where SMPTE members meet to converse and rekindle friendships.

### Equipment Exhibit

The exhibit hours are as follows:

Saturday, Oct. 31....2:30-6:00 p.m.  
 Sunday, Nov. 1.....10 a.m.-6 p.m.  
 Monday, Nov. 2.....9 a.m.-7 p.m.  
 Tuesday, Nov. 3.....9 a.m.-5 p.m.

All the space in this year's equipment exhibit was reserved by early June. A total of 216 companies will occupy 750 booths. The booths will cover 75,000 ft<sup>2</sup> of floor area in the convention center. On display will be a full range of film and television equipment, from battery packs and camera lenses to VTRs and sophisticated video special effects systems.



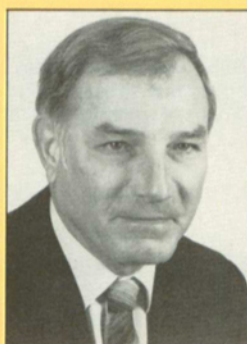
Conference  
Vice-President  
Blaine Baker



Editorial  
Vice-President  
Howard T. La Zare



General Arrangements  
Chairman  
Michael V. Chewey



Program  
Chairman  
Frank J. Haney



Program  
Vice-Chairman  
Edward J. Burns

129th SMPTE CONFERENCE  
LOS ANGELES CONVENTION CENTER  
October 31 - November 4, 1987

**CONFERENCE REGISTRATION FORM**

Return this completed form with registration fees (U.S. \$ only) to: SMPTE, 595 West Hartsdale Avenue, White Plains, NY 10607. Make check payable to SMPTE.

**If payment cannot reach Headquarters by September 25, 1987, please see brochure for late registration information.**

PLEASE TYPE OR PRINT

LAST NAME	FIRST NAME	MIDDLE INITIAL
COMPANY NAME		
COMPANY ADDRESS		
CITY	STATE	ZIP OR CODE
COMPANY TELEPHONE (include area code)		COUNTRY

**COMPLETE NEXT LINE ONLY IF SPOUSE IS REGISTERING FOR SPOUSES PROGRAM:**

SPOUSE'S LAST NAME	SPOUSE'S FIRST NAME	MIDDLE INITIAL
--------------------	---------------------	----------------

**Check ALL that apply:**  
**FEES**  
**WEEKLY:**

	Before September 25th		On-Site Registration DO NOT MAIL
Member (includes H&A Lunch) . . . . .	\$185.00	\$ _____	\$ 225.00
Non-Member* (includes H&A Lunch) . . . . .	225.00	_____	265.00
Spouse (includes H&A Lunch) . . . . .	85.00	_____	95.00
Life Fellow (includes H&A Lunch) . . . . .	FREE	FREE	FREE
Life Member (includes H&A Lunch) . . . . .	FREE	FREE	FREE
Student Member (no lunch) . . . . .	FREE	FREE	FREE
Student Non-Member (no lunch) . . . . .	10.00	_____	\$15.00
Author (day of paper only, no lunch) . . . . .	FREE	FREE	FREE
Press (no lunch) . . . . .	FREE	FREE	FREE
Fellows Luncheon (Fellows only) . . . . .	35.00	_____	40.00
Honors & Awards Luncheon (Quantity: _____) (if ordered separately) . . . . .	30.00	_____	35.00
Banquet (Quantity: _____) . . . . .	60.00	_____	70.00
Full Table Banquet (Quantity: _____) . . . . .	600.00	_____	700.00
Total \$		\$ _____	

Members of BKSTS, FKTG, SPSE, SBE, and AES may register at the Member rate.  
If unable to attend entire conference, daily registration available at conference only.  
\*Weekly non-member registrants may present this receipt at SMPTE Membership Desk for \$20.00 credit towards annual membership (total dues \$50 annually).

**Payment (check one):**

- Cash     Check     Mastercard     Visa     American Express

ACCT. #: \_\_\_\_\_ Exp. Date: \_\_\_\_\_

Signature: \_\_\_\_\_

All fees slightly higher on-site. No refunds after October 16, 1987. All refunds subject to a \$25.00 cancellation fee.  
Registration materials will be mailed to the address you have listed.

## Technical Papers Program

Response to this year's papers program was overwhelming. Because of the approximately 150 papers that will be presented at the conference, the Program Committee has found it necessary to expand the schedule. Sessions will start on the first day of the conference (Saturday, October 31), not the second day. The sessions will be held concurrently.

The papers in the 129th SMPTE Conference program will reflect new developments in motion-picture and television technology. "Important" and "timely" perhaps best describe the program. Full sessions will be devoted to the topics of high-definition television (HDTV) and enhanced NTSC. Featured for the very first time at an SMPTE conference will be a session on fiber optics, aimed at creating an awareness among broadcasters of the feasibility of the new technology for program distribution. Another new topic is EBus, the serial communications standard jointly developed by the SMPTE and the European Broadcasting Union (EBU) for the control of equipment in a television facility. These topics, together with discussions on film and video laboratory practices, film and electronic production, video recording, and other subjects, make up what should be a most informative technical program.

A listing of the complete papers program follows.

## HDTV Demonstration

Continuous demonstrations of 35mm film transferred from HDTV will take place at the conference in a specially created HDTV film theater. The films, which were originally produced on high-definition television, will be shown at 24 and 30 frames/sec. Those who have seen these demonstrations before have been impressed by both its technical and artistic quality.

The demonstrations will be jointly sponsored by the SMPTE and the Motion Picture and Television Engineering Society of Japan (MPTEJ).

## Fellows Luncheon

The Society's new Fellows — those engineers or executives who, in the opinion of the SMPTE Board of Governors and Fellow Membership Award Committee, have attained outstanding rank in the motion-picture, television, or related industries — will be honored at a luncheon at noon, Sunday, November 1. Both the luncheon and the reception preceding it will take place in Petree Hall of the convention center. Former SMPTE President John G. Frayne (1955-56) will be the guest speaker.

The Society encourages all Fellows and Life Fellows to use the registration form (included here) to order luncheon tickets. The prepurchased tickets will then be mailed directly to you along with the rest of your credentials.

## Committee Meetings

The Society's executive, administrative, editorial, and engineering committees, as well as the SMPTE Board of Governors, will meet during the 129th Technical Conference. Most of these meetings will be held at the Los Angeles Convention Center. Committee members will be notified in advance of the time and place of their meetings. The complete schedule of SMPTE committee meetings will be printed in the conference program booklet, which may be picked up on-site.

## SMPTE Banquet

This enjoyable banquet, a staple of the SMPTE Conference, will take place on Tuesday evening, November 3, in the California Ballroom of the Westin Bonaventure Hotel. A reception will be at 7:00 p.m., followed immediately by dinner, dancing, and entertainment.

Companies wishing to reserve one or more tables at the banquet should call SMPTE Headquarters to obtain the necessary forms.

## Spouses Program

Spouses Program Chairwoman Judith Chewey is planning a week of visits, tours, luncheons, and other activities in and around Los Angeles and Hollywood, Calif. The program promises to be both entertaining and informative.

Spouses may register for the pro-

## Registration Rates

	Before Sept. 25th	On-Site Registration
Member*	\$185.00	\$225.00
Non-Member*	225.00	265.00
Spouse*	85.00	95.00
Life Fellow	FREE	FREE
Life Member	FREE	FREE
Student Member	FREE	FREE
Student Non-Member	10.00	\$15.00
Honors & Awards Luncheon (if ordered separately)	30.00	35.00
Fellows Luncheon**	35.00	40.00
Banquet	60.00	70.00

No refunds after October 16, 1987. All refunds subject to a \$25.00 cancellation fee.

\* Includes Honors and Awards Luncheon.

\*\* Fellows and Life Fellows only.

Members of BKSTS, FKTG, SPSE, SBE, and AES may register at the Member rate. If unable to attend entire conference, daily registration available at conference only.

## Hotel Rates

The Westin Bonaventure (Headquarters)		
Single	Double	Suite
\$97	\$117	\$235-\$1,330

The Los Angeles Hilton & Towers			
Single	Double	Suite	Exec. Sgl/DbI
\$93	\$108	\$300-\$575	\$140/\$155

11% occupancy tax will be applied to above prices. Shuttle bus service will run between the Convention Center and both the Bonaventure and the Hilton at no cost to attendees. Reservations must be received by September 25.

Guests are requested to establish credit on arrival or pay in advance.

If a room at the rate requested is unavailable, one at the nearest rate will be reserved.

# Hotel Reservation Form

**129th SMPTE Conference**  
**Los Angeles Convention Center**  
**October 31 - November 4, 1987**

Name \_\_\_\_\_  
 Company \_\_\_\_\_  
 Address \_\_\_\_\_  
 City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_  
 Telephone \_\_\_\_\_  
 Arrival Date \_\_\_\_\_ Time \_\_\_\_\_  
 Departure Date \_\_\_\_\_  
 Room Type (check one) Single \_\_\_\_\_ Double \_\_\_\_\_

**YOU MUST GUARANTEE ARRIVAL:**

Credit Card # \_\_\_\_\_ Exp. Date \_\_\_\_\_  
 Check one:  Amex  Visa  Mastercard

- Hotel rooms will be reserved for Conference registrants only.
- Hotel reservations must be made on this form. Reservations must be received by September 25. Reservations received after that date will be subject to availability. The special rates will no longer be in effect.
- No telephone reservations will be accepted. For changes or cancellations call the Housing Bureau at (213) 488-0211. Referrals by the Housing Bureau after October 9, 1987.

FOR OFFICE USE ONLY

\_\_\_\_\_

SMPTE Housing  
 P.O. Box 71608  
 Los Angeles, CA 90071

Please circle desired accommodations:

**The Westin Bonaventure (Headquarters)**

Single	Double	Suite
\$97	\$117	\$235-\$1,330

**The Los Angeles Hilton & Towers**

Single	Double	Suite	Exec. Sgl/DbI
\$93	\$108	\$300-\$575	\$140/\$155

11% occupancy tax will be applied to above prices. Shuttle bus service will run between the Convention Center and both the Bonaventure and the Hilton at no cost to attendees.

Reservations must be received by September 25.

Guests are requested to establish credit on arrival or pay in advance.

If a room at the rate requested is unavailable, one at the nearest rate will be reserved.



gram in advance — and take advantage of a \$10.00 savings — by checking the appropriate box on the registration form. The form and payment must be received at Society Headquarters no later than September 25. Pre-registered spouses will have their packets mailed to them.

On-site registration will be available in the Santa Anita room of the Westin Bonaventure Hotel, beginning at 9:00 a.m. on Friday, October 30, and continuing through every day of the conference.

The complete schedule of Spouses Program activities will appear in the conference program booklet.

### Coffee Club

An arrangement of coffee, tea, and Danish will be set out on each morning during the conference. The Coffee Club is provided courtesy of Fuji Photo Film U.S.A., Inc.

### Hotel Reservations

The SMPTE has an allotment of approximately 2000 rooms at both the Westin Bonaventure and the Los Angeles Hilton. The rates listed in the accompanying form are special rates available only to conference registrants who make room reservations by

September 25. Reservations received after this cutoff date are subject to availability, and the special rates will not apply. (Members are asked to please read the hotel reservation form carefully. Note that payments for room reservations are *not* mailed to Society Headquarters, rather to SMPTE Housing, P.O. Box 71608, Los Angeles, CA 90071.)

Convenient shuttle bus service will be provided between the hotels and the convention center.

### Sponsors

The Society wishes to thank the following sponsors for their generous support. (The companies that notified the SMPTE on or before June 15, 1987, are listed.)

Riviera Broadcast Leasing and Film Processing Corp. (*Banquet Entertainment*)

Ampex Corp. (*Banquet Reception*)

Foto Kem Industries (*Banquet Roses*)

NBC, Inc. (*Banquet Wines*)

Dolby Laboratories, Inc. (*Board of Governors Reception*)

Fuji Photo Film U.S.A., Inc. (*Coffee Club*)

Magna-Tech Electronic Co., Inc. (*Fellows Reception*)

JVC Corp. of America (*Honors and Awards Reception*)

Faroudja Laboratories, Inc. (*NTSC Precision Decoders*)

Image Video Ltd. (*Videotape Transfer Services*)

Eastman Kodak Co. (*Welcoming Reception*)

### Special Airline Rates

American Airlines is offering discounted airfares to and from Los Angeles during the conference. For more information, members can call 1-800-433-1790, and ask for Star File No. S12553.

### Airport Transportation

Members may wish to take advantage of the low cost and convenience of the Super Shuttle service to and from the Los Angeles International Airport (LAX). Upon arrival at LAX, collect your baggage, call Super Shuttle at 417-8988 (or use the baggage claim courtesy phone) to arrange for pickup, then walk to the bus stop area on the airport's lower level.

Advance reservations will be required for Super Shuttle service back to LAX. Simply call (213) 338-1111 for door-to-door service between your hotel and the airport.

## Program Outline

### 129th SMPTE Technical Conference

#### Imaging and Sound — Today and Tomorrow

The papers listed below are in correct sessions, but not in order of presentation. The sessions and papers are firm as of July 27, 1987. However, changes are possible between the time of this printing and the conference. For up-to-the-minute program information, call or write the SMPTE Program Coordinator, 595 W. Hartsdale Ave., White Plains, NY 10607 (914) 761-1100.

#### Saturday Morning Opening Session

**Conference Opening:** Welcoming address by SMPTE President M. Carlos Kennedy, *Ampex Corp.*

**Engineering Report:** SMPTE Engineering Vice-President Richard G. Streeter, *CBS Broadcast Group*

**Keynote Address:** Daniel E. Slusser, *Universal City Studios*

#### Saturday Afternoon Session A ARCHIVAL

"Fox's Development of CinemaScope, 1953-1954," John Belton

"The Archival Quality of Film Bases," Karel Brems, *Agfa-Gevaert N.V.*

"Snow White and the Seven Dwarfs — 1/2 Century Later," Leon Briggs, *Walt Disney Studios*

"Theatre Television: A History," Douglas Gomery, *University of Maryland*

"Stability of Processed Cellulose Ester Photographic Films," A. T. Ram and James L. McCrea, *Eastman Kodak Co.*

"Restoring the First Television Show Produced on Color Video Tape — An Evening with Fred Astaire," Edwin H. Reitan and Daniel Einstein, *ITT Gilfillan*

#### Session B COMPUTER AIDED DESIGN (CAD) PANEL

#### Saturday Afternoon Session C

#### 1988 OLYMPICS

"The 1988 Seoul Olympics: TV From a

Parking Lot," Charles H. Jablonski and Peter Randall, *NBC*

"Digital Video Graphics — A Component Experience," Charles H. Jablonski and David H. Salant, *NBC*

"Host Broadcasters Prepare for the 1988 Olympics," Joseph Roizen, *Telegen*

"MII — A Complete Production Format," Charles E. Spicer and Phil Shaw, *NBC*

"High-Performance Switching and Machine Control System for NBC Use at 1988 Olympic Games, Seoul, Korea," Frank Zimmerman, *3M Co.*

#### Sunday Morning Session A

#### FILM & LABORATORY TECHNOLOGY I

"40 Years of Upgrade and/or Downgrade in Viewed Image Quality on the Screen Including Lens Changer," Glenn Berggren, *Optical Radiation Corp.*

## 129th SMPTE Technical Conference — List of Sessions

Date	Day	Session A	Session B	Session C
Oct. 31	Saturday afternoon	Archival	CAD Panel	1988 Olympics
Nov. 1	Sunday morning	Film & Lab Technology I	35mm HDTV Transfers	Image Processing
Nov. 1	Sunday afternoon	Film & Electronic Production I	35mm HDTV Transfers	Fiber Optics
Nov. 2	Monday morning	Film & Lab Technology II	HDTV I	Digital Signal Distribution
Nov. 2	Monday afternoon	Film Laboratory Practices	HDTV II	Post-Production I
Nov. 3	Tuesday morning	Film & Electronic Production II	35mm HDTV Transfers	Enhanced NTSC/Compatible HDTV
Nov. 3	Tuesday afternoon	Audio, Film	35mm HDTV Transfers	Beyond the Cathode Ray
Nov. 4	Wednesday morning	Audio, TV	Post-Production II	Video Recording
Nov. 4	Wednesday afternoon		ES Bus and Panel Discussion	Post-Production III

“Utilizing Test Films for Optimizing Film-to-Tape Transfer,” David Corbitt, *The Tape House Editorial*

“Progress Report on Feasibility of Motion-Picture Frame Rate Modification to 30 Frames per Second,” Edward M. DiGiulio, *Cinema Products Corp.*

“Packaging Innovations for Motion-Picture Films,” Ann P. Griffin, *Eastman Kodak Co.*

“Eastman Color High-Speed Daylight Negative Film 5297/7297 — Trade Reaction,” Milton D. Jones, *Eastman Kodak Co.*

“A Color Negative Film For Laser Recording,” Y. Urata and S. Honjo, *Fuji Photo Film Co., Ltd.*

“Effects of Pitch on Image Steadiness,” Irwin W. Young, *Du Art Film Labs, Inc.*

### Session B — 35mm HDTV TRANSFERS

#### Session C

#### IMAGE PROCESSING

“The Video Workstation Concept: Merging Computer and Video Technologies,” Ajay Chopra, *Pinnacle Systems, Inc.*

“A High-Speed Architecture for Image Computation,” J. Davis, P. H. Lucht, and L. K. Putnam, *BTS*

“Digital Effects Integration in a Video Switcher,” Jay L. Flora and David A. Haycock, *Ampex Corp.*

“Modified Flood Filling Algorithm with the Capability of Automatically Finding a Seed Point,” Hua Li, *University of Iowa*

“Affiliate Identification System,” Joseph A. Maltz and Ivan J. Maltz, *Dubner Computer Systems*

“Digital Processing of Planetary Images,” Robert Nathan, *JPL*

“Multiresolution Dissolve,” Charles S. Stein and Lewis E. Hitchner, *University of California*

“Multilevel Compositing in the Digital Domain,” Peter D. Symes, *Grass Valley Group*

### Sunday Afternoon Session A

#### FILM & ELECTRONIC PRODUCTION I

“OPUS — One Electronic Intermediate Production,” David Collins, *Teledyne Camera Systems*

“Electronics in Discharge Lighting,” Adrian Donkin, *Lee Colortran Ltd.*

“The Illumination of Travelling Matte Backings,” Jonathan Erland, *Apogee, Inc.*

“Major Motion-Picture Production Standards,” G. Kennel, J. Pytlak, R. Sehlin, and R. Uhlig, *Eastman Kodak Co.*

“Educating Film/Video Professionals,” Paul D. Mareth, *Projections Co.*

“Camera Lens and Light Source Filtering Recommendations for Application in Fluorescent and High-Intensity Discharge Lighting Situations,” David L. Quaid, *David Quaid Productions, Inc.*

“Eastman Color High-Speed SA Negative Film 5295: Production Experience,” R. C. Sehlin, *Eastman Kodak Co.*

### Session B — 35mm HDTV TRANSFERS

#### Session C

#### FIBER OPTICS

“Fiber Optics And Video: A Background,” George F. Benton

“Nationally Compatible, DS3 Rate (45 Mbit/sec) Customer Controllable, Multi-point Networks for Broadcast Television Distribution: Possibilities and Challenges,” R. J. Blackburn, E. M. Underwood, W. K. Karbonsky, and G. F. Lenham, *Bell Communications Research*

“Multichannel Broadcast Video Delivery in Fiber Optic,” Mircho Davidov, *Catel Telecommunications*

“Video Compression and Fiber Optic Digital Transmission,” Allan R. Lamberti, *NEC America, Inc.*

“Practical Experience with OPCM Fiber Optic Transmission Systems for Inter-City Television Network Program Distribution,” Ken Michel, *Capital Cities/ABC*

“Broadcast Quality Television 45 Mbit/sec (DS3) Encoding Algorithm,” Ed M. Underwood, *Bell Communications Research*

“Potential Use of Optical Intra-Plant Video Interface in a Future Broadcast Facility,” Robin Wilson, *NBC*

### Monday Morning Session A

#### FILM & LAB TECHNOLOGY II

“Optical Code on Film for Projectors,” Jean Pierre Beauviala, *Aaton*

“40 Years of Performance Progress with Concept Inputs and MTF Results (Snaplite to Ultra-Star Studio),” Glenn Berggren, *Optical Radiation Corp.*

“Colorization Challenges,” Wilson Markle and Brian Holmes, *Colorization, Inc.*

“Performance Measurement of Cine Projection Lenses,” Boyce Nemece, *Boyce Nemece Designs*, and R. Brian Gaynor, *Ealing Electro Optics, Inc.*

“Direct Introduction of Time Code on Film,” Michel Oudin, *SFP*

“Method of Bonding Lexan and Sapphire to Form a High-Pressure, Flame-Resistant Window,” William R. Richardson and Ernie D. Walker, *NASA*

“Film Data Track — Time Code on Film: A Working System,” Moe Shore, *Panavision*, and Jean Pierre Beauviala, *Aaton*

### Session B

#### HDTV I

“HDTV — An Historical Perspective,” Corey Carbonara, *Baylor University*

“Technical Aspects of HDTV Production,” Keith Fields, *CBC*

“Film-Style Drama Production Using High-Definition Video,” John Galt and Charles Pantuso, *Northern Light and Picture Corp.*

"Julia and Julia — The First Movie Made by HDTV Means," E. Lionetti, *RAI*

"Study Groups and Their Roles in Practical Application of HDTV in Japan," Ryo Mochizuki, *NHK*

"The High-Definition Studio — A Unique Approach to Creating Visuals," Barry Rebo, *Rebo High Definition Studio, Inc.*

### Session C

#### DIGITAL SIGNAL DISTRIBUTION

"Generation Loss in Digital Video Systems," John Abt, *Grass Valley Group*

"Serial Link Between Digital Equipments," C. Maurer, C. Delattre, and J. Vallee, *Thomson Video Equipement*

"Television (Video/Audio/Data) Signal Routing and Distribution: Converging Operations Needs, Diverging System Solutions," C. Robert Paulson, *AVP Communications*

"Development Process And Performance of the PBS VBI Data Delivery System," Mark S. Richer and Aderemi A. Adeyeye, *PBS*

"Motion Theatre: Technological Fusion and the Facility of the Future," Michael Van Himbergen and Jeffrey Diamond, *Motion Theatre Association*

"Digital Intelligence in Professional Broadcast Monitors," Joost Verbrugge, Martin Piepers, and Norbert Lietaert, *Barco Industries*

"Extending Current Digital Standards to 10 Bits," Merrill S. Weiss, *NBC*

### Monday Afternoon

#### Session A

#### FILM LABORATORY PRACTICES

"Digitized Video Analyzing for Motion-Picture Film," Larry A. Anderson, *Bremson Data Systems, Inc.*

"The Light Valve Controller and the Answer Print Printer," John Baptista and James A. Robertson, *CFI*

"Television-Compatible Prints: Fitting a Quart of Light Onto a Pint-Pot Screen," Dominic Case, *Colorfilm Pty Ltd.*

"Film Facet 3000H Color Film Analyzer," Howard W. Hoadley, *LMC Peterson, Inc.*

"The 300H Video Color Film Analyzer, A New Generation," Mark Levine and Harry Teitelbaum, *Hollywood Film Co.*

"Productivity Improvements for ECP-2, 60,000-Ft Rolls and Automatic Unloading," Colin F. Mossman, *Rank Film Labs*

"One Solution Bleach for Process ECN-2," Frank Ricotta and T. M. Henretty, *Eastman Kodak Co.*

"A Radically New Video Color Analyzer Designed Specifically for the Motion-Picture Industry," Nigel S. Varian, *Photo Micro Systems, Ltd.*

"Lab Central — A Computerized Printing, Production, and Scheduling Control System," Joseph Wary, *LMC Peterson, Inc.*

### Session B

#### HDTV II

"A Flexible Memory System for the Integration of Multiple Studio Quality Video and Image Windows on a High-Definition TV (HDTV) Display," Hugo Gaggioni and J. Robbins, *Bell Communication Research*

"Practice of HDTV-to-Film Conversion by Means of Laser Film Recorder," Hiroaki Kumata, *NAC, Inc.*, and Noboru Yura, *Imagica Corp.*

"HDTV Requirements for Motion Picture Film," James A. Mendrala, *NBC*

"Recent Developments of Laser Telecine and Laser Beam Recorder for HDTV," T. Motoki, Y. Nojiri, Y. Sugiura, and H. Hirabayashi, *NHK*

"Modeling Economic and Sociological Forces Impacting New Technologies in Television Broadcasting," Martin Polon, *Polon Research International*

"HDTV-to-35mm Film Transfer via Electron Beam Recorder," Larry Thorpe and Yoshio Ozaki, *Sony Broadcast Products Co.*

### Session C

#### POST-PRODUCTION I

"A New Audio Mixing Console Architecture for Film Post-Production," Chris David, *Solid State Logic*

"High Technology and Film Post-Production," Milton Forman and Adrian Ettlinger, *Cinedco*

"Applications of the LaserVision Standard Videodisc in the Broadcast Industry," Donald R. Hayes, *Optical Disk Corp.*

"A Computerized Post-Production Management System for Film and Videotape," Rush S. Hickman and S. Carnahan, *Amтел Systems, Inc.*

"A New Post-Production Facility: The Technical Building at Skywalker Ranch," Tomlinson Holman, *Lucasfilm*

"Acoustical Design for the Technical Building at Skywalker Ranch: Part I, Sound Isolation and Room Acoustics," David R. Schwind, *Chs. M. Salter Assoc.*

"Acoustical Design for the Technical Building at Skywalker Ranch: Part II, Mechanical and Electrical Acoustic Noise Control," Thomas A. Schlinder, *Charles M. Salter Assoc.*

### Tuesday Morning

#### Session A

#### FILM & ELECTRONIC PRODUCTION II

"Current Broadcast Finance Trends," Robert Bernfeld, *Riviera Broadcast Leasing*

"Film And Video — They Do Work Together — Electronic Tools for Film And Video Production," Al Jensen and D. P. Bird, *Broadcast Television Systems*

"The CCIR Five-Point Grading Scale in Television Quality Control," Heikki Kilpelainen, *Finnish Broadcasting Co.*

"A New Technique to Reduce Video Instability by Digital Processing, Developed by NHK," Toshinari Matsuzuru and Y. Monjyo, *NHK*

"Theaters, Film, and the Electronic Image — New Design Approaches," Boyce Nemece, *Boyce Nemece Designs*

"Shoot in Super-8, Release on Video," Philip E. Vigeant, *Super-8 Sound*

"A New 1-Degree Spotmeter for Measuring Screen Brightness and Set Lighting," Richard A. Walker, Don V. Kloepfel, and James K. Branch, *Spectra Cine, Inc.*

"New Portable Battery And Charger Technology," Anton Wilson, *Anton Bauer, Inc.*

#### Session B — 35mm HDTV TRANSFERS

### Session C

#### ENHANCED NTSC/COMPATIBLE HDTV

"Experiment with Enhanced Quality TV System, Compatible with NTSC," Yosai Araki, Y. Kimata, and Y. Sugimori, *NTV*

"Enhancing Television — An Evolving Scene," John L. E. Baldwin, *IBA*

"Recent Advances in NTSC Signal Processing," Yves Faroudja, *Faroudja Labs*, and Joseph Roizen, *Telegen*

"Transmission of High-Definition Television Pictures Compatible with the X-MAC/Packet Family," F. Fonsalas, P. Hayet and J. Lejard, *Labs d'Electronique et de Physique Applique*

"1125-Line HDTV Can Be Compatible with NTSC," W. E. Glen, K. S. Glen, *NYIT*

"System Concepts for NTSC Compatible HDTV," C. A. A. J. Greebe, *North American Philips Co.*

"Exploring and Exploiting Subchannels in the NTSC Spectrum," Michael A. Isnardi, *David Sarnoff Research Center*

"Optimizing the Encoding Process to Overcome the Major Defects of NTSC

Color Pictures," John P. Rossi, *Intel-Video*

## Tuesday Afternoon Session A

### AUDIO, FILM

"Spectral Recording for Film and Broadcast," Ioan Allen and William Mead, *Dolby Labs*

"Film Optical Sound Tracks — The Move Toward Digital Audio," Herbert Fiala, *Mitsubishi Pro Audio Group*

"The CP-250's: A Dubbing Stage Monitor System," Tomlinson Holman, Brian Kelly, and Gary Kephart, *Lucasfilm*

"New Technology in the Neve V-Series Console," Anthony Langley, *Rupert Neve, Inc.*

"An Improved Theater Sound System," John Mosley and Jack Cashin, *Ultra-Stereo Labs, Inc.*

"The Tapeless Audio Work Station — The Future is Now," Frank Serafine, *Serafine Fx, Inc.*

"Digital Sound Feasibility Study," R. Uhlig and R. J. Cirulli, *Eastman Kodak*

## Session B — 35mm HDTV TRANSFERS

### Session C

### BEYOND THE CATHODE RAY

"Development of the New Generation's CCD Color Camera," S. Ikeda, K. Nagai, S. Yamamoto, Y. Taniji, and R. Dienhart, *NEC Corp.*

"Testing of Component Analog Video," Victor L. Kong and Ed Kiyoi, *Magni Systems, Inc.*

"A New Era in Television Test and Measurement," John Lewis, *Tektronix, Inc.*

"An Overview of Flat Video Display Technology," Koichi Sadashige, *Consultant*

"Operational Experience with a F.T. CCD Camera," Filippus Stok, *BTS*

"New Advances in CCD Imaging," Larry Thorpe and T. Iwasaki, *Sony Broadcast Products Co.*

"The CCD Camera for Field Production Applications," Peter Wonfor, *Thomson Video Equipment*

## Wednesday Morning Session A

### AUDIO, TV

"The Audio Frame Digital Audio Workstation," Glenn T. Edens, *Waveframe Corp.*

"A Method for Recording and Reproducing the Second Audio Program on a Standard C-Format VTR in a Stereo Environment," John Fullwood, *The Fullwood Consulting Group*

"Motion-Picture Sound for Video Productions," Austin Green and Brent Keast, *Cinesound Co.*

"The Use of Video-Style Edit Lists in Audio Post-Production," Walter A. Hickman, *Adams-Smith*

"The Future of Television Audio," Randy Hoffner, *NBC*

"The Built-In Intercom in the Television Camera — Get Serious!" Stan Hubler, *RTS Systems, Inc.*

"Direct-to-Home Digital Audio Broadcasts," David MacCarn, *WGBH*

### Session B

### POST-PRODUCTION II

"A New Approach to Videotape Editor Architecture," Stanley D. Becker, *CMX Corp.*

"The Use of Standard Computer Platforms in Post-Production," Charles P. Clarke, Steven T. Mayer, and Andrew E. Wade, *Digital F/X Inc. America*

"The Electronic Laboratory — A Working Reality," Emory Cohen, *Pacific Video*

"Evolution of Off-Line Edit Decision List Management Software," Lon McQuillin, *McQ Productions*

"The Link Editing System — A New Concept," Arthur Schneider

"Automatic Logging of Editing Information on LaserVision Videodiscs by the Spectra System," Larry S. Spangler, D. Register, and J. Sherbon, *Spectra Image, Inc.*

"Video Recording of Still-Frame Audio and Digital Data," Robert E. Yablonski, *EECO, Inc.*

### Session C

### VIDEO RECORDING

"A Digital Velocity and Amplitude Error-Correction System for Component Time-Base Correctors," Robert L. Bleidt, *For-tel, Inc.*

"Design Considerations for the D-2 NTSC Composite DVTR," Richard Brush, *Ampex Corp.*

"How to Define a Reference Recording for Digital VTRs," B. Eiberger, *BTS*

"Television Video, Audio, and Data Signal Recording: Format Standardization Dreams and Realities," C. Robert Paulson, *AVP Communications*

"Margin Testing of Digital Video Tape Recorders," Richard D. Petit, *Odetics, Inc.*

"Evaluation of Small-Format VTR Performance," Robert G. Thomas, *Capital Cities/ABC*

"Development of All Solid-State Recorder," Jeffry White, Kazuo Kashigi, and Keiichi Hirayama, *NEC America, Inc.*

## Wednesday Afternoon Session A — Open

### Session B

### ES BUS AND PANEL DISCUSSION

"ES Bus, Its Use Within the British Broadcasting Corp.," M. Gleave, *BBC*

"The ES Bus from the Viewpoint of the Applier," Hans-Joachim Goetz, *Bayerischer Rundfunk*

"The 3M ES Bus Machine Control System," Fred J. Hodge and Mark Riley, *3M Co.*

"Expanding the Use of the ES Bus for Station Automation and Remote Machine Control," Douglas A. Hurrell, *Alamar Electronics*

"Future Direction for the ES Bus," Craig McCartney, *Ampex Corp.*

"The One-Man Studio," Rob Saltarelli, *W. Vinten Equipment, Ltd.*

"The ES Bus in an Editing Environment," Karl H. Trissl, *IRT*

### Session C

### POST-PRODUCTION III

"Component Analog Video Color Correction," David E. Acker, *For-A Corp.*

"A New System Architecture for Digital Video Post-Production," Charles P. Clarke, Michael Ogrinc, Steven Mayer, and Andrew E. Wade, *Digital F/X Inc. America*

"Film, Video, and Printing: One World?" Cesare Massarenti, *Mikros Image*

"A Whirlwind Course in MIDI Time Code," Chris Meyer, *Digi Design*

"Techniques for Ultimatte Compositing in Post-Production," Richard Patterson, *Ultimatte Corp.*

"Creative Color Correction in Component and Composite Environment," D. Poetsch, *BTS GmbH*

"Real Time Disk — The Solution to Multi-Generation Video Combining," James M. Seipp, *DSC*

"The Opus Random Access Digital Audio Production System," Brian Zolner, *Lexicon, Inc.*