

128th SMPTE Technical Conference and Exhibit

Friday, October 24–Wednesday, October 29, 1986

Jacob K. Javits Convention Center, New York City

The 128th SMPTE Technical Conference and Equipment Exhibit will be held Friday, October 24, to Wednesday, October 29, 1986, at the Jacob K. Javits Convention Center in New York City.

The conference is under the overall supervision of SMPTE Conference Vice-President Maurice L. French, Canadian Broadcasting Corp., and SMPTE Editorial Vice-President Howard T. La Zare, Deluxe Laboratories, Inc. French has appointed Irwin Young, Du Art Film Laboratories, Inc., as General Arrangements Chairman. His responsibility is to coordinate all of the non-program aspects of the conference and exhibit. On the technical end, Jack Spring, Eastman Kodak Co., and Frank J. Haney, ABC-TV, have been named by La Zare as Program Chairman and Program Vice-Chairman, respectively. The Program Committee also includes topic chairmen Grant P. Ireland, Allied Film & Video (film and audio sessions), and Michael T. Fisher, ABC-TV (television sessions).

New Conference Schedule

The schedule for the 128th Conference has been modified. The conference opens at the end of a week, on Saturday morning, October 25. Following a welcoming address by SMPTE President Harold J. Eady, Novo Communications, Inc., conference keynote speaker Mark L. Sanders will deliver Ampex Corp.'s Special Technical Presentation. Slated for 10:30 a.m., this presentation will mark the official opening of the conference.

Registration

Both advance and on-site registration will be available for the conference and exhibit. Those who register in advance through SMPTE Headquarters, 595 W. Hartsdale Ave., White Plains, NY 10607, can pick up their packets at the New York Hilton, Avenue of the Americas at 53rd St., on Friday, October 24. The advance registration desk will be open from 8:00 a.m. to 5:00 p.m. On-site registration will take place on the second level concourse of the convention center, from Saturday, October 25, through Wednesday, October 29, beginning at 8:00 a.m. each day.

Members are advised to register in advance. Not only will this avoid long lines at the convention center, but reduced rates are offered to all persons registering in advance. To qualify for the special rate (see box with this article), registration forms and payment must be received at SMPTE Headquarters no later than Wednesday, September 24.

Honors and Awards Luncheon

The presentations of honors and awards, which annually recognize both outstanding technical achievements in the industry and distinguished service to the Society, will take place on Saturday, October 25, during a luncheon at the Jacob K. Javits Convention Center (Hall 1D). Dr. George H. Brown, former engineering executive at RCA Corp., who was instrumental in the development of the technology for color television, will be the luncheon speaker.

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

Equipment Exhibit

The equipment exhibit will take place in Halls 1A, 1B, and 1C of the convention center. It opens on Saturday afternoon, October 25, with the ribbon-cutting ceremonies set for 2:30 p.m. The exhibit will run for four days, concluding on Tuesday, October 28, at 4:00 p.m.

The daily hours of the exhibit are as follows: Saturday, 2:30 p.m. to 8:30 p.m.; Sunday, 9:00 a.m. to 7:00 p.m.; Monday, 9:00 a.m. to 5:00 p.m.; and Tuesday, 9:00 a.m. to 4:00 p.m.

Exhibitors may unload freight and set up their booths on Thursday and Friday, October 23 and 24. Equipment may be broken down and reloaded on the following Wednesday, October 29.

This year's exhibit of professional motion-picture and television equipment will likely be the largest in SMPTE history. It is expected that 275 to 300 high-technology companies will participate in the exhibit. Projections indicate that 775 to 800 booths will be occupied. As of the early date of June 30, a total of 226 companies had reserved booth space on the exhibit floor.

The three halls in the convention center which the Society has allocated for the exhibit provide 230,000 ft² of floor space. As a result, the SMPTE is able to offer its exhibitors 60% more space than it was able to provide last year at the Los Angeles Convention

Center. With this increased space, the Society can accommodate last-minute requests from companies. Firms who wish to display professional equipment are encouraged to contact the Exhibits Dept. at SMPTE Headquarters. The telephone number is (914) 761-1100.

Papers Program

The film, audio, and television papers comprising this year's technical program will be consistent with the conference theme, "Today's Technology — Tomorrow's Reality?" They will be grouped under 13 topic headings. A schedule for the paper sessions follows. Note that the sessions run concurrently and, in some cases, there are two sessions devoted to a single topic.

Sunday, October 26

Morning Sessions:

Laboratory Practices/Film and Video I

Computer Applications for Television

Afternoon Sessions:

Archival/Film and Video

Digital Applications for Television I

Monday, October 27

Morning Sessions:

Laboratory Practices/Film and Video II

Television Sound Systems

Afternoon Sessions:

Digital Applications for Television II
Film and Laboratory Technology

Tuesday, October 28

Morning Sessions:

Television Camera Systems

Film and Video Post-Production I

Enhancing the Theater Experience

Program Committee	
Editorial Vice-President	Howard T. La Zare
Program Chairman	Jack Spring
Program Vice-Chairman	Francis J. Haney
Program Topic Chairman (film and audio)	Grant P. Ireland
Program Topic Chairman (television)	Michael T. Fisher

Arrangements Committee	
Conference Vice-President	Maurice L. French
General Arrangements Chairman	Irwin W. Young
Associate General Arrangements Chairman	Philip Godfrey
Hotel Arrangements Chairman	Edward J. Burns
Banquet and Entertainment Chairman	William L. Cooper
Awards/Fellows Luncheons Chairman	Ed Hobson
Display Chairman	Tim Spitzer
Registration Chairman	Irving Rosenberg
Audiovisual and Projection Chairman	Roger J. Salles
Membership Chairman	Guy Beverlin
Hospitality and Information Chairman	Neal R. Pilzer
Opening Films and Tapes Chairman	Arthur E. Florack
PA and Recording Chairman	Earl F. Arbuckle
Facilities Chairman	Charles H. Jablonski
Transportation Chairman	Edward J. Messina
Assistant Auditor	James Hannafin
Spouses Program Chairman	Linda Young

Afternoon Sessions:

Film and Electronic Production I

Enhanced Television Systems I

Wednesday, October 29

Morning Sessions:

Audio: "Talkies" Are Back

Film and Video Post-Production II

Afternoon Sessions:

Film and Electronic Production II

Enhanced Television Systems II

A final technical program listing paper titles, authors, and times of presentation will be available from SMPTE Headquarters sometime in mid-October. The program booklet,

to be available on-site at the convention center, will carry the complete program; all conference attendees can also pick up a synopsis booklet at the convention center.

Program Chairman Jack Spring, whose committee is still evaluating the many technical papers that have been submitted for inclusion in the program, invites inquiries from authors wishing to participate in the sessions. Contact Dollie Hamlin, Editorial/Program Coordinator, SMPTE Headquarters, or Jack Spring at Eastman Kodak Co., 1901 W. 22nd St., Oak Brook, IL 60522; telephone: (312) 654-6872.



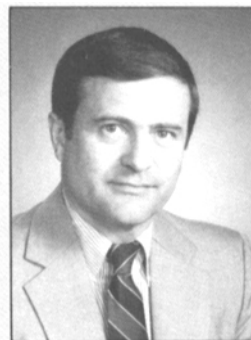
Conference Vice-President
Maurice L. French.



Editorial Vice-President
Howard T. La Zare.



General Arrangements Chairman
Irwin W. Young.



Program Chairman
Jack Spring.



Program Vice-Chairman
Frank J. Haney.

The following papers have been received at Society Headquarters as of July 16, 1986:

Considerations in Designing a New Camera/Battery Mounting System and Charger, Bebe F. McClain, *PAG America, Ltd.*, Asheville, N.C.

HDTV-Compatible Transmission System, William E. Glenn, *New York Institute of Technology*, Dania, Fla.

A New Fuji Color Intermediate Film, Sadayuki Yamaro, *Fuji Photo Film Co., Ltd.*, Tokyo, Japan

The Audio Side of Consumer Videotape Duplication, James Brown, *Sound Engineering Associates*, Chicago, Ill.

Adaptive Equalization Techniques for Digital Video Recording Systems, Seiichi Mita, Morishi Izumita, Nobukazu Doi, and Yoshizumi Eto, *Central Research Laboratory, Hitachi, Ltd.* Kokubunji, Tokyo, Japan

Creative Videodisc Applications Solutions, Paul Mareth, *Projections Co.*, Jersey City, N.J.

A Low-Cost and Extremely Effective System for Taking Camera Negative to the Answer Print, Nigel S. Varian, *Photo Micro Systems Ltd.*, Chinnor, Oxon, England

The Motorcycle Radio-Camera System, Yoshiharu Murakami, T. Yoshitake, and S. Takenoshita, *NHK (Japan Broadcasting Corp.)*, Tokyo, Japan

Techniques for Improving VITS Generators/Inserters to Meet New Demands, Jens Simonsen, *Philips Professional Television*, Copenhagen, Denmark

BVW-105 — New 510-Element CCD in News Camcorder, Larry Thorpe and E. Tamura, *Sony Broadcast Products Co.*, Teaneck, N.J.

New High-Performance Portable Camera — BVP-350, J. Cohen, H. Take, and Y. Kuroki, *Sony Broadcast Products Co.*, Teaneck, N.J.

Soundmaster Syncro — A Programmable Control Center, Robert D. Predovich, *Soundmaster International Inc.*, Rexdale, Ont., Canada

Low and High-Speed Photography with HMIs, Kirk E. Paulsen, *Victor Duncan, Inc.*, Chicago, Ill.

Development of an Eye Movement Analyzer and Its Application to the Study of Quantitative Evaluation of Psychological Effects Caused by HDTV Displays, Tadahiko Fukuda, *NHK*

Science and Technical Research Laboratories, Tokyo, Japan

Designing a Film Mix Theater for Video, Thomas E. Miller, *Universal Recording Corp.*, Chicago, Ill.

All-Solid-State VHF 50-kW TV Transmitter, Kunio Shibata, *Tokyo Broadcasting System, Inc.*, Tokyo, Japan

Random-Access Editing with Special Effects, Jack Behrend, *BHP Inc.*, Chicago, Ill.

3-D Technology: Visibility and Invisibility, William Paul, *Massachusetts Institute of Technology*, Boston, Mass.

Lighting for the Television Camera — A Matter of Balance, E. Carlton Winckler, *Imero Fiorentino Associates, Inc.*, New York, N.Y.

A High-Capacity Data Network for Television Studio and Station Applications, Lyle Keys, *Utah Scientific, Inc.*, Salt Lake City, Utah

A System Approach to Digital Effects in a Changing Environment, Peter D. Symes, *Grass Valley Group, Inc.*, Grass Valley, Calif.

Electronic Cinematography for Motion-Picture Film, James A. Mendrala, San Fernando, Calif.

A Proposal for a New High-Definition NTSC Broadcast Protocol, Richard J. Iredale, *The Del Rey Group*, Del Rey, Calif.

Standardization and Independence: The Context of the Founding Characteristics of the SMPTE, Janet Staiger, *Dept. of Cinema Studies, New York University*, New York, N.Y.

Desirable Changes in NTSC Standard and Practices, Yves C. Faroudja, *Faroudja Laboratories*, Sunnyvale, Calif.

HDTV: The Bottleneck, Yves C. Faroudja, *Faroudja Laboratories*, Sunnyvale, Calif.

Universal Video Signal-Processing System: Aiming at Constructing Flexible Broadcasting Systems, Kazumasa Enami, Keinosuke Murakami, and Nobuyuki Yagi, *NHK Science and Technical Research Laboratories*, Tokyo, Japan

Intercom System for Television, Stan Hubler, *RTS Systems*, Burbank, Calif.

Parallel Component Analog Video Amplitude and Timing Considerations, David E. Acker, *FOR-A Corp. of America*, Newton, Mass.

The Computerization of Television Production, Post-Production, and Broadcasting Operations: Whither It Goest, Thou Must Go!, C. Robert Paulson, *AVP Communications*, Westborough, Mass.

Commercial VCR-Based High-Capability Data Recorder Development Potentials, Koichi Sadashige, *consultant*, Berlin, N.J.

Loudspeaker Directivity Considerations in the Motion-Picture Theater, John M. Eargle, *JBL Inc. and JME Consulting Corp.*, Los Angeles, Calif.

HDTV Bandwidth Reduction by Adaptive Subsampling and Motion Compensation DATV Techniques, Graham A. Thomas, *British Broadcasting Corp.*, Surrey, England

QT M-S New Saticon®: H4228, S. Kato, A. Matsuda, E. Inoue, Y. Takasaki, M. Maruyama, K. Tanioka, M. Kurashige, K. Shidara, and T. Yamashita, *NHK Science and Technical Research Laboratory*, Mobarra City, Chiba, Japan

VAFE — 80-Bit SMPTE Time Code on Film, Rolf W. Mueller, *Arnold & Richter*, Munich, F.R. Germany

The Computer as a Camera Operation and Image Quality Manager, F. J. Van Roessel and E. Tienkamp, *Broadcast Television Systems*, Mahwah, N.J.

Improvement of Dynamic Resolution Using CCD Electronic Shutter, S. Ikeda, H. Nakajima, E. Oda, S. Yamamoto, T. Umise, M. Shimizu, and R. Dienhart, *NEC Corp.*, Fuchu City, Tokyo, Japan

An Electronic Analog to Upright and Flatbed Editing Machines, Stanley D. Becker, *CMX Corp.*, Santa Clara, Calif.

All-Digital Television Transmission from Studio to Home via an Optical-Fiber-Based Integrated Services Network, Manfred J. W. Lange, *Federal Ministry of Posts and Telecommunications*, Bonn, F.R. Germany

The Computerization of Television Server and Distribution Systems — Concepts and Realities in a Customer-Driven Environment, Peter Krawarik, *AT&T*, Piscataway, N.J.

The Computer as a Building Block in a Video Information System, Allen L. Larson, *AT&T Information Systems*, Denver, Colo.

Cost-Effective Sync Pulse Generation Using a Logic Gate Array, Michael Guess and Rich Murphy, *Grass Valley Group, Inc.*, Grass Valley, Calif.

Fellows Luncheon

The Society's new Fellows will be honored at a luncheon that will take place on Sunday, October 26, at 12:45 p.m., in Hall 1E of the convention center. Fellows are 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. A reception is scheduled for 12:00 p.m. Roland J. Zavada, Eastman Kodak Co., will be the speaker at the Fellows Luncheon.

The Society encourages all Fellows and Life Fellows to use the registration form included with this article to order luncheon tickets, as there will not be a separate mailing for this event. The prepurchased tickets will be available at the New York Hilton, Avenue of the Americas at 53rd St., on Friday, October 24, or at the convention center's registration desk on Saturday, October 25, and Sunday morning, October 26.

SMPTE Committee Meetings

The Hilton will be the site for the Executive Committee and Board of Governors meetings. The various administrative and engineering technology committees are scheduled to meet at the convention center. All committee members will be notified in advance of meeting times and places. The complete schedule of SMPTE committee meetings will appear in the conference program, which can be picked up at the main registration area of the convention center.

Spouses Program

The spouses attending the conference will be treated to the magnificent sights and rich culture of New York City. The Spouses Program will run for five days, beginning on Saturday, October 25, and concluding on Wednesday, October 29. Registration will take place on Friday, October 24, starting at 12:00 p.m., at the New York Hilton. The complete schedule of activities will be printed in the program booklet.

SMPTE Banquet

A Banquet, Reception, and Dance will be held in the Grand Ballroom of the Hilton on the evening of Monday, October 27. The reception is at 7:00 p.m. Companies wishing to reserve one or more tables at the Banquet should contact SMPTE Headquarters for the necessary forms.

Sponsored Activities

The conference reception, once again courtesy of Eastman Kodak Co., is set for Friday evening, October 24. It will take place at the Copacabana, the popular New York City night spot on East 60th St., beginning at 6:00 p.m.

Fuji Photo Film, U.S.A., will again arrange a Coffee Club for conference attendees. The coffee and tea will be set up in Lobby 1D of the convention center from Saturday through Wednesday, between 7:45 a.m. and 10:00 a.m.

Other companies and organizations that have agreed (as of June 30) to sponsor activities during the con-

ference are Abekas Video Systems, Inc. (Lounge Area); Ampex Corp. (Conference Program Booklet); Capital Cities/ABC Inc. (Pages); Dolby Laboratories, Inc. (Honors and Awards Reception); Magna-Tech Electronic Co. (Fellows Luncheon Reception); and the Will Rogers Institute (Blood Pressure Clinic).

The SMPTE wishes to thank all sponsors for their generous support.

Hotel Reservations

The Society has an allotment of 1000 rooms at the New York Hilton, 650 at the Marriott Marquis (1540 Broadway), 450 at the Sheraton Centre (Seventh Ave. at 53rd St.), and 100 at the Milford Plaza (270 W. 45th St.). Reservations at any of these hotels must be made on the hotel reservation form which has been sent by Headquarters to all members. (A copy of the form is included with this article.) Those who return completed forms to the New York Convention Bureau on or before September 24, 1986, will receive a special room rate; reservations received after the September 24 cutoff date are subject to availability, and the special rates will not apply.

There will be shuttle bus service available between the Hilton, Marriott, and Sheraton hotels and the convention center.

Association of Cinema and Video Laboratories

The ACVL will meet in Hall 1E of the convention center on Saturday, October 25.

Registration Rates

	Before Sept. 24	After Sept. 24
Weekly: Member*	\$185.00	\$222.00
Non-Member*	225.00	265.00
Spouse*	75.00	85.00
Life Fellow, Life Member*	FREE	FREE
Student Member	FREE	FREE
Student Non-Member	10.00	15.00
Honors and Awards Luncheon (if ordered separately)	30.00	35.00
Fellows Luncheon**	35.00	40.00
Banquet	50.00	60.00

No refunds after October 22, 1986.

* Includes Honors and Awards Luncheon.

** Fellows and Life Fellows only.

Members of the BKSTS, FKTG, SPSE and AES may register at the member rate. Daily registration will be available at the Jacob K. Javits Convention Center during registration hours.

Hotel Rates

The New York Hilton

Single	Double/Twin	Exec. Tower Sgl/DbI	Suite
\$127-137-147	\$152-162-172	\$167	\$340-475

The Marriott Marquis

Single	Double/Twin	Suite
\$132	\$146	Upon request

The Sheraton Centre

Single	Double/Twin	Suite
\$117	\$132	From \$345

The Milford Plaza

Single	Double/Twin
\$70	\$85

8.25% New York City tax to be applied to above prices. Shuttle bus service will be provided only between the Convention Center and the Hilton, Marriott and Sheraton. The rates at these hotels include \$2.00 per night per room which will be used to defray the cost of the shuttle bus service.

128th SMPTE CONFERENCE
 NEW YORK CONVENTION CENTER
 October 24--October 29, 1986

CONFERENCE REGISTRATION FORM

Return this completed form with registration fees (U.S. \$ only) to: SMPTE, 595 W. Hartsdale Ave., White Plains, NY 10607.
 Make check payable to SMPTE. TYPE information requested. Must be received by September 24, 1986 to obtain advance rate.

PLEASE TYPE OR PRINT.

Name _____

Company _____

Business Address _____

Business Telephone (include area code) _____

City _____ State _____ Zip or Code _____ Country _____

Spouse's Name (ONLY if registering for spouse's program) _____

FEES

Check ALL that apply

Weekly:	Before 9/24	After 9/24	Total
Member (includes H&A Lunch)	01 <input type="checkbox"/> \$185.00	06 <input type="checkbox"/> \$222.00	\$ _____
Non-Member* (includes H&A Lunch)	02 <input type="checkbox"/> 225.00	07 <input type="checkbox"/> 265.00	_____
Spouse (includes H&A Lunch)	03 <input type="checkbox"/> 75.00	08 <input type="checkbox"/> 85.00	_____
Life Fellow (includes H&A Lunch)	12 <input type="checkbox"/> FREE		FREE
Life Member (includes H&A Lunch)	13 <input type="checkbox"/> FREE		FREE
Student Member (no lunch)	04 <input type="checkbox"/> FREE	04 <input type="checkbox"/> FREE	FREE
Student Non-Member (no lunch)	05 <input type="checkbox"/> 10.00	09 <input type="checkbox"/> 15.00	_____
Author (day of paper only, no lunch)	14 <input type="checkbox"/> FREE		FREE
Press (no lunch)	15 <input type="checkbox"/> FREE		FREE
Fellows Luncheon (Fellows Only)	<input type="checkbox"/> 35.00	<input type="checkbox"/> 40.00	_____
Honors & Awards Luncheon (Qty _____) (if ordered separately)	A <input type="checkbox"/> 30.00 Quantity: _____	D <input type="checkbox"/> 35.00	_____
Banquet (Qty _____)	B <input type="checkbox"/> 50.00 Quantity: _____	E <input type="checkbox"/> 60.00	_____
Full Table Banquet (Qty _____)	C <input type="checkbox"/> 500.00 Quantity: _____	F <input type="checkbox"/> 600.00	_____
		TOTAL	\$ _____

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 credit towards annual membership (total dues \$50 annually).

Payment (check one):

- Check enclosed Mastercard
 VISA AMEX

Acct # _____

Expir. Date _____

Signature _____

No refunds after October 22, 1986.

Pick up all registration materials at the advance registration desk at the New York Hilton.

PLEASE ANSWER (briefly but specifically):

TYPE of company by which you are employed: _____

Your main RESPONSIBILITY: _____

PRIMARY field (check one): MP TV Other (specify) _____