

Special Events Coverage
Royce L. Pointer
ABC

Video Instrumentation
Scott Schaire
Grumman Aerospace Corp.

Tentative Program Outline

Topics and sessions for the technical program have been tentatively scheduled as follows.

Monday a.m. — Oct. 29
Conference Opening: *Focusing on the Future of Image Technology*

Monday p.m.
Imaging Technology I: *Film and Television Production*

Tuesday a.m. — Oct. 30
Imaging Technology II: *Image Duplicating: Film-to-Film/Tape-to-Tape*

Tuesday p.m.
Imaging Technology III: *Film/Television Interface*

Wednesday a.m. and p.m. — Oct. 31
Imaging Technology IV: *New Technologies in Film and Television*

Thursday a.m. — Nov. 1
Imaging Technology V: *Audio and Projection Practices for Theatrical and Television Display*

Thursday p.m.
Imaging Technology VI: *Post-Production in Film and Television*
Imaging Technology VII: *Graphics and Animation for Film and Television*

Friday a.m. — Nov. 2
Imaging Technology VIII: *Image Technology in Action*

Friday p.m.
Imaging Technology IX: *Panel Discussion — Future Applications of Electronic Technology*

Information about the Arrangements Committee chairman and the exhibits will appear in a future issue of the *Journal*.
— *Rae Hargrave*

SECTION MEETINGS

Atlanta, April 14 A paper on laser-encoded 16mm optical sound was presented by Robert P. Klein, Walter J. Klein Co. He demonstrated the greatly improved response and fidelity obtained on 16mm print with a conventional projector and sound system, compared to the magnetic master track and a comparable conventional print.

E. R. Myler, Eastman Kodak Co., presented two papers: "A Low-Contrast Color Print Film," and "Choosing Eastman Color Negative Film 5247 or Eastman Color High-Speed Negative Film 5294: A Technical Rationale." Both papers were illustrated with 35mm slides and 35mm split-screen motion projection of the negative comparisons. Chris Allen, Production Services, Inc., contributed the 35mm projection equipment.

The meeting was held at the Walter J. Klein Co.'s production and laboratory facilities in Charlotte, N.C. Following the presentations, the 1983 CLIO Award Winners film was shown. — William J. Reddick (Chairman), 4780 Chatworth Ct., N.E., Atlanta, GA 30342.

Chicago, April 10 — Joe Kresnicka, director of engineering, ABC TV, gave a talk on ABC's coverage of the 1984 Winter Olympics. Excerpts from his speech are given below:

ABC sports coverage of the winter games in Sarajevo, Yugoslavia, reached new technical heights. Achieving this took a great deal of time and extensive planning, beginning in 1980.

Few people remember the first Olympic coverage at the 1960 winter games, televised in black and white from Squaw Valley, Calif., with a young Walter Cronkite doing the solo announcing of all the events. It was a far cry from the sophisticated electronic equipment that ABC installed in Sarajevo. There, ABC had its own on-site satellite uplink to send the NTSC signal directly to New York; however, the Yugoslav government prevented

us from using it. The government ruled that the signal had to go to Belgrade via microwave, then to the transponder. In essence, they wanted to control the signal, and our 11-meter dish thus became the backup feed should a signal loss occur somewhere along the path.

What a signal left the ABC broadcast center! Processed by all the wizardry of modern image generation and manipulation, the high visual impact of athletic prowess resulted from such technology as digital standards conversion, frame stores with endless digital effects, and 1-in. helical VTRs that provided variable speed motion in either direction and frozen video frames of the competitors.

Sarajevo is not Lake Placid, the site of the 1980 winter games. Just getting to



Joe Kresnicka (L-center), ABC-TV, discussing his presentation with attendees at the meeting of the Chicago Section.

Sarajevo was a logistical nightmare. At Lake Placid, we were broadcasters to the world. At Sarajevo, JRT, the state-owned Yugoslav network, was the host broadcaster to the world. Controls were tight, and there were frequent disputes. ABC was located in the JRT broadcast facility where it had set up the most comprehensive unilateral coverage of any network in Sarajevo, including JRT's coverage.

ABC paid \$91.5 million for exclusive U.S. rights to transmit 63.5 hours of air time. To JRT's 106 color cameras, ABC added 60 of its own. Seven digital standards converters provided interface between ABC (NTSC standard for the U.S.) and JRT (PAL). ABC had some PAL equipment, and the live broadcasts, on tape, were converted on location. Ten self-contained editing suites expedited satellite broadcast relay back to the U.S., and the final air copy was integrated in ABC's New York studios for airing that same evening. An estimated 188 miles of cable connected the various venues' equipment. More than a dozen digital frame synchronizers stabilized and synchronized the feeds coming into the broadcast center by microwave or cable.

The JRT television center was located a few miles from the old part of the city. The new broadcast center, a multi-level building, was the home of the ABC television operation. A special studio was constructed next to the main anchor control room to serve as the on-air commentary center. In the master control room, all the incoming feeds were correlated and processed. Eight technicians, working around the clock, converted the signal from PAL to NTSC.

Following Kresnicka's talk, he showed a tape that had been extracted from the final day's program. Mike Fisher, Terry Stoller, and Mike Davis, ABC, answered questions from the audience. — Paul Markun (Secretary-Treasurer), Skylite Communications Inc., 625 N. Michigan Ave., Chicago, IL 60611.

Detroit, April 17 — Bruce Keplin, Eastman Kodak Co., presented a dual slide and 35mm split-screen comparison of Eastman Color Negative Film 5247 and Color High-Speed Negative Film 5294. The comparison was presented to aid film users in choosing the film best suited to their purposes. General guidelines were given for choosing the most appropriate film for a number of exposure conditions. The presentation confirmed underexposure as a cause of inherent grain and lack of sharpness.

Two slide projectors and a 35mm projector were made available by John Rusche, Sandy Corp. — Stan Nalski (Secretary-Treasurer), Film Craft Labs Inc., 66 Sibley, Detroit, MI 48201.

Ottawa, March 29 — Marcel H. Clement, National Film Board of Canada, present-



David George, at the podium, introduced the speakers at the Toronto Section meeting.

ed a paper on the Canada Videodisk System. The NFB produced a videodisk to show government departments the capabilities of an interactive videodisk system. This included a presentation on the various originating formats from Super 8 film to 1-in. videotape. Clement demonstrated the system's capabilities using a demo disk, and then showed its capabilities when tied with a microcomputer. Features include subtitle overlay, accurate searching, branching options, and still frame access. He showed examples of programs produced for Unemployment Insurance of Canada and the Department of National Defence for information distribution and training.

Roger Leroux, Sony of Canada Ltd., discussed the incorporation of microcomputers with videodisk technology, saying, "This becomes a visual data base providing instant access to video information." He suggested that film and tape are still the best media for lineary playback. He showed further examples of interactive uses of the disk, and of training programs, using a Sony videodisk player and an SMC-70 microcomputer. The Sony videodisk player is capable of programmable access since it has 5K of memory.

Following a coffee break, Andre Proulx, Optical Art Camera Corp., described the production of B&W hard copies of still video images from any video source, including a videodisk. The Wave-tek Video Hardcopier, he said, uses a fiber optic CRT to produce images on heat-sensitive silver paper. He demonstrated the quality of the image available with this system. — Ross Mutton (Chairman), Carleton University, Colonel By Dr., Ottawa K1S 5B6, Canada.

Rochester, March 14 — The two-part program consisted of the presentation of a paper entitled "Modern Color Photographic Systems" by Michael Kriss, East-

man Kodak Research Laboratories, and a demonstration of the Ampex Digital Optical Systems by David Bancroft, Ampex.

Kriss described the various refinements, developed in past years, that have become the quality standard to which all other imaging systems are compared. Chemistry-based and electronic-based systems were compared, and the relative strengths and weaknesses in final image formation were shown. The image-forming attributes of HDTV and solid-state imaging (CCD) devices were discussed and demonstrated with slides. The rate of high-speed digital imaging processing in future systems, and the potential of hybrid film-electronic systems were discussed.

Bancroft then gave a slide and visual demonstration of the Ampex Digital Optics Systems (ADO), which was used by ABC at the Winter Olympics in Sarajevo, Yugoslavia. He used a current ADO system to display, via TV monitor and slides, the functions of ADO systems. Many unusual effects were accomplished by digital processing and complex interpolation techniques. — R. J. Erskine (Secretary-Treasurer), 168 Vinedale Ave., Rochester, NY 14622.

Rocky Mountain, March 22 — A blizzard was under way at the time of the meeting, but hosts Ron Peters and Kent Gratteau, KWGN-TV, were delighted to see the 25 SMPTE members who braved the storm to hear Brad Lipson, Lighting Services, speak on professional lighting techniques.

Lipson began his presentation with a detailed discussion of the differences and similarities of location lighting for film and television. He demonstrated 2:1 ratio lighting and explained how different lights interact with one another. He also demonstrated how to reduce or increase light by changing light placement, how to increase and decrease shadows, and how to soften shadows.

Following the presentation, he answered questions from the group by relating the questions to some actual lighting problems he has encountered. His answers were practical and helpful. — Donna D. Zingelman (Secretary-Treasurer), Audio Visual Concepts, 558 S. Swadley St., Lakewood, CO 80228.

Rocky Mountain, April 12 — Dave Washington, test engineering supervisor, Ampex, hosted the meeting held at Ampex in Colorado Springs. James Hite and Rick Bowley, Ampex, discussed and demonstrated the VPR-3 and VPR-5 1-in. C-format video recorders developed by Ampex.

Bowley explained that the VPR-5 is the result of a collaborative effort by Ampex and Stephen Kudelski (designer of the Nagra audio recorder). It has all the mechanical, electrical, and technical qualities of the Nagra. The 75 members and guests watched as Bowley stood on the recorder, then swung it around and moved it back and forth. Not only did the recorder continue to play, but it did so without a breakup of the picture. In addition to its sturdiness and reliability, the machine is compact and weighs less than 25 lb. — Donna D. Zingelman (Secretary-Treasurer), Audio Visual Concepts, 558 S. Swadley St., Lakewood, CO 80228.

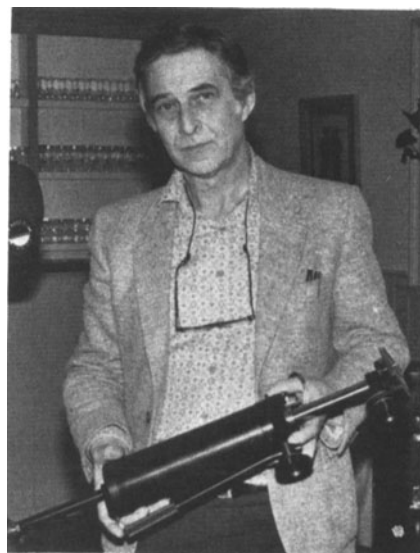
Toronto, February 16 — The meeting, arranged by David George, Imagineering, Ltd., was held at George Brown College. Les Brown, Grass Valley Group, gave a presentation on the component video switcher. Because any coding system, such as NTSC, imposes an indelible "footprint" on the picture, he said, the bandwidth of color components is drastically reduced, and the SNR of the compo-

nents is impaired by the modulation and demodulation process. Alias products are also produced from luminance to color, and from color to luminance. However, by adapting analog component recording, even if the end product is eventually encoded, the following is accomplished: improvement in off-tape chroma key and matting; improvement in chroma-crawl-type edge effects on keys and wipes; and the capability of interfacing almost transparently to digital video equipment.

Brown also described the E-MEM 11, program/preset mixer, downstream keyer insert, and effects dissolve. The switcher system provides test bars selectable on the control panel as an alternate to color background. Facilities are also provided for direct channel measurement and differential measurements to check optimum channel balance.

John Howells, Panasonic, then gave a paper on the Panasonic OMDR, (optical memory disk recorder). Beginning with a brief history of Matsushita's technological development, he went on to describe disk products of various manufacturers. Matsushita introduced the OMDR, a device for the systematic storage and retrieval of pictures on an 8-in. disk with a capacity of 15,000 pictures, or 4000 high-resolution B&W pictures.

The unit has an RS232C port for computer interactive operation. Since it is erasable, using a video camera or any video signal, a real-time recording with instant playback can be made. It employs a semiconductor laser, and needs 0.5 sec to access the correct track by microprocessor control. The heat-sensitive tellurium suboxide film is vapor deposited onto the stamped grooves in the UV polymer layer. This layer stores video signal information in the form of a chain of dots. The OMDR



Maurice Embra displaying the Portamount at the March meeting of the Toronto Section.

was demonstrated following the presentation. — Fung F. Lam (Secretary-Treasurer), Sony of Canada Ltd., 1325 Melton Dr., Mississauga, Ont., Canada L4Y 1L6.

Toronto, March 13 — Innovations in 16mm cinematography was the topic of the meeting, held at the Old Village Restaurant in Islington. Douglas Macaulay, Kingsway Film Equipment Ltd., spoke on the Aaton Datatrack film-to-tape time-code transfer system, tracing its development from the original Aaton clear-time system to its use in 16 and 35mm formats. The robust nature of the checkerboard coding system, which allows the use of inexpensive equipment to decode the information, was emphasized. The small size of the diodes and electronics make it possible to install the system in any film camera. A slide presentation illustrated the compatibility of the Datatrack system with the Super 16 format.

The second speaker, Maurice Embra, Embra Productions Ltd., demonstrated the new Portamount system, a low-cost and efficient means of damping vibration in medium-weight cameras. Originally designed for use in helicopters, the Portamount has been used in cars, boats, and other situations requiring a stabilizing system when use of a larger system is not possible.

Kish Sadhvani, Rank Precision Industries, displayed the new Cooke 10-30 T/1.5 16mm lens. Part of the Cooke 16mm family, this ultra-sharp high-speed lens is designed to replace the standard set of prime lenses, while offering greater flexibility and image quality. Using a lens projector, Sadhvani demonstrated the optical features of the lens, and gave an overview of lens theory and design. — Fung F. Lam (Secretary-Treasurer), Sony of Canada Ltd., 1325 Melton Dr., Mississauga, Ont., Canada L4Y 1L6.



John Howells (foreground) demonstrated Panasonic's optional memory disk at the Toronto Section Meeting.