

Section Meetings

Detroit, January 21, 1992 — Fifty-two members and guests attended the January meeting, where Colin Ritchie, Alpha Images, gave a presentation entitled, "An Introduction to the Dynamic Serial Matrix." He described the decision process and questions that one should ask when planning a digital expansion, such as "Should the system that best suits the application be serial or parallel?" and "What are the limitations and the costs involved?"

The integration of equipment into a current analog system was discussed, and the process of A-to-D and D-to-A conversion, serializing, and deserializing were reviewed. His presentation also covered router control with references to control applications of the router, how a "control system dependent" product can maximize the crosspoint efficiency of a facility, and the system requirements for the facility of the future. After the formal presentation, Ritchie and representatives from several other digital production equipment manufacturing companies gave demonstrations and conducted hands-on sessions for the attendees. The meeting, which was held at The Embassy Suites Hotel, was coordinated by Jorge Alfaro, TV One Corp. — Helge Blucher (Secretary/Treasurer), Pro-Vision, Inc.

Houston, January 15, 1992 — Videoconferencing on T-1 lines was the topic of discussion at the January meeting. Communicating with full two-way video is becoming more common as equipment and facilities proliferate. Southwestern Bell, the host of the meeting, now offers the capability of communicating via T-1 lines in a variety of formats, from 56 kbits/sec (Videophone) to 1.5 Mbits/sec using compressed video.

Greg Batterson, Southwestern Bell, gave a history of videoconferencing on phone lines and compressing video. The presentation covered events that occurred from 1927 through 1992. The major stumbling block, which was standards accepted by manufacturers to allow all codex equipment to communicate with all other codex, was solved in 1990. Differences between proprietary standards and individual vendor's standards still exist, but most equipment can now communicate.

Following the technical and historical explanations, the 20 members and guests were shown a videotape that demonstrated the differences between the various kbit/sec standards, and then given a demonstration of two-way videoconferencing using 1.5 Mbits/sec. — Robert Musburger, (Secretary/Treasurer), University of Houston.

New England, January 22, 1992 — The January meeting, held at Raytheon Co., featured a three-part presentation on multimedia for professional production. The first speaker was Phyllis Cheng, Articulate Systems, who discussed voice recognition technology to execute several complex functions normally controlled by a keyboard. She demonstrated several complex CAD designs and setup procedures, all by speaking simple voice commands.

The second set of presentations was by Chas Porter and Christopher Haff, who represented Cambridge Electronics and the Digital F/X nonlinear video editing system. They demonstrated Paint F/X, Digital Graphics F/X, and Soft F/X, which is a software for editing previously digitized audio and video program material. The demonstrations included the display of live NTSC signals and the digitized RGB Video F/X display on adjacent large-screen projectors. The audience was impressed with the resolution and clarity of the digitized F/X images.

The meeting concluded with a series of presentations by Robert E. Lamm, Cync Corp., who demonstrated the IBM Autodesk Animator Pro, the AT&T Vista, 3-D Studio, TIPS Software, Videomaker Plus software, and VistaVision color correction software. He showed some extraordinary video graphics that were created on very simple personal computer platforms, and

rendered to NTSC images through a variety of inexpensive computer peripherals. — Paul R. Beck (Secretary/Treasurer), Emerson College.

Rocky Mountain, January 23, 1992 — John Newell, Western Cine Film and Video, gave a presentation on film restoration and preservation. He talked about the necessity of preserving archival footage and restoring older films that are rapidly deteriorating. Four restored clips, dating from 1915 to 1925, were screened, followed by a discussion in which several members of the audience expressed an interest in this type of work. The meeting concluded with the showing of a 1933 feature that the company is presently restoring. The meeting, which was attended by 30 people, was preceded by a Greek dinner. — Louise Fujuki (Manager), Western Cine.

San Francisco, January 22, 1992 — In a joint meeting with the AES, the San Francisco Section met at Dolby Laboratories to hear presentations from Ioan Allen and Charles Seagrave, of Dolby, on "Dolby SR•D: A New Audio 35mm Theater-Release Format." The presentations covered a new 35mm format that contains two high-fidelity sound tracks: An SR-encoded analog sound track in the normal



Charles Seagrave, Dolby Laboratories (left), discussing his presentation with a member of the San Francisco Section.

sound-track area and a six-channel digital sound track recorded in the adjacent inter-sprocket area of the film. The new sound track is intended for single inventory release, thus making a high-fidelity audio source available for every theater.

Ioan Allen noted that the new interperforation digital sound track is very robust and not subject to scratches, since scratches tend to be elsewhere on the film. He said that the six channels of digital sound are high quality. He noted that the placement of the digital sound track was considered for the right and left film edges, however this area is already being used for Barco and Eastman Kodak Co.'s Keykode™ system, which is used for editing. Placement of the digital track in the inter-perforation area of the film provides a large-bit recording area that makes the bit virtually immune to scratches. He said that the SR•D is the only film sound-track that has a flat response throughout. A demo film was then shown to illustrate the limitations of the SR•A sound format. During the demonstration, Allen observed that when many sounds occur at once, the sound in the middle of the theater collapses. It was decided to leave the current SR•A alone and add digital as a separate sound source. He then demonstrated the new SR•D format. During the portion of the sound track where several people were speaking simultaneously, it was not possible to separate the voices individually and understand what was being said.

The demo tape included a portion recorded at the San Francisco Airport of a jetliner taking off. The volume was tremendous. However, the low frequency,

high-volume noise did not block up the sound system. At the same time, high frequencies were clearly reproduced.

Charles Seagrave added some technical details to the discussion. He noted that sprocket-hole perforations are 100 mm in width and there is a separation of 109 mm between perforations. Digital sound is recorded in blocks between perforations and each block contains 76 pixels, and is 1.26 mm sq., containing audio image auxiliary data. Each block measures 96×96 mm, centered in an area between the perforations to allow a guard band of 6.5 mm around the data area.

A digital reader head was developed, which is sometimes called Penthouse. It is simply a way of scanning the digital signal and provides a bypass for 70mm film or film without digital data. If SR•D film is passed through the Davis Loop, it provides a means of isolating and smoothing the speed of the film as it goes around the film path. A 75-W halogen projection lamp, which is readily available, is used to illuminate the digital track via a fiber-optical light pipe. A microscope objective lens focuses and scans the digital image onto a CCD and then to the projector. — Vernon L. Kipping (Chairman), Consultant.

Soviet Union, January 28, 1992 — Dr. Alexey I. Vinokur, NIKFI, presented a paper entitled, "Exposure Problems of Color Film Processing in the Laboratory." He described a mathematical model of the color film printing process with an exposure parameter introduction based on a duplication theory of color reproduction.

Within a frame of the proposed model,

there is a formalized description of operations of a positive motion-picture film color and evaluation of installation. The method of nonstop testing of scale photographic control of color film production was described. A classification of exposure tasks occurring during the process of laboratory operation was supplied, including gradation control of additive printers and exposure compensation of chemical-photographic process fluctuations. Algorithms of their solutions were offered. — Eleonora Vinogradova (Chairman), NIKFI.

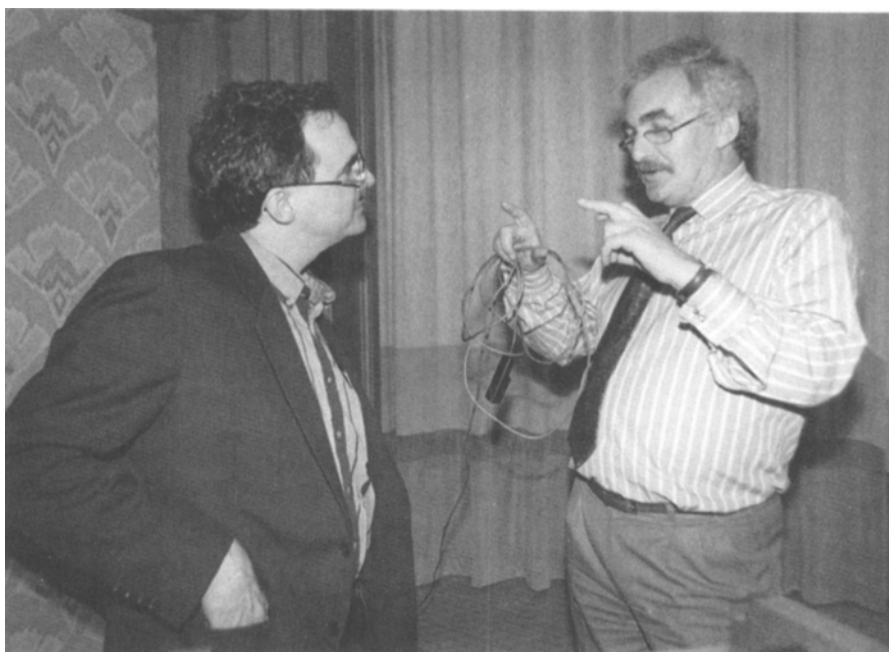
Toronto, January 7, 1992 — The meeting was the section's sixth consecutive satellite-delivered program. As in previous years, the program was made available live, via CanWest's satellite channel on Anik E2 to other participating SMPTE Sections in North America.

The introductory paper was presented by Peter Laidlaw, Imagineering Ltd. The paper, entitled "Digital Smigital — A Primer," provided a brief tutorial aimed at answering two basic questions: What is digital and why are we using it?

He explained the process of converting traditional television pictures into a digital form and then developed models showing the problems of interconnecting digital broadcast equipment, which led to a description and rationale for the increasingly popular serial digital technology.

The second paper, "Digital Yesterday, Today, and Tomorrow," was presented by Michael Robin, CBC. He gave a comprehensive review of the technical and historical aspects of standardization trends in the NTSC and digital television worlds and provided thorough insight into the merits and limitations of the digital standards, as we know them today. Of particular interest was Robin's categorization and summarization of problems of the NTSC, which led the audience to appreciate the merits of digital video.

The third paper was presented by David Fibush, Tektronix. His paper covered the theoretical and technical issues surrounding performance and measurements of the serial bit stream. His talk was supported by a series of graphics that demonstrated the serial digital transmission parameters and showed the practical limitations of the transmission systems in the presence of digital noise and jitter. He described his company's proposal for the insertion of a test byte into the serial bit stream for in-service testing so that other equipment can identify faults appropriately. Of interest, Fibush noted that some of the traditional parameters such as bit error rate were of limited value in this environment and outlined preferred solutions that his company has developed. The evening concluded with questions originating from the audience and by telephone from across Canada and the U.S. — Peter Laidlaw (Secretary/Treasurer), Imagineering Ltd.



Ioan Allen, Dolby Laboratories (right), engaging in an animated conversation with an attendee of the San Francisco Section meeting.