Section Meetings

Chicago
February 23, 2000

The February meeting attracted 25 attendees for a presentation by Neil Neubert. Neubert discussed how JVC engineers developed the D-9 format for HDTV recording. He also reviewed the challenges facing broadcasters as they prepare their facilities for DTV. As part of the presentation, Neubert gave a technical demonstration, which included an upconversion to HDTV from a 50 Mbit/sec source. Those in attendance were able to view this process, make qualitative judgements, and ask several questions about the specifics of the demonstration.—Steve Robinson, Secretary/Treasurer

Detroit
February 8, 2000

The Detroit meeting in February was held jointly with the Audio Engineering Society. Frank Maynard, Section Chair, and Bob Klacza, AES Detroit Chair, welcomed over 40 members and guests to the meeting, hosted by WWJ-TV (CBS) at its studios in Detroit. Pete Sockett, Section Manager and WWJ-TV Assistant Director of Technical Operations introduced the guest speaker, Tim Carroll, Dolby Labs. Carroll is currently the chairman of the ATSC IS-S3 ad-hoc working group on audio and video synchronization issues. He started his presentation with a look at the history of multichannel audio for television and presented an overview of Dolby sound recording technology. He explained how the Dolby Digital 5.1-channel audio and AC-3 encoding format became the ATSC standard for DTV audio, and that it is currently used in DVD, direct satellite distribution, and digital cable television, in addition to its use in movie theaters since 1992. Carroll described how Dolby E was developed to enable distribution of up to eight audio channels, plus metadata, via AES-3 digital audio pairs, or pairs of tracks on VTRs and video servers. The subject of audio synchronization in DTV was discussed in detail, and Carroll described the typical audio plant structures and gave tips on how to ensure normal operation with multichannel audio. A Q & A session followed the presentation.—Helge Blucher, Secretary/Treasurer

Hong Kong
November, 1999

DTTB Systems Debate Forum—Part II, a seminar organized by SMPTE and sponsored by Quantel Asia Pacific Ltd., was held prior to the Hong Kong Section's annual dinner party. SMPTE member Tim Kelly, Television Broadcast Ltd., chaired the meeting and guest speakers Steve Chao, ATSC; Osamu Yamada, DiBEG; and Barry Tew, DVB; provided updated information on the three DTTB systems. Members showed keen interest in the topics relating to single frequency network, mobile reception, and the current status of

The Hong Section meeting in November. Attendees at the DTTB Systems Debate Forum—Part II.

Left to right: Wai-Boon Lenng, Wai-Sting Lo, Kwok-Luen Lam, Tim Kelly, Barry Tew, Steve Chao, Osamu Yamada.

Opening speech by Section Chair, Kwok-Luen Lam, during the Fifth Anniversary Dinner of the Hong Kong Section.

Left to right: Raymond Lou, Wai-Sing Lo, David Lenng, Nigel Watson, Tim Kelly, Kwok-Luen Lam, Wai-Boon Lenng, Wicky Law, Tong Ngai, William Chan, Lawrence Chan, and Neol Lenng.

HDTV in Japan and the U.S. As the technical trials on the three systems had recently been completed in Hong Kong, and the Specials Administration Government would like to make decisions on the system to be adopted in early 2000, discussion was centered on the implementation of them from the theoretical domain to the practical world of system integration.

The fifth anniversary dinner party of the Hong Kong section was held at the New World Renaissance Hotel. The event, sponsored by Quantel, was attended by more than 100 members and guests. In his welcoming speech, Section Chair, Kwok Luen Lam thanked the representatives of ATSC, DiBEG, and DVB for their participation in the seminar on Digital Terrestrial Television Broadcasting (DTTB). He also briefed members on the progress and activities of the Hong Kong Section in the past year. Lam reported that committee members actively involved themselves in the recruitment of student members by visiting educational institutions and talking to students about the functions of the Society. His speech was followed by a short presentation on digital editing equipment developed to meet the challenge of digital broadcasting, given by a representative of Quantel. Video clips produced by Quantel products for television channels in Europe were also screened.—Noel Leung and Wai-Boon Leung, Section Managers

Nashville
October 21, 1999

Joel Embry, Television Systems, Inc., guest speaker for the October meeting, discussed the Telestream system, which allows video, audio, and time code to be sent over various types of data networks. He also spoke about the importance of Clipmail in providing communications for large companies all over the world such as Nissan Motor Manufacturing.—Phil Arnold, Secretary/Treasurer

Nashville
November 18, 1999

The November meeting, held jointly with IEEE, took place at Home and Garden TV station in Knoxville, TN, with 72 people in attendance. A presenter from IPIX demonstrated the company's camera with lens in excess of 180°, developed primarily for use in real estate. This digital software enables the user to take a complete picture with two shots and have a full 360° picture. After the presentation, the group toured the HGTV facility.—Phil Arnold, Secretary/Treasurer

New York
December 8, 1999

More than 75 people attended the meeting at the Museum of Television and Radio to hear four respected speakers talk about what has become a regularly visited topic in the New York Section: the state of the art of telecine. The four major players in telecine each gave a powerpoint lecture. Cintel was represented by Craig Risebury; ITK, Barry Johnson; Philips, Michael Schneider; and Sony, Luke Freeman. Each discussed the core technology of his product and its application in film scanning, both now and in the future. Hot topics of contention were CRT vs. CCD sensors, line vs. field array CCDs, and continuous vs. intermittent film traction. The lectures were followed by a Q & A session.—Bill Topazio, Section Chair

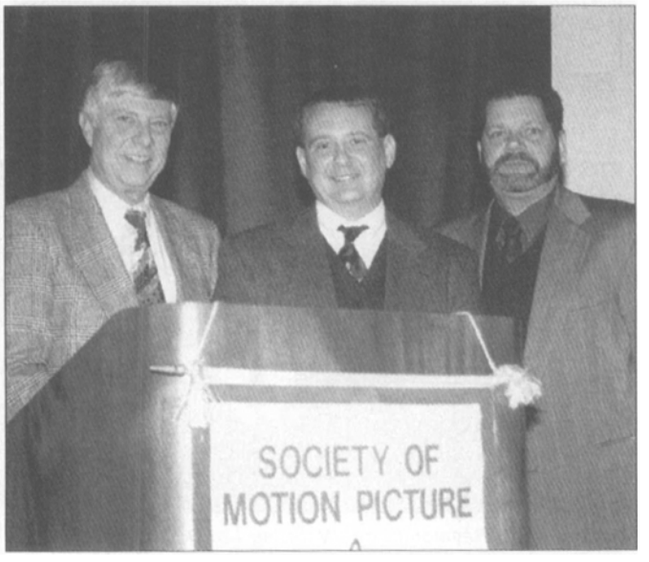
New York
January 19, 2000

Approximately 40 film and television professionals attended the January meeting, presented by Eastman Kodak Co., at the TriBeCa Film Center Screening Room. Chris Wheeler, of Kodak, discussed the technology behind the Vision films, focusing on the 800-speed stock. Wheeler explained the benefits of the tabular grain (T-grain) over conventional formulations and showed the layer structure of the new film, explaining the functions and relative sensitivities of the various layers.

Following Wheeler's presentation, Don Ver Ploeg, formerly of Kodak, discussed the history and current state-of-the-art of machine-readable key numbers (Keykode). Ver Ploeg has been involved with Keykode since its introduction and offered insight into post-production practices that utilize this data effectively. The presentations were followed by a Q & A session.—Bill Topazio, Section Chair

New York
February 16, 2000

The Guild Hall of IATSE Local 600 was filled to capacity for the February meeting. Marty Ollstein, Tiffen Co., and Tom Maier, Eastman Kodak Co., talked about the color-perception aspects of motion imagery. Ollstein began with an overview of the Tiffen Crystal Image software plug-ins for filter modeling. Using a Discreet Logic Flame system, he showed how the plug-ins emulated the entire line of Tiffen color filters. He also showed how they can be graded and "packed" to achieve the benefits of multifilter effects with none of the disadvantages of light loss.



New York Section meeting in January. (l-r) Don Verploeg, Consultant; Chris Wheeler and Bob Strickland, Eastman Kodak Co.

New York February Section meeting. (l-r) Ira Tiffen, The Tiffen Co.; Tom Maier, Eastman Kodak; Section Chair Bill Topazio, Manhattan Transfer; Marty Ollstein, The Tiffen Co.

Maier followed with a detailed and cogent introduction to psychovisual phenomena and human color perception, using the Kodak PreView system as a framework. The many well-presented visual examples and audience participation kept attendees in their seats. The presentations were followed by a Q & A session.—Bill Topazio, Section Chair

Ohio
February 21, 2000

The February meeting was held jointly with the local SBE (Society of Broadcast Engineers) Ohio Chapter at the Wigwam-Columbus Dispatch meeting facilities. With 60 attendees, James Bridgewater, FCC, Detroit, MI, opened the meeting with an introduction to members and discussed the current importance the Commission places on professional societies such as SMPTE, by voluntarily monitoring and assisting in logging their compliance with many of the broadcast standards within their territories. The FCC field staff uses these groups as key reference in the field, when on regular rounds. He related stories of his field experiences in enforcing various FCC regulations and policies, especially with underground, unlicensed low-powered broadcasters. Bridgewater dispelled the myth that FCC field enforcement officers typically break the doors of buildings housing illegal stations and transmitters to gain entry. He assured everyone that they usually "pick" door locks to enter such facilities.

The second part of the program was an interesting Q & A session. Bridgewater stated that many of the inquiries that he receives, as well as misconceptions of FCC Regulations, can be answered on the FCC website.—Gene L. Batey, Secretary/Treasurer

Rochester
January, 2000

WXXI-TV21 provided the venue for the meeting titled, "Digital Microwave Solutions for STL and ENG Applications." John J. Cerquone, CERTEC, Inc., opened the program, presented by Nucomm Inc., by introducing Nucomm's sales manager, Bill Dumm. Beginning with STL systems, Dumm covered the digital modulation formats in use: QPSK, 8PSK, 16QAM, and 8VSB. Nucomm's 3RU Dual Stream Plus DS Series DTV System uses 8VSB to transport both analog and ATSC data at 19.39 Mbits/sec within a single 25-MHz RF channel (6.80 to 7.125 GHz/12.75 to 13.25 GHz). The optional "Flexi-Mod" multiformat modulator allows QPSK, 8PSK, and 16QAM for net data throughput of 30, 48, and 64 Mbits/sec, respectively, with forward-error correction and adaptive equalization.

Dumm concluded his presentation on ENG systems, by discussing the 2-GHz band update issue—specifically, the seven proposed 12.1-MHz channels in docket ET 95-18—hung up over relocation costs and overdue since August 1999. Nucomm, aware of the reduced quality of a 12.1-MHz channel, believes that COFDM will be the standard for ENG and has allied with NEC Corp. to develop systems. Dumm explained the merits of COFDM in modulating Nucomm's MMPT6 Series newscaster digital-ready mast mount ENG/OB transmitter system (1.3 to 15.4 GHz), its PT/RX6 portable tripod mount transmitter and receiver, and its CR6 digital-ready central receiver.—John P. Weiksnar, Section Manager/Membership Chair

Sacramento
February 9, 2000

The February Section meeting was held at the Grass Valley Group facility. Janice Mahon, Universal Display Corp., discussed Organic Light Emitting Device (OLED) technology. OLED is the latest technology for flat panel displays of all types. Of particular interest were the applications for control panel status displays and full-color video displays. OLED has many advantages over LCD displays, including brightness, viewing angle, and projected costs. For full-color video displays, OLEDs provide the ability to stack red, green, and blue light emitters on top of one another, thus, increasing the resolution by a factor of three. Working prototypes of the displays were also shown and received with great interest. Mahon's presentation was followed by a Q & A session.—Jim Blecksmith, Section Manager

San Francisco
January 20, 2000

Sixty members and guests attended a presentation, "Imaging in the Age of DTV and Multiple Video Standards," at the Silicon Graphics Presentation Center in Mountain View, CA. Presenter, Joe Kane, Joe Kane Productions, a noted video monitoring specialist in the science of electronic, began his work at Eastman Kodak Co., and later formed his own company. In 1986, he joined and later became chair of the SMPTE Working Group on Professional/Studio Monitors. That work helped define standards in professional and broadcast picture displays. The SMPTE Working Group challenged Kane to communicate the same message to consumers.

Kane originally chose the laserdisc format as his means of communication and introduced the groundbreaking "A Video Standard" in 1989, which covers color rendition and decoding, audio separation and levels, patterns for testing high-voltage regulation, and many other parameters. That LD and its subsequent LD and DVD versions, "Video Essentials," have been instrumental in increasing consumers' awareness of video monitoring in both equipment manufacturers as far as the need for presentation standards.

Kane discussed the video monitoring process for analog and digital television. In a world of MPEG encoding/decoding, the old color-bar pattern has little meaning as we see new distortions of motion vectors, color space transformations, sound/video sync, etc. How do we evaluate quality through these new convoluted paths in terms that represent what a viewer sees and judges to be "excellent" or only "fair" or even worse?

According to Kane, the existing NTSC system is a producer's palette that only works if everyone adheres to a fixed standard in producing and reproducing video signals. A similar situation exists with DTV; its many potential scan rates are going to be better received in the future if a device's rate of the display is set up for its best capability, independent of any incoming signal or aspect ratio. All incoming signals, including those from computers, should be converted to the progressive rate best suited for an individual display device, something that would be required for all fixed array display devices and also enhance CRT images. Technology exists today to accomplish such "adaptable" scan rates, with two or three high-quality processors already available. More should appear in the next six to twelve months. Aspect ratio conversion will be included to handle input being run through a fixed-rate output converter.

Kane said he hopes the digital era will bring a new way of thinking, as far as displaying images. The ATSC Table 3 addresses only the picture rates of 24, 30, and 60, while in the world of "bit buckets," any rate is fair game. Super high-resolution images could be sent at just a few frames per sec in non-realtime, perhaps overnight, while low-resolution images might be sent much faster than realtime. The digital era will hopefully force us to re-think the technology of conveying images. "Digital" means conservation of bandwidth or a more efficient use of bandwidth. Kane looks forward to the idea of using only as much bandwidth as needed to properly convey any given digital message.

Achieving the full potential of our digital system will take some time, he said. Not all of the technology is yet in place. We will witness many steps forward, and