

Section Meetings

Chicago June 24, 1997

Over 200 guests attended the final meeting on the 1996-1997 program schedule, a joint effort of the SMPTE, SBE, and ITS Chicago chapters held at WTTW-TV in Chicago. The purpose of the gathering was to discuss the various issues facing the industry during the preparation for and implementation of advanced digital television, recently approved by the FCC. A keynote presentation was given by Larry Thorpe, Sony Electronics, who stressed that a real advantage of HDTV is that it offers a significant increase in the number of pixels per frame, thus providing a superior format for the composition of pictures. Slides were shown of scenes shot in HDTV aspect and resolution, but were masked off to represent normal TV framing. As these slides were shown, first in standard NTSC, then in 16:9 SDTV, and finally in HDTV, a dramatic improvement was noticed. Thorpe encouraged broadcasters to move toward 16:9 SDTV as soon as possible.

The program continued with a panel discussion among engineering representatives from several Chicago television stations and cable operations. Each participant provided insight to his or her particular concerns, the largest of which was the lack of a suitable site for the ATV antennas. Other universal needs were switching video/audio streams, key bugs, and inserting voiceovers for emergencies.

Finally, a panel of marketing representatives from broadcast equipment manufacturers discussed projects presently dealing with the issues of manipulating the compressed MPEG-2 stream in ways familiar to traditional video. As the meeting ended, all agreed that there were interesting times ahead for meeting the challenges.—Steve Robinson (Secretary/Treasurer), Serial Scene

Detroit June 19, 1997

Section Chair Rudy Kryger opened the meeting by introducing section officers and announcing the results of the election for 1997-1998. Then Ben Stone, Kodak, announced his transfer to New York and introduced Pamela Zeh, the new area sales representative who will be based in Chicago.

Zeh presented slides explaining some of the technical features of Vision II film stocks V200T and V250D, balanced for tungsten and daylight respectively. She said that the new films have many of the same attributes as the 5/7293 and 5/7297 films that they are replacing, but with better tone



Sue Zygo addresses the Detroit audience during the June meeting.

scale and color reproduction, wider latitude, and more detail. Color saturation and sharpness have been improved, along with image structure and grain, the result of more uniform grain thickness.

Two 35mm demonstration films were shown. The first was produced by Kodak in Hollywood from scenes shot by various professional cinematographers and was intended to demonstrate the attributes and capabilities of the new films in a theatrical sense. The second, introduced by Sue Zygo, Project Leader for Vision II films, was a technical demo shot by Kodak cinematographers and assembled by the Vision project development team in Rochester. It was more technical, including A/B comparisons between the new films and their predecessors. Zygo continued the technical discussion and showed a third film, a 35mm print of footage shot with the 16mm version of the new film stocks. All three Kodak representatives answered questions from the 24-member audience. A drawing for two Kodak Cameo cameras was then held.—Frank Maynard (Secretary/Treasurer), WKBD-TV

Nashville June 27, 1997

The meeting, held at WSMV Studios, Nashville, was opened by Section Chair Mike Quinn, BTS Broadcast Television Systems, who introduced speaker Aldo Cugnini, Philips Broadcast Television. Cugnini presented information on DTV and what engineers and managers can expect in the future. As a member of the ATSC, Philips Research played a key role in the development of the new digital transmission standard. Cugnini discussed the DTV standards, NIST video acquisition for DTV, and some methods for distribution of the new format throughout the broadcast facility. He gave an excellent presentation,

SMPTE SECTION CALENDAR

Hong Kong

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Dates for future meetings

November 1997: MPEG-2

Rocky Mountain

For further information contact Section Chair Fred Baumgartner, TCI, tel: (303) 486-3946, fax: (303) 486-3891

Dates for future meetings

September 17, 1997

Facility tour, KCNC Television

October 15, 1997

The Challenges of Wiring for Digital
Speaker: Dave Geon, Belden Wire Cable

November 19, 1997

Video Preprocessing for Compression

San Francisco

For further information contact Section Chair Charles Hintz, KTVU Partnership, Inc./Fox, tel: (510) 874-0290, fax: (510) 272-9957, e-mail: CHARLESinCA@aol.com, Internet: <http://members.aol.com/SMPTEsf/seminars.html>

The 1997 San Francisco Section Second Saturday Tutorials

September 13, 1997

Digital Audio and Compression

October 11, 1997

Growing into MPEG

November 8, 1997

Living with MPEG-2

All times are 9:30 a.m. to 4:00 p.m. Seminar 2 will be at Dolby Labs, 100 Potrero Ave., San Francisco, Calif. Seminars 3 and 4 will be held at Stanford University, Gates B-01 Computer Science Classroom, Palo Alto, Calif.

To publicize your Section events, please send announcements to SMPTE Headquarters, 595 W. Hartsdale Ave., White Plains, NY 10607, tel: (914) 761-1100, fax: (914) 761-3115, e-mail: edit@smpte.org. Information must be received by the 15th of the second month preceding issue date (e.g., September 15th for November issue).

discussing why bit stream splicing is difficult; buffer underflow and overflow; and ongoing research to produce graphic stations, fades/wipes, and mixers capable of handling digital television.

Great interest and concern was expressed during the question-and-answer segment regarding the use of traditional broadcast operating procedures when applied to the present DTV abilities. Cugnini provided Web site information to the group, encouraging them to contact the organizations

listed for ongoing developments and to become more involved in expressing the requirements of the broadcast community.—Tom Hoffman, (Secretary/Treasurer), The FilmWorkers Club/Nashville

Ohio May 29, 1997

Joseph S. Balkin, NBC, New York, an expert in the field of high-definition digital TV was well received by the more than 50 attendees at the May meeting; audience participation was very lively. The meeting was presented in cooperation with Chapter 52 of the Society of Broadcast Engineers, and the hosts for the evening were Gene L. Batey and WCMH, Columbus. Visitors demonstrated an interest in joining the SMPTE.—David Prince (Chair), Prince & Associates, Inc.

Sacramento March 19, 1997

David Hoogendyk, Tektronix/Grass Valley Products, gave a presentation on fiber-optic transmission technology. Topics included an optical fiber overview and a discussion on loss budgeting, single mode versus multimode, various kinds of dispersion, connector types, etc. He also discussed optical sources (how the laser diode works) and detectors, and various transmission techniques.—William Carlquist (Secretary/Treasurer), Tektronix, Grass Valley Products

Sacramento May 21, 1997

Peter Symes, Tektronix, Grass Valley Products, presented a "first person" timeline of how we came to have the recent DTV system adopted in this country. What a bizarre process! The audience was spellbound hearing about the politics, simulations, tradeoffs, prototyping, testing, cajoling, etc., that led us down this path. Symes also covered the technical concepts and details of the various schemes proposed. Among the 52-member audience were people from the TV manufacturing industry, production community, and broadcasters (including PBS), as well as several foreigners (from six countries) in town for training. The most common question was "why?" All agreed this was an excellent meeting.—William Carlquist (Secretary/Treasurer), Tektronix, Grass Valley Products

San Francisco June 26, 1997

Jeff Cree, Sony Acquisition Systems, San Jose, Calif., spoke to a gathering of 60 SMPTE members and their guests on the ramifications of the DTV mandate by the FCC and its effect on image acquisition technology. Cree, a rare combination of video design engineer and program producer, discussed DTV imaging issues, both in theory and in practice.

The Sony DTV meeting, hosted by Silicon Graphics, Mountain View, Calif., was the first in a series of SMPTE monthly presentations covering various aspects of the transition to all-digital television and what the change will mean to video engineers and program producers.

DTV's MPEG-2 delivery system supports multiple scan standards, resolutions, and aspect ratios, including standard-definition 4:3 (704 x 480), standard-definition widescreen 16:9 (1280 x 720), and high-definition widescreen 16:9 (1920 x 1080). After an overview of the FCC's requirements for DTV transmission, Cree discussed the program origination process. Along the way, he identified how the DTV specification is not really a standard, but offers guidelines for the broadcaster delivering digital information to the public.

He pointed out that, armed with these guidelines, each broadcaster will need to make many decisions in the upcoming months that are more related to business and economic issues than to technology. These issues include broadcasting a mix throughout the day of standard-definition 4:3, standard-definition widescreen, and high-definition widescreen video, along with simulcasting NTSC analog well into the future.

The show concluded with an overview of Sony's imaging products and strategies to support the many choices that broadcasters and producers face, including camera systems that offer simultaneous NTSC analog and widescreen digital outputs. —John Hartwell (Manager), Sony Electronics

News

The Digital Video Broadcasting Project (DVB) has issued the DVB blue book, "Implementation Guidelines for the Use of MPEG-2 Systems, Video and Audio in Satellite, Cable and Terrestrial Broadcasting Applications." This specification allows for both standard-definition (SDTV) and high-definition television (HDTV), optimized for both 50-Hz and 60-Hz countries.

The new blue book was produced by the Technical Module of the DVB Project, to commercial requirements issued by the DVB Commercial Module, and has been approved by the DVB Steering Board. It now goes forward to ETSI for publication as a revision to ETR 154.

The Implementation Guidelines detail the MPEG-2 parameters that baseline SDTV and HDTV decoders should support. As before, the baseline SDTV decoder is based on MPEG-2 Main Profile at Main Level (MP@ML). The HDTV baseline decoder uses MPEG-2 Main Profile at High Level (MP@HL), ensuring backwards compatibility with existing DVB/MPEG-2 bitstreams.

While the DVB MPEG-2 data container gives a flexible range of service options, the Implementation Guidelines recommend that HDTV broadcasters use the so-called common image format (CIF) proposed by the ITU and DAVIC (i.e., 1080 lines by 1920 pixels). They also detail the implementation requirements necessary for integrated receiver-decoders (IRDs) to be used in countries which for historical reasons have either 60 Hz or 50 Hz field-refresh rates.

When HDTV broadcasts are directed towards populations of DVB-compliant IRDs of which some are not HDTV-enabled, the DVB Implementation Guidelines recommend multiplexing SDTV program streams into the MPEG-2 bitstream alongside the HDTV program, in an approach known as simulcasting.

Panasonic Broadcast and Digital Systems Co., an SMPTE Sustaining Member, was presented with a 1997 Primetime Engineering Award by the Academy of Television Arts and Sciences

(ATAS) for the development of the AJ-LT75 laptop editing system. The award, recommended by the ATAS Engineering Awards Committee, was presented at a luncheon on July 10, 1997, as a preliminary part of the upcoming 49th Annual Primetime Emmy Awards. ATAS cited the AJ-LT75 for "its small size and weight, which represents the equivalent of an entire field edit in a pack that can fit under an airplane seat."

UCLA Extension is offering "Project Management Principles and Practice," a course designed for project managers and personnel, functional managers whose staff participate in projects, and executives to whom project managers report, to be held October 7 to 10, 1997. The course will develop insight into the special characteristics of projects and the tools and techniques needed to manage them. Topics include the nature of project management; the importance of end-item focus, careful planning, appropriate control, open and timely communication, and interproject