



SECTION MEETINGS

Hollywood March 2009

The Hollywood Section meeting on March 24, entitled “**White Gamut—It’s Not Just for Polar Bears,**” was held at the Motion Picture Academy’s Linwood Dunn Theater with more than 90 attendees from SMPTE and the American Society of Cinematographers. A reception in the theater’s lobby preceded the program. Section Chair Paul Chapman began with announcements, then Membership Coordinator Beverly Pasterczyk described the new SMPTE membership categories available.

Speakers Rod Bogart and Rick Sayre of Pixar gave an entertaining and informative presentation, first providing a brief history on the issue of projector white gamut, and what steps were taken to investigate. They explained that during the 2K/4K comparative sessions held at the Entertainment Technology Center, unexpected differences in color were noticed between 2K and 4K projectors. Further investigation revealed consequences of a direct implementation of the minimum gamut of the DC28 reference projector, causing clipping of all white points except calibration white.

Bogart and Sayre provided a summary of the findings of the SMPTE White Gamut Study Group, which resulted in a set of recommended revisions to the DC28 Reference Projector document RP 431-2. They also described an informal survey that was done on digital cinema projectors and explained how proposed changes would affect the performance. Several demonstrations made during the presentation illustrated the effect of potential clipping that can occur without the proposed changes. They showed that the proposal better preserves the color gamut for both film and digitally-originated material, and that an artistically chosen white point can be maintained from mastering through exhibition.

Dan Sherlock, from the Academy of Motion Picture Arts and Sciences’ Science and Technology Council, presented a demon-

stration on the new SMPTE Digital Leader and explained that it provides the critical verification of sync between sound and picture and offers a wealth of features to verify proper image presentation. It helps with setting screen masking, verifying projector color space and white point settings, evaluating the quality of projector rescaling and filtering, and checking the stereoscopic phase.

A short Q&A session followed the presentations. The meeting concluded with Pixar’s short film *Presto*, presented on a Barco 2K projector set-up with the new virtual white calibration. —Paul Chapman, Section Chair

Hong Kong May 2009

In an education alliance between the SMPTE-Hong Kong Section and the Institute of Vocational Education (IVE), under a special education project titled “**Apply Learning (APL),**” 268 students joined SMPTE student membership recently. The APL project was initiated by the Education Bureau in Hong Kong and executed by institutions such as IVE, which is a member

of the Vocational Training Council (VTC), one of the largest education institutions in Hong Kong. One of the goals of APL (video media production) is to inspire teenage students to observe, imagine, create, comprehend, and organize, via the process of making short (video based) films.

The first participation of the SMPTE/APL project took place on May 23 on IVE’s Kwun Tong campus, where senior film industry/academic speaker, Stephen Lam, was invited to speak on the concept of film appreciation/critics etc., to inspire teenage students (under APL) to explore filmmaking from a professional perspective.

Lam is a senior professional in both the film and academic world of Hong Kong. He was a lecturer in the Academy of Performing Arts (APA) school of TV and cinema and is currently a senior member of the Hong Kong film critics association. Lam, who initially studied psychology, asked students to find out what they thought might be of interest to them. He said that filmmaking needs new filmmakers with new ideals. Lam told students that the goal of a director is to make films that touch people’s heart as well as their own.



Stephen Lam addresses students at the Hong Kong meeting in May.

Lam also showed footage of both contemporary and past selected film works to illustrate his speech. Students were eager to explore their options and gain a better perspective in areas where they had not originally considered. —Tony Ngai, Section Chair

Hong Kong June 2009

Hong Kong Section Manager Raymond Lai represented the Section at the BroadcastAsia2009 in Singapore, held on June 16-19. The annual four-day conference and exhibition at Singapore Expo encompasses BroadcastAsia2009, CommunicAsia2009, InteractiveDME, EnterpriseIT, and CG Overdrive.

Rear-Admiral Lui Tuck Yew, Acting Minister for Information, Communications and the Arts, addressed attendees at the opening ceremony. In his speech, Yew remarked that Singapore is striving to turn the Lion City into a vibrant media center, “the Next Generation National Broadcast Network (Next Gen NBN), is expected to achieve nationwide coverage of high-speed broadband services by 2012,” he said.

Despite the global recession, more than 600 exhibitors participated at the event. An array of products and technologies in the broadcasting market were displayed including broadcast-to-handheld/mobile TV, digital media asset management, high-definition technology, IPTV, mobile broadcasting, and professional audio technology. 3D technology was also a focal point, with the introduction of stereoscopic recorders and



Section Manager Raymond Lai stands next to SMPTE booth at BroadcastAsia2009 in Singapore.

3D LCD displays and projection by various companies. The event also included workshops in 3D workflow, exploring many facets of 3D concept and effects. —Raymond Lai, Section Manager

**GET THE
STORY.
OR WATCH
SOMEONE
ELSE
REPORT IT.**

NOTE TO SELF: LOWER YOUR COST.

Competition fuels the news business. It's get or get out. So give your team an unfair advantage: Streambox. Instead of rolling ENG/SNG trucks, broadcasters can deploy a scalable IP-based solution that helps you move more content faster and at a lower cost. Go live-to-air, edit the story for later broadcast, or feed video to websites and affiliates. Call us to schedule a demo.

Streambox
Innovation is in the box™

Learn more at www.streambox.com
or call +1.206.956.0544 ext 3.



Thomas Bond provides technical overview of new digital projection system.

Rochester April 2009

Bob Russell, executive director of The Little Theater, began the meeting on April 16 by extending a warm welcome to all attendees. Russell expressed his excitement in having a SMPTE Section meeting at The Little Theater and a chance to showcase the theater's new digital projection system.

After brief comments, Section Manager Ricardo Figueroa introduced Thomas Bond, vice president of technology for the Entertainment Experience Inc., who gave a **technical overview of the digital projection system at The Little Theater**. Bond's presentation focused on some of the technical aspects of the system, including projector and player, as well as a description of the sector of the market for which the system had been designed. He stated that Entertainment Experience tailored their digital projection system design for smaller venues focused on showing special events such as operas and sports, as well as independent theaters and schools that demand high-quality imaging but do not require Digital Cinema Initiative (DCI) compliance as do large movie theater chains.

Bond's presentation was followed by a Q&A session. The meeting concluded with a screening of one of the scheduled featured digital movies at The Little Theater that evening. The Little Theater provided

admission tickets to attendees who wanted to stay and watch the feature. —Ricardo R. Figueroa, Section Manager

Rochester May 2009

Ed Stratmann, branch manager and associate curator of the Motion Picture Collection at Eastman House, presented the Rochester/Kodak screening night on May 29. The screening, which has become an annual event, included *Tompkins Boy's Car* (1922), a 16mm black and white, silent, reversal positive, new GEH preservation, dupe negative, print on 16mm; *A Kodak Honeymoon* (circa 1920), slightly incomplete, copy vintage mid-1920's, black and white, silent, 16mm positive; *The Kodak Dye Transfer Process* (circa 1950), 16mm sound Kodachrome reversal; and two Kodak commercials (circa 1970), 35mm color sound vintage positives. —David Long, Secretary/Treasurer

a **NEW** world of time code *for SD & HD video*



The ESE HD-488/SD Time Code Reader, Generator and Inserter

ESE introduces a new world of flexibility and features for time code with the HD-488/SD Time Code Reader, Generator and Inserter for HD and SD Serial Digital Interface video.

- *Generates/Inserts Time Code • USB Setup Interface • User Friendly Control*
- *Universal Power Supply (90-264 VAC) • Accepts Multiple HD Formats*
- *Time Zone Offset • LCD Setup/Status Display • Dual LTC Output*



142 Sierra Street
El Segundo, CA 90245 USA
Tel: (310) 322-2136

www.eseweb.com

San Francisco April 2009

Are traditional video and broadcast engineering jobs disappearing? Increasingly stable and easy-to-use equipment is reducing the need for installation and maintenance in call-letter, network, and facility engineering departments. The traditional role of the engineer continues to change as never before. Engineers used to offer their employers the combined talents of repairman, inventor, and operator, but, increasingly, studio and transmission operations require only part-time babysitting.

A generation ago—that's only the mid-1980s!—network and station engineers could still be called a special breed, while the IT people downstairs usually did unexciting work such as payroll. Today, many IT specialists handle all video and audio ingest, storage, and transmission tasks. The “computerization” of operations, along with the steady advance of Ethernet and Internet protocol networking and file-based media, are rapidly changing the skill-set of the traditional, over-the-air radio frequency broadcasting and satellite/cablecasting engineer, requiring radio frequency and video experts to become IT specialists as well.

In a presentation titled, “**Who's Your Daddy? Television Engineering's Past, Present, and Where We're Heading as Career Engineers,**” John Hartwell, SMPTE-SF manager, offered a unique perspective, based on his decades of dealing with engineering change. Hartwell began his career in a small market TV station in northern California, later taking a position as a maintenance/production engineer at KQED in San Francisco, then moving into video system design and integration. Hartwell spent 14 years managing projects and designing state-of-the-art facilities.

Steve Goze, a faculty member at Napa Valley College's Broadcast Television Engineering Technology program and SMPTE Student Chapter 11 advisor, attended the Section meeting, along with several Napa Valley students. Napa Student Access TV president, Michael Calpo joined Hartwell during a Q&A session on how engineers can “future-proof” themselves in the face of technical change and stay in the new game. Calpo offered the perspective of to-

day's student just entering the broadcast, video, and imaging fields, facing rapidly changing business models and working conditions.

The meeting was videotaped by Tim Erskin for later on-demand viewing on the Internet. —Peter Hammar, Section Chair

San Francisco May 2009

Engineers often choose technology for its own sake, perhaps because of the desire to build the pure and perfect system. The evolution of digital technology and the migration of storage from isolated videotapes sitting on library shelves to centralized shared servers—contrasted with increasingly distributed production—means thinking more in terms of workflow than equipment.

The meeting on May 28 at the San Francisco headquarters of Current TV (www.current.com) provided attendees a case study

of how the system design and technology in building Current's network were driven by a unique business model for cablecasting.

Joe Maidenberg, vice president broadcast and production technology, described Current TV's design, operation, and future plans. His presentation showed how the company's business model continues to drive its technical requirements and how the network's architecture has been instrumental in expanding into cable markets in the U.S., the U.K., and Italy.

Current TV first went on the air in the U.S. in August of 2005 with the concept of “a television network created by the people who watch it.” Current's viewers now produce as much as 60% of all programming content, which is first posted in low resolution on the company website so fellow cable viewers can vote on what they want to watch. Current pays the winners fees in exchange for copyrights.

In March 2007, Current expanded its reach with a cable channel in the U.K., and



Extra Value for the Digital Age™

FOUR CHANNEL HD-SDI CAPTURE CARD

- Quad channel PCI Express input card
- For ingesting HD streams for storage and editing



4 Channel HD-SDI PCIe Input Card

DELAY SATELLITE FEEDS ACROSS MULTIPLE TIME ZONES

- Simultaneous capture and time-delayed playback of MPEG-2 transport streams
- DVB-ASI in and out
- Schedulable from milliseconds to weeks



TS Time Delay

SINGLE CHANNEL MULTI-STANDARD HD/SD-SDI I/O CARD

- Input card converts to Output card, & vice-versa
- Linux® and Windows® support



1 Channel HD/SD-SDI PCIe LP Input or Output Card

CAPTURE AND ANALYZE ASI OR CABLE TS ON A LAPTOP

- MPEG-2 transport stream recorder for monitoring or testing
- Full TS analyzer
- Forwards captured TS over IP -- UDP, Unicast, or Multicast



ASI & RF-C Recorders/Analyzers

8VSB TO IP GATEWAY

- Simultaneously receives transport streams from 1 to 4 8VSB stations
- Multiplexes transport streams into IP packets
- Supports MPEG-2 and H.264 input and output, in SD and HD format



8VSB to IP Gateway

MPEG-2/4/H.264 HD DECODER & FREQUENCY AGILE SATELLITE RECEIVER

- Demodulates all satellite frequencies
- Decodes both H.264 and MPEG-2 video formats to HD-SDI or YPrPb
- Input: DVB-S+S2, DVB-ASI
- Output: Composite, HD-SDI, DVB-ASI



Decoder/Receiver

For more information on any DVEO products, call 858-613-1818 or visit www.dveo.com. **IBC Stand 2.C33 Amsterdam**





in February 2008 launched a third cable outlet in Italy, while maintaining a centralized workflow in San Francisco—the heart of its business model.

Stephane Savard, consulting engineer (www.SavardFaire.tv), also provided an audience-interactive overview of how Current TV was built, the challenge of a short design/construction timeline, and how they coped with “bleeding edge” technology. Savard pointed out that all network packet routers are not “created equal” in implementing what a video engineer would consider as a basic requirement: “quality of service.”

An edited, on-demand version of the event will be available on www.smpte.org. —John Hartwell, Section Manager and Meeting Organizer

Toronto May 2009

The May meeting for the Toronto Section has traditionally been the **NAB wrap-up**.

This year’s event, moderated by Canadian Governor Paul Stechly included an enthusiastic group, who came out to hear the comments of a cross-section of industry professionals representing an array of industry perspectives.

The meeting began with the customary open mic session of industry observations, which included Micro Holographic Media, ABC’s entry into Hulu, and progress with the DTV transition.

Chris Bell began the NAB observations summary, noting the re-invention of the MPEG-2 encoder. He commented on the practice of broadcasters providing feeds in MPEG-4, which ends up being transcoded to MPEG-2 at head ends. Bell was particularly interested in the appearance of Dolby E processing being licensed in software for the first time and how that will help with workflow as well as lip sync and audio developments.

Lane Steinhauer noted that equipment power consumption and savings has be-

come an important issue with manufacturers and discussion about power savings has become mainstream. He also commented on how much the quality gap was closing between lower and high-end cameras and the increasing presence of mobile TV applications at NAB, commenting that in their experience more than 60% of those under 30 in his market have adopted mobile TV.

Dave Simon discussed the transition to digital broadcasting in radio and the HD audio format. He also noted bumps in that road, with signals working well outdoors but having difficulty penetrating buildings. Also evident was the move to IP codecs replacing ISDN, and Google’s decision to get out of the radio market, which causes concern for the thousands of stations using their automation products.

Emil Tchoukalesky found it particularly noteworthy that there were 70 first-time exhibitors at NAB, with the majority related to post-production, 3D, and storage in particular. He noted the increasing differ-

Engineers: How to be Ready for HD and 3Gb/s

When rack space is at a premium and you need a **solid sync pulse generator** with every signal imaginable – HD, 3Gb/s, SD, time code, AES and more – look to the new BrightEye 57 from Ensemble Designs. Source ID Slates and Cyclops (a nifty moving element in the test signal) help you identify your sources and check that nothing is frozen in a frame sync somewhere in the signal chain. Plus you can **create custom test signals** and load them into the front of the unit with a convenient secure digital card.

Currently used in remote trucks, broadcast, news helicopters and flight packs world-wide, BrightEyes are rugged and reliable.

- **HD, SD, 3Gb/s, composite, AES, Tri-Level Sync, time code outputs**
- **Reliable and Easy-To-Use**
- **USB and front panel control**
- **Create custom test signals**
- **5-Year Warranty**



ENSEMBLE
DESIGNS

PO Box 993 • Grass Valley, CA 95945 USA
Tel 530.478.1830 www.ensembledesigns.com



Call us today for a hands-on demo.

ence between broadcast and digital cinema cameras, with the latter capturing full image data, much of which would be brought out later in the post-production process. His particular focus this year was 3D, and he noted the emergence of the term depth budget, which is the maximum amount of 3D depth in front of and behind the display surface for a specific 3D display and its effect on the viewer's comfort viewing. He also discussed the efforts to deal with 3D imagery on different-sized screens and a proposal to take metadata from a screen to adapt projection to its size.

In more generalized discussion with the audience, the panel agreed that NAB 2009 was as busy as previous years, but it was much easier to navigate the floor and visitors were able to spend more time with manufacturers. However, one change this year that the panel agreed was problematic was the effort of organizers to place large vendors apart. This made it difficult for visitors to make good comparisons be-

cause it was difficult to remember details in the trek between booths.

Other general observations that surfaced included wide support for the Red camera among manufacturers; the variety of approaches to 3D with little standardization; new life breathed into antenna manufacturers to support mobile TV applications; OLED displays starting to appear and show promise; LCD monitors capable of replacing reference CRT monitors are getting closer, but still not there; 3G workflow is gaining prominence but still missing in the transmission part of the chain, including the fact that 50% of homes have MPEG-2 decoders in set-top boxes but no 1080P capability on the horizon; file-based workflows are here with products readily available in cameras, storage and playout; the VTR really is dead; the industry needs to move from being TV and film companies to being content companies; and to ask who their customer is—sometimes it's no higher-end than a mobile device. —Paul Roeser, Section Manager

Washington, D.C. February 2009

The Washington, D.C., Section meeting on February 19, hosted by WUSA-TV, took the form of an ENG camera tutorial and hands-on adjustment clinic. The event, which attracted 45 attendees, larger than usual for a winter month meeting was titled “**HD Camera Setup.**”

After a short business meeting, guest speaker George Ganos of Leader Instruments, began the presentation by describing what was necessary to produce the best-looking video, while maintaining a legal video signal. Ganos briefed attendees on the fundamentals of color encoding and MPEG compression, as he made camera software setup adjustments. A large-screen projector allowed attendees to observe the results of the hands-on parameter changes being made, displaying both observable image quality and signal levels.



32MD-ST-2U
Shown

75Ω Staggered Mid-sized Video Patchbays
Available in 1RU, 1.5RU and 2RU

Mid-sized Video Patchbays

Features

- Superior isolation performance up to 3.0GHz
- Industry standard BNC plugs can be used
- Available in Normal & Straight Through Configurations
- 32 channels of I/O into 1RU and 2RU
- Canare original reliable rotary switch
- Lightweight




75Ω Dual Video Jacks

MDVJ-STW
Straight Through *Shown*
Available in
MDVJ-STW
Normal Through



Featuring Canare's Exclusive Rotary Switch Technology



CANARE
digital interconnect technology

canare.com | 973.837.0070 | hybrid fiber-optics & EO/OE | snake systems | connectors | cable reels | patchbays | cables



Guest Speaker George Ganos demonstrates equipment at the Washington, D.C., meeting in February.

Ganos also demonstrated various features of the latest generation video test and measurement equipment provided by Leader, including Cinelite, which translates IRE unit video levels to the *f*-stop readings more readily understood and appreciated by film shooters. The technology also allows the display of video level differences as false color image displays.

Ganos fielded numerous questions about camera adjustments and video terminology from the audience throughout and following the presentation. Many of the attendees were videographers in the D.C. area.
—James O’Neal, Section Manager

Washington, D.C. March 2009

One of Washington’s newest and largest privately funded museums, the **Newseum**, was the setting for the Section meeting on March 19. The 250,000 sq ft facility officially opened on April 11, 2008, and is located on Pennsylvania Avenue, just a short distance from Capitol Hill.

The Newseum is a one-of-a-kind facility, and is dedicated to the history of news and its reporting. Unlike some museums, it is not a somber and static collection of relics, but rather a lively, active, and evolving assemblage of galleries, theaters, broadcasting studios, and interactive visitor kiosks. The new facility replaces an earlier and smaller one located in suburban Virginia that closed in 2002.

After a period set aside for refreshments and socializing, attendees gathered in the larger of the facility’s two television studios. Although the 3,000-sq ft studio was designed

Connecting Content to Opportunity

From individual appliances to integrated global workflows, Digital Rapids’ flexible, award-winning solutions have earned the trust of leading media organizations worldwide.

Increase your revenue. Expand your audience. Reduce your costs.

Visit our website to learn how.

Ingest • Encode • Transcode • Stream • Protect • Deliver

www.digital-rapids.com

North America: 905-946-9666 x212
 EMEA: +44 1428 751012
 Asia: +61 2 9546 1300
 Latin America: +54 11 4700 0051



Attendees at the D.C. Section's March meeting filled the Newseum studio's installed riser seating to capacity.



Bud O'Connor, director of engineering at Washington D.C.'s Newseum, briefs Section members and guests about the facility's technical infrastructure.

with installed seating for large audiences, additional seating had to be provided, and some of the crowd stood during a briefing given by Bud O'Connor, the Newseum's director of engineering.

O'Connor presented an overview of the Newseum's construction, technical capabilities, and broadcast equipment configurations. The most visible piece of installed equipment was a 32,000 lb 40 by 22-ft LED-driven video display screen, outside the windowed studio's south wall, which provided a backdrop for O'Connor's remarks. The giant display uses 6mm LED technology and has enough clusters to provide 1920 x 1080 resolution. It is suspended by cables, allowing it to travel over a vertical span of 50 ft in the Newseum's 90-ft-high atrium lobby.

Generation and transport of HD video were prime concerns in the technical planning and design of the facility, and 3 Gb/s fiber cabling has been installed throughout the building. Eight HD studio cameras can be shared in any combination between the two television studios. (The smaller studio covers an area of 1,100 sq ft and can seat 40 guests. It is designed in an "L" shape, and large, heavily sound-proofed windows provide a sweeping view of Pennsylvania Avenue and the Nation's Capitol. The ABC Sunday morning political affairs program, "This Week with George Stephanopoulos," originates from this facility.)

After O'Connor provided an overview of facility, attendees were divided into several groups and toured the technical areas of the Newseum, including its 1,225 sq ft master control facility with a 35-ft long video wall and an adjoining self-contained radio broadcasting studio. State-of-the-art studio control rooms were part of the tour agenda, as were the facility's editing suites and operation's central equipment center, which in addition to housing several large broadcast video file servers, also contains server equipment used to provide audio and video for the Newseum's 130 interactive visitor kiosks.

The Section meeting was one of the best-attended meetings in recent memory, with about 140 SMPTE members and guests in attendance.—James O'Neal, Section Manager