

Section Meetings

Australia

June 29, 1998

More than 100 people gathered at the Australian Film Radio and Television School (AFTRS) to hear presentations from Neil Pickford, DoCA Labs, and Wayne Dickson, Network Ten.

Pickford began the presentation defining the benefits of switching to digital transmission. These benefits included noise-free pictures, higher resolution images, widescreen and HDTV, no ghosting, multichannel sound, and the ability to provide other services along with the programs.

There are currently three systems around the world: DVB (COFDM) in Europe; ATSC (8-VSB) in the U.S.; and ISDB from Japan. Tests on the ATSC and DVB systems have been carried out in Sydney over the past year on VHF Channel 8 between current PAL Channels 7 and 9, as well as in the Labs of DoCA in Canberra. These lab tests can be summarized as C/N ATSC 4dB better than DVB-T (This advantage offset by Poor Noise Figure); DVB-T is better than ATSC for Multipath; ATSC is better than DVB-T for Impulse Noise; ATSC cannot handle Flutter or Doppler Echoes; ATSC is very sensitive to Transmission system impairments and IF translation; DVB-T is better at handling Co-channel PAL; DVB-T is better rejecting on channel interference (CW).

Dickson followed with a presentation on filed trials. He defined this as a "Study of Failure." The trials compared DTB with the existing PAL system in a variety of reception conditions, from the beach to the mountains, and everything in between.

Digital Transmission tends to be a "cliff edge" failure, whereas current PAL transmission is a gradual deterioration over distance. Dickson said that Australia plans to minimize the effects of the "cliff edge" by ignoring the "hype" and testing and analyzing results to select the best parameters for reliable HDTV into Australian homes.

From the on-air trials, DVB was excellent for use in mobile vehicles. They were running a TV set in a bus receiving programs while driving over the Harbor Bridge.

The presentations were followed by a panel discussion including the following members: Pickford, Dickson, Colin Knowles, ABC, Bruce Robertson, Nine Network, Roger Barrett, Seven Network, and David Soothill, SBS.

Sacramento Chapter Announcement

The Sacramento Chapter of SMPTE is making some changes to better meet the needs of video engineers in its geographical area. There are more than 20 companies actively designing video and audio equipment in Grass Valley (also known as Video Valley). Other significant companies in related industries are emerging in the Sacramento and Folsom areas as well. Nowhere else in the world can one find such a concentration of video and audio design talent.

We see an opportunity to increase our chapter's enrollment by supplying more relevant topics at the monthly meetings in an effort to attract the design engineers at these companies. Topics for the upcoming year include high-speed (gbit +) chip sets, advanced display systems, and the problems of serial digital interfaces.

It is important to keep the topics interesting to local broadcasters and production facilities. Sharing information between users and developers is vital and facilitating this interaction between users and developers is an essential function of our chapter. The Sacramento Chapter was established in 1992 and serves Northern California and Northern Nevada.—Wayne McLachlan, (Section Chair), Tektronix, Grass Valley Product

The turnout of over 100 people indicated a high interest in this topic. In result, the section will provide some more evenings and maybe even a half-day seminar to further discuss the topic. Our thanks go out to all of the participants.—Gerry Brooks, (Section Chair), GEC Video Systems

San Francisco

June 25, 1998

Seventy-five bay area video engineers and producers gathered at the Embassy Suites Hotel in South San Francisco to hear Phil Livingston, Panasonic Broadcast and Digital Systems, deliver a presentation titled, "1080i? 720p? 480p? 480i? Pick One! Understanding the New Digital TV 'Standards'."

The audience participated in a DTV equipment demonstration before and after the show featuring Panasonic's prototype 720-line progressive camcorder and DVCPRO-50i and DVCPRO-50p gear, which also records and plays "regular" 25 MHz DVCPRO. The 480-progressive is becoming the DTV "flavor of choice" for many broadcasters. The demo also included Panasonic's high-definition D-5 VTR and HDTV processor, as well as professional and consumer prototype 16x9 high-definition monitors.

With the proliferation of DTV standards, an already awkward situation could get even more confusing. Livingston

brought the audience up to date on the latest developments in advanced TV since this year's National Association of Broadcasters convention (NAB98). Recent announcements by the major television networks about their adoption of various standards point to industry trends, but there are still many questions about the broadcast plant infrastructure and how producers can meet the technical demands of broadcasters and cablecasters.

Livingston has 30 years of broadcast experience, serves as the director and general manager of Panasonic, and has actively participated in leading-edge equipment development. He currently chairs the SMPTE P-18 committee responsible for DTV production standards and is a frequent speaker at SMPTE events.—Peter Hammar, (Secretary/Treasurer), Hammer Communications

Hong Kong

May 21, 1998

May's meeting featured a seminar focusing on conditional access and interactive TV solutions for MPEG-2 Broadcasting at the Industrial Technology Centre. Section Chair Lam Kwok-Luen introduced guest speaker Gwilherm Nicolas from Canal+ Technology in France. The two-part seminar first presented some security aspects of Conditional Access System Mediaguard. Part two featured a demo tape illustrating

the sample of interactive services. Also included were Head-End and the architecture presentation of some interactive services of the Interactive TV System Mediahighway. Members were very interested in the security against privacy attack issue, and Nicolas' informative presentation answered many of their questions. He gave an excellent presentation.— Wai-Boon Leung, (Manager), Television Broadcasts

New England

February 18, 1998

David McCarn, WGBH-TV, provided a super position paper on the issue of preserving media. He proposed a permanent, universal digital file format for archived media.

McCarn envisions a technological approach which provides not only capture of the original sound and image data, but also transcriptions, production notes, authorship/copyright/royalty information, with hypermedia links to other media files. Once in this form, McCarn feels the data would be free from the underlying videotape technology it may have been originated upon. The data could also be permanently linked to useful information which usually gets lost in paper files, and can be stored in the same general-purpose digital media that we keep our e-mail and other computer-based files on.

His vision for WGBH is driven by a real concern for the collection of 150,000 reels and cassettes in their current archive. Although WGBH stores their archived material under optimal conditions, magnetic tape seems to be inherently unstable and inevitable deterioration appears to be setting in. Additionally, it is cumbersome for WGBH to keep and maintain the broad selection of older tape-format VTRs carefully preserved and in operational condition to recover program material. Older programming material is becoming more and more valuable according to McCarn, because it is often the first source that documentarians turn to when making any new projects about any historical topic of the last 50 years.

As an example, he cited the recent successful negotiation between WGBH and The Food Network, which is now broadcasting the original black and white Julia Child programs produced at WGBH and recorded on low-band Quadruplex 2-in. tape formats which are now obsolete.

McCarn asked the rhetorical question, "It would be easy to simply transfer these 2-in. and some 1-in. masters to Digital Betacam and other popular formats, but who knows how long those formats will survive?" He pointed out

that there are currently 13 different all-digital formats available, and not one of them were warranted to outlast any of the people attending the section meeting (it was a young crowd, too).

He foresees a Tapeless Digital Format in one sense, not unlike Quicktime, which can exist on almost any digital storage technology. Ideally, the process would not involve transcoding the original media, except for the transcoding of the original analog material. The basic process should take the original samples, digitize at the appropriate high-quality rate, and wrap a header with all the associated data, along with the correct algorithm used to encode the media, so that a future processing technology will be able to decode it.

McCarn cited work that has already been done in the field, in particular the Apple "BENTO" concept, which is a platform-neutral compound content container scaleable enough to address large amounts of media, plus address both simple and complex data models. He also mentioned AVID's "OMF" format, which is based on BENTO, but also gives information on how video segments fit together with each other and other program elements. He proposed that one step further could create a "Media Compiler" file type which is more flexible, can carry more data, and is more media independent than OMF.

McCarn wants the new creation to be "The Format of The Centuries," and carry the algorithm used to encode everything in case this information gets lost over the ages. (A wag in the audience suggested that perhaps the format should carry the algorithm for reconstituting a Viewer, just in case they also become obsolete.)

A discussion followed stating that this type of technology may be closer than most people realize. It was mentioned that Norsam Technology makes a LaserDisk recorder which can store terabytes of information-per-square in.

The SMPTE Study Group formed to develop a recommended practice was also discussed. McCarn is hosting information at the WGBH web site (www.info.wgbh.org/upf). Interested parties can join the listserv he recently instituted by sending conventional e-mail to upf@info.wgbh.org with "subscribe upf (your name)" in the body of the text (upf indicates Universal Preservation Format).

The illuminating presentation was followed by a short technical presentation by Virage Corp., who makes a system which automatically logs media. The system is capable of recording data when a shot sequence ends, and is very much like the data used in closed-captioning. The Virage Media Cataloger System can

SMPTE SECTION CALENDAR

Rocky Mountain

For further information contact Section Chair Fred Baumgartner, TCI, tel: (303) 486-3946, fax: (303) 486-3891, e-mail: baumgartner.fred@tcinc.com

Dates for future meetings

October 21: Quantel solutions for transporting and otherwise working on digital TV in the DTV broadcast station

November 18: SBE Election

November 19: SCTE

January 20, 1999: Back-up power systems

San Francisco

For further information contact Section Chair Charles R. Hintz, KTVU Partnership, Inc., tel: (510) 874-0290, fax: (510) 272-9957, e-mail: chasinca@aol.com

1998 Second Saturday Full-Day Seminar

October 10: "HDTV, DTV, and the Painful Alternatives," at Stanford University

Toronto

For further information contact Promotions Adviser Brad Fortner, Rogers Communications Center, Ryerson Polytechnic University, tel: (416) 237-0625, fax: (416) 979-5203, e-mail: bfortner@acs.ryerson.ca

Dates for future meetings

October 13: Television Networks Using Public Fiber Networks

November 10: 16x9 Television Studio Tour

December 8: 3-D production Systems featuring SoftImage

January 12, 1999: Satellite Meeting

also perform image recognition to determine what kind of picture content it is looking at. Further discussion covered useful aspects such as auto-logging news feeds and other broadcast applications.

The presentations were capped off with some informal discussion and socializing with the assembled SMPTE members, guests from SBE, ITVA, and ITA, and local colleges. The section thanks SMPTE Managers George Teplansky and Phil Ozek for coordinating and steering the meeting.—Paul R. Beck, (Secretary/Treasurer), Emerson College