

Section Meetings

Ohio

June 11, 2002

The June section meeting was held at the WKYC-TV/DT Broadcast Center in Cleveland (Gannett/NBC). Rex Rickly, chief engineer of the plant opened the program by welcoming approximately 30 members and guests to a combined meeting with the Society of Broadcast Engineers, Chapter 70. After brief business meetings by both groups, Larry Bloomfield, Broadcast Engineering, presented "A Taste of NAB." This is a national traveling road-show-type live demonstration re-capping this year's NAB Convention-Exhibition. Rickly's presentation is especially beneficial for those members who were not able to attend the activities in Las Vegas. The program highlights products from firms such as Scala, Clark Wire & Cable, ESE Pixel, AJA Video Systems, Acrodyne, Panasonic, Durrough, and Sundance Digital.

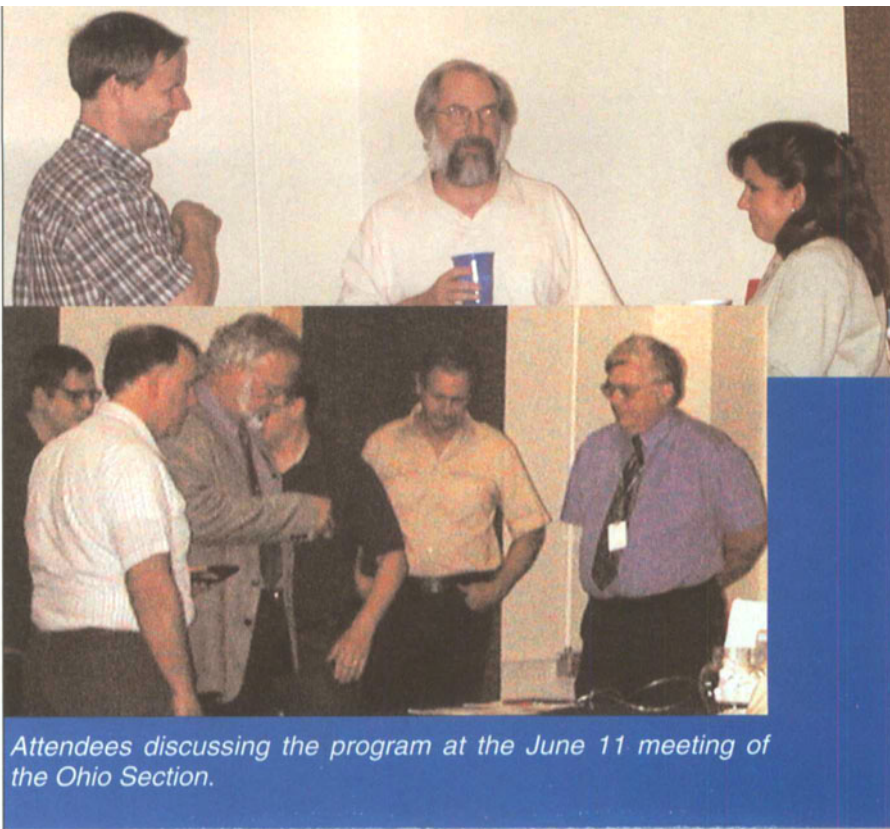
John Pierce of Leader Instruments gave the final product presentation, demonstrating the features of the new LV 5700 multiformat SDI monitor. The meeting concluded with a tour of the new digital, state-of-the-art broadcast studio facilities—Gene L. Batey, Secretary/Treasurer

Rocky Mountain

August 21, 2002

Our thanks go to Victoria West and the fine folks from Squaw Mountain Communications for hosting our August meeting at their facility. Sixty five members joined us atop a 10,000-foot mountain at the communications site for an evening of networking and a facility tour. Squaw Mountain Communications currently hosts two-way communications, wireless internet providers, FM, and is considered a site to accommodate Denver's growth in the DTV transition.

We also wish to thank ERI for their sponsorship and assistance in hosting the meeting.—Rome Chelsi, Chair



Attendees discussing the program at the June 11 meeting of the Ohio Section.

Twin Cities

July 18, 2002

The meeting was held at the Hi-Wire facility in Minneapolis. Mark Chiolis, Thomson/GVG began the program with an overview of Philips/Thomson/Grass Valley events over the last year or so. He discussed the history of (then) Philips cameras, some of the firsts that Philips achieved in this area, and the technology behind the CCDs used in the current Thomson/Grass Valley line of cameras. He demonstrated how the unique configuration allowed for very sharp images for all HD formats in addition to SD formats. This was important setup information to the next section of his discussion.

The Viper FilmStream camera was first shown at NAB 2002. Using the CCD technology discussed previously, the Viper is able to take full-resolution, uncompressed, unprocessed images directly to film or hard-drive-based storage. Any necessary processing can then be done during editing. The philosophy behind this is that it is better to capture exactly what is seen when filming and leave the creative decisions on color correcting, etc., for the production process.

The session was well attended by local filmmakers. Several questions were asked following the presentation; the majority pertained to availability of the camera, hard drive storage, interfacing between the camera and storage, and who will likely be purchasing it for rentals, etc.—John Reuter, Secretary/Treasurer

San Francisco Section Meeting July 25, 2002

MPEG-4: It's Finally Here—Just In Time or Too Late?

Titled "Hot off the press! MPEG-4: It's Finally Here — Just In Time or Too Late?" the July program organized by SF Section Treasurer Jason Mancebo of SGI was held at the France Telecom R&D facility in south San Francisco. Thirty-five members and guests attended.

MPEG dominates the world of digital video content delivery, including broadcast, satellite, cable, and physical media such as DVD. The various types of MPEG represent a wide range of compression "toolkits" created by the Moving Picture Experts Group for coding audiovisual information in digital compressed formats. MPEG-4 is built on its MPEG-1 and MPEG-2 predecessors and offers content purveyors even more alternatives to overcome the limitations of their delivery pipelines. Describing the technology and the new licensing arrangement were Rob Koenen and Julian Signès, two key people in the development of MPEG-4.

Koenen is responsible for InterTrust Technologies' strategic technical partnerships and standards. He is a founder and current president of the MPEG-4 Industry Forum. As chairman of the MPEG Requirements Group, he played a key role in the development of the MPEG-4 standard and is helping define the upcoming MPEG-7 and MPEG-21. Julien Signès is the president, CTO, and a cofounder of Envivio, which was spun off from France Telecom in 1999 to develop MPEG-4 streaming solutions for the broadcast, cable network, and content-developer markets. He chaired the group responsible for the interactive and graphics portions of the MPEG-4 specification (BIFS).

The MPEG-4 framework provides not only video compression technology but improved methods of utilizing and exploiting digital-media data, while maintaining all content elements as discrete objects. MPEG-4 allows the integration of production, distribution, and content-access features of DTV and interactive graphics and multimedia across internet protocol, along with wireless, broadcast, satellite, cable, and mobile.

MPEG-1 and 2 construct images frame by frame or field by field, even if their image components are identical. MPEG-4 defines graphic objects within a frame and sends them just once, with time duration and position information included. Identical objects are not repeated, resulting in bandwidth savings compared to current methods, with more possible as the format evolves. Attendees saw MPEG-4 examples in which less than 900 kHz produced acceptable video images. In contrast, attendees were told MPEG-2 requires at least 3-MHz bandwidth to avoid obvious video problems. The Envivio engineers showed some

new MPEG-4 authoring tools, and demonstrated the low latency of MPEG-4 encoding.

Although MPEG-4's advanced compression format has been formalized for some time, its market acceptance was stalled because of a licensing term dispute. On July 15, 2002, MPEG-LA, the licensing firm for the MPEG-4 patent pool, issued terms more acceptable to its licensees. The standard can now move into "mainstream" technology. The new agreement arose out of protests from boycott-threatening licensees, including Apple Computer, who, with the July agreement, released their new version of QuickTime 6 based on MPEG-4 only.

Quoted in the July 15, 2002, issue of *EE Times*, Koenen said: "It's make or break for MPEG-4. The standard was frozen three-and-a-half years ago, and licenses should already have been available." Some developers think the MPEG-4 codec is too little, too late. MPEG-4 faces challenges from Microsoft, Divx, Real Networks, and H.264. And the standard may not exactly be cutting-edge anymore, according to some meeting attendees. On the other hand, to succeed in the marketplace, a standard need not be the best or the latest technology. One member commented, "Consensus usually beats perfection."

—Peter Hammar, Secretary

For more information on MPEG-4, see the following URLs:

Coverage of recent MPEG-4 licensing news:
www.theregister.co.uk/content/6/26219.html

"From MPEG-1 to MPEG-21: Creating an Interoperable Multimedia Infrastructure," by Rob Koenen:
mpeg.telecomitalia.com/documents/from_mpeg-1_to_mpeg-21.htm

MPEG-LA licensing:
www.mpegla.com, www.1394la.com and www.dvbla.com

Comparison of Apple QuickTime 6 and Windows Media Player 9, ref. MPEG-4:
geek.com/news/geeknews/2002Jul/gee20020716015436.htm

"MPEG-4 Secrets," a tutorial by John Watkinson (a frequent SMPTE conference speaker), *Broadcast Engineering* magazine, 15 May 2002: broadcastengineering.com/ar/broadcasting_mpeg_secrets/index.htm

Summary of all MPEG standards and their history:
www.sims.berkeley.edu/courses/is224/s99/GroupG/report1.html#_Toc447982102