

creative excellence. For example, just as a tape operator is expected to have the aptitude for maintenance, every person plays an important part on the creative team. According to Hamley, you must take your territory and try to do the best to optimize the final product. He said we learn from our mistakes and should try to utilize work as a productive training environment. Hamley also gave some insight on educational issues. He said every situation should be a learning experience and it would be helpful to try to guess the next edit, the next cut, or the next clip that ties into the core material. He also suggested that students learn to do things on paper in the form of diagrams, illustrations, schematics, and floor plans if necessary. He pointed out that it is a privilege to learn from someone else's experience in one's profession, therefore trainees should make the first effort to show that they want to learn from the experts.

Hamley then discussed creative development. This area covered script writing, production, implementation, shooting, and editing. Creative development is a balance of all programming commercials, and intro's and outro's. It is important that all pieces fit perfectly. He said creative development is also a part of the technical end, with emissions, transmissions, distribution, etc. This is affected by how technology changes quickly in the industry. For instance, SMPTE plays an important role in developing industry standards. Hamley showed an illustration of a BBC satellite feed of a Casius Clay Championship Fight from the U.S. to the U.K. It depicted a signal diagram of video uplinking via satellite and audio on telco-phone lines under the sea. Hamley noted that the pictures were out of sync by a delay of one second, because the audio was arriving quicker than the video information. His ingenuity took

over, and he varied the speed of the capstan motor in the tape machine to correct the delay. Prior to this technology, a courier would have been used to get the tape to viewers in the U.K.

The final slide was a current worldwide television standard. Hamley talked about the Motion Picture Expert Group and their important role in the evolution of digital television. The presentation was followed by a Q & A session.—Brian Klepek, Student Chairperson

## San Francisco May 1999

Over 30 members and guests attended the special annual meeting on the campus of Napa Valley College (NVC) for a demonstration of the updated Tektronix Picture Quality Analyzer, the PQA-200 for MPEG encoding and compression, and the Tek PDR-300 MPEG-2 Profile fileserver. NVC Telecommunications Technology Coordinator Gary Vann, and the Napa SMPTE Student Chapter, chaired by Bob Davis, co-hosted the meeting with Charles Hintz, Past Chair of the San Francisco section.

The number of qualified technicians able to troubleshoot increasingly complex digital gear and processes seems to be declining relative to the need. Therefore, more expertise is needed for testing hardware and software. Jim Edwards, Tek's Measurement Business Division, demonstrated one solution to the problem of properly encoding MPEG video streams by using the PQA-200, which looks at various levels of compression severity and provides a visual display of video artifacts.

Ken Royer, Tek's Video Networking Division, contributed to the audience's understanding of the PQA process. Using hardware demonstrations, Bill DeMay, Tek

Measurement Division, explained the theory of the device in a tutorial that especially interested the NVC students in attendance. Many of them will soon be facing MPEG compression challenges as they enter the workforce.

The PQA looks at samples of video clips over a period of several seconds and provides both objective and subjective measurements of digital and analog parameters. The demo clearly illustrated that channel capacity—the number of Mbits/sec required for an unimpaired picture—is scene dependent. A numerical picture-quality rating based on the Sarnoff Labs' research of human perception helps a variety of MPEG operators make what would otherwise be totally subjective decisions about encoding and compression choices.

Several methods to feed back corrective information to the MPEG compressionist are available. Jim Edwards showed how an MPEG compression engine trying to save bits could easily get confused and automatically eliminate important elements from the picture such as birds flying in the background. Snowfall and rain also represent challenges to the MPEG compression process. A pre-filtering decision on the part of the compressionist can recover some of the necessary picture elements by compromising overall detail.

In addition to the presentation and an outstanding technology display, Tektronix also brought a variety of tutorial publications, including "White Papers," which were distributed to those in attendance. After the Tek presentation, students from the telecommunications program gave tours of the Napa Valley College television training facility. Napa's leading-edge, two-year program successfully places almost 100% of its graduates in video engineering positions around the country.—Peter Hammar, Secretary/Treasurer

# Calendar

## SEPTEMBER

IBC99, Amsterdam, the Netherlands. Info: Gina Christison, IBC Office, Savoy Place, London WC2R OBL, U.K.; tel: +44 (0)171 240 3839; fax: +44 (0)171 240 3724; e-mail: show@ibc.org.uk; website: www.ibc.org.uk/ibc. *September 10-14, 1999.*

## NOVEMBER

ASA, 138th Meeting, Columbus, OH. Info: Acoustical Society of America, 500 Sunnyside Blvd., Woodbury, NY 11797; tel: (516) 576-2360. *November 1-5, 1999.*

## SMPTE ACTIVITIES

SYDNEY, AUSTRALIA—SMPTE99, Darling Harbour Convention Centre. Info: Expertise Events, P.O. Box 295 Brookvale NSW 2100; Australia; tel: +61-2-9935-4445; fax: +61-2-9935-4229; e-mail: smpte99@expertiseevents.com.au; Register online/information via website: www.expertiseevents.com/smpete99. *July 13-16, 1999.*

MILAN, ITALY—SMPTE 1999, International Conference, *October 14-15, 1999.*

NEW YORK, NY—141st SMPTE Technical Conference and Exhibition, *November 19-22, 1999.*

SAN FRANCISCO, CA—34th SMPTE Advanced Motion Imaging Conference, *February 3-5, 2000.*

For more information on these and other SMPTE activities contact SMPTE Headquarters: 914-761-1100; fax: 914-761-3115