
SECTION MEETINGS

Atlanta, September 17, 1984 — Virgil Lowe, Fortel, Inc., Norcross, Ga., described an advanced time-base corrector for C-format VTRs and other formats. He explained that in designing this TBC, the goal was to exceed the performance capabilities of existing TBCs. He then explained the design philosophy of "pipeline" analog circuits. A lively question-and-answer period followed the presentation. The final event on the program was a tour of Fortel's engineering and manufacturing facilities. — Earl V. Higgins (Secretary-Treasurer), Box 165, Cumming, GA 30130.

Atlanta, October 16, 1984 — "Audio Sweetening: Film or Video Based" was the subject of the meeting held at Crawford Post Production, Atlanta, Ga. The guest speaker was Les Duncan, Trackside Engineering, Smyrna, Ga. Topics of discussion included the tape lock system, dialogue replacement, Foley application, sound effects direct to picture, automation and time code, and 24-track multi-track applications in synchronizing. — Earl V. Higgins (Secretary-Treasurer), Box 165, Cumming, GA 30130.

Baylor University Student Chapter, November 7, 1984 — A new SMPTE student chapter has been formed at Baylor University, Waco, Tex. The first session of the new student chapter was held November 7

with 13 members attending, together with the faculty sponsor, Corey Carbonara. Prof. Carbonara teaches a course called "Television and Film Technologies." As part of the course, he encouraged the students to join the SMPTE. After 60 students had joined, they formed a chapter. There are now 75 students enrolled in the chapter, Carbonara reported.

Discussion at the first session centered around Professional Development Week, when representatives of major communication industries will be invited to give presentations at chapter meetings. Some contacts had already been made, eliciting some enthusiastic acceptances. Following the discussion, Carbonara conducted an election for the offices of chairman, secretary, and vice-president of professional development. The elected chairman is Sam Norman, and the secretary is Vicki Leeper. Greg Mangum was elected vice-president of professional development. — Corey P. Carbonara, Baylor University, Waco, TX 76798.

Detroit, September 18, 1984 — The meeting was held at the recently completed Communication Arts Building on the campus of Michigan State University, East Lansing, Mich. Three MSU staff members described the design criteria for the building.

Fred Henderson, manager, technical services, television, described the overall

design of the building. Special consideration had to be given to the reduction of airborne and earth-transmitted vibrations resulting from the proximity of the building to a railroad trestle and a coal shaker system at the nearby MSU power plant. He also described the television production and broadcast facilities serving WKAR-TV and the university's requirements for instructional television.

John Hawkins, chief engineer, WKAR, explained the design philosophy of the "quiet ground" system that is used to isolate the very sensitive audio system grounds from the relatively noisy building and electrical grounds. He described the detailed cable identification and record system used within the building.

Michael Chial, associate professor, audiology and speech sciences, discussed the research facilities of his department. These include an anechoic chamber, a reverberation chamber, and several laboratories for studying psycho-acoustic phenomena and hearing disorders. Guided tours of the facilities followed the presentations. — Richard L. Kennedy (Secretary-Treasurer), John F. X. Browne & Associates, 525 Woodward Ave., Bloomfield Hills, MI 48013.

Hollywood, October 9, 1984 — The meeting, held at CBS Television City with an attendance of 250 members and guests, was on the subject of recent advances in *time code on film and video editing*. Charles Kircher, section chairman, presented Bill Hogan, president of Ruxton, Ltd., who introduced the guest speakers: Steve Irwin, Ruxton's engineering manager; and Andy Maltz, editing projects manager.

Irwin told the audience that during the past few years, there has been an explosive growth in the merging of film and video technologies. "The film community wants to do things the tape way, and the tape community wants to do things the film way," he said. "Filmmakers are exploring ways of editing their programs on videotape, and users of videodisks and videographers are shooting film style, and even transferring their projects back to film for distribution."

Irwin noted that production and post-production techniques for film and tape were once almost exclusive of each other, but that today practitioners of both imaging technologies are learning from each other and are finding new and synergistic ways of improving shooting and editing. Since 1967, he said, videotape has had a way to identify every frame. Film has also



Members of the SMPTE Baylor University Student Chapter.



Officers of the SMPTE Baylor University Student Chapter: (L-R) Secretary Vicki Leeper, Faculty Sponsor Corey Carbonara, Chairman Sam Norman.

had its system of frame identification edge numbers; however, this system is a man-readable, labor-intensive way of searching and logging. The benefits of automation through the use of time code are taken for granted by most video users, and during the last few years, the film industry has awakened to the overwhelming possibilities of reporting and reading time code on film.

The use of time code on film starts with production, Irwin stated. During shooting, identical time code is recorded in-camera and on the production audio recorder. Scene and take numbers, date, roll numbers, and other information can be recorded in time code for later retrieval. Several companies are working on achieving time code on film, but there are two different approaches — magnetic and optical.

In the forefront of magnetic recording is Eastman Kodak, which, in June 1982, introduced the Datakode magnetic control surface. Several companies are developing hardware to expose time code on film by using micro LEDs. There are currently no standards for what an exposed time code on film should look like or its exact positions. Some systems resemble bar-code, and some look like a checkerboard. There is a strong need for standards and the hardware to support any type of time code on film.

Irwin discussed Ruxton's recent experience with Aaton, the French camera manufacturer, which has developed an optical film time-code system. In 1978, the firm introduced a time-code system called CTR (clear time recording). In 1984, it introduced the FDT (film data track) system, which exposes a matrix of small squares between the perforations of 16mm film. It also records clear-time,

man-readable numbers every second on the film between the matrices. A small line-array CCD camera can read the matrix and regenerate the time code into a standard 24-frame SMPTE format code for use in post-production.

Irwin then showed a series of slides, including a slide of a new Nagra time-code version of a stereo machine that records time code in the center track.

Andy Maltz was next on the program. "Currently," he said, "there is a move in the industry toward modernizing production and post-production techniques." He gave a few examples, citing film time code, digital audio recording and processing, computerized prompting and music scoring systems, and computerizing scripts through the use of word processors. This advance was aided by the availability of sophisticated electronic devices, microprocessors and microcomputers that are built around them, better quality VTRs, and digital audio. The net result is a higher quality finished product; however, he noted, this high technology does come at a price. Although hardware is becoming less and less expensive, system complexity and software development push up costs.

With the aim of improving the quality of the finished product while keeping costs down, Ruxton and the Auto-Cue Corp., the developer of light-pen controls, entered into a joint development project. After more than three years of software development and two or three hardware upgrades, they announced a new random-access editing system.

Random access is achieved through the use of multiple, low-cost 1/2-in. industrial videocassettes. Maltz explained that the primary method of operation is through light-pen control, allowing the editor to access a whole screen of information

quickly. The operator interface was designed for simplicity. The learning curve is short and allows the editor to work in a number of different ways, including film style. The system is portable and can be packaged to be moved around a studio lot or to fit into small film editing rooms. Although videotape is the storage medium, a production shot and released on film can be edited on the system.

The negative is transferred on a modified Rank Cintel telecine to 655 lines, 24-frame videotape; 24-frame video has the advantage of maintaining the frame accuracy of the editing process. There is no 3/2 pull-down with which to be concerned. The transferred material is loaded into the editing system. Since no recordings are made, any changes can be viewed instantly. When the show is completed, a cut list is generated with numbers corresponding to the edge or key numbers. Since no negative cutter will cut up the camera original from such a list, a black-and-white kinescope of the edited show is also delivered.

Looking at the videotape-original-videotape release process, flipping a few switches converts the system to a 30-frame standard. As in the film process, the uncut material is loaded into the system and edited. When the final cut has been approved, an off-line edited master videotape is generated, along with an industry-compatible edit decision list on an 8-in. floppy disk. Maltz emphasized that the system has been field-proven and that an organization is being formed to make it available to the motion-picture and video production industries.

Bill Hogan then asked for questions from the audience. Following is a report on the question-and-answer session:

Q. How do you have random access with the editing system?

A. You gain random access because you have the same material on more than one tape transport. The system keeps track of where the transports are and simply cues up the machine that is nearest to where the material you want is located.

Q. How many VCRs do you need for a 10-min reel?

A. On the system at Universal City Studios, they used six VCRs. They thought at the time they would need more, but as the project progressed, six VCRs proved enough to handle the editing. It would depend on the amount of material, how out-of-sequence it was shot or transferred to tape, how complex the editor found his work, and how many edits were separate audio from separate picture. The card frame will support 15 VCRs, and you could go to another card frame. Six to eight VCRs is optimum for size and cost.

Q. Would both a film and a tape editor be comfortable with the system?

A. Both would feel comfortable. The system screen has no SMPTE time-code numbers visible. You tap the screen with the light pen, and then you have SMPTE time-code numbers and source numbers.

You can have elapsed numbers or not. The comments have been very positive from both film and tape editors.

Q. *Would you have a problem with a match-frame edit?*

A. I don't know of that being a problem, because you can see both the in and out points and decide whether you are matching or picking up from where you left off.

Q. *For "Still The Beaver" at Universal Studios and the Dick Clark documentary, was the final sound done on a multitrack machine using conventional sound sweetening techniques?*

A. "Still The Beaver" was done at TAV Sound on a multitrack machine. Glen Glenn has been selected to do the sound on the Dick Clark project, and I suppose that it, too, will be done on a multitrack system.

Q. *Earlier, you mentioned that you transferred the film silent and put the audio edits on one by one in sync with your picture slate. What happens in the case of an end slate where you don't have syncing or clapstick information, and you are using conventional methods for syncing this up, because you have to back it in?*

A. You simply find the picture. If you are involved with an end slate, you find the time-code number for the slate, put in an offset, go back to the beginning, and lay it down. That is one of the advantages of the system. It is much easier to manipulate than film or other types of syncing systems, because it is easy to find the end slate.

Q. *How does your system accommodate the loss of frames in the hot splicer? When cutting the negative, how do you keep track of the frames you are losing? Also, how do you handle the dupe negative when you repeat part of the scene?*

A. In the case of repeating part of the scene when you've developed a negative cutting list, you cannot use the same material twice. There is software built in to flag that. That would require a duplicate negative being made. If you are using adjacent frames, it would be easy to put in software that would identify that you do not have that frame to use because you have used the frame on both sides of it.

Q. *How are you handling the color correction scene-to-scene in this particular operation?*

A. Color correction is done during the transfer, and the production people agreed that it was not necessary after the fact. It depends on how much time you spend and how carefully you do it — the lighting, makeup, etc. In the case of documentary shooting, there will be tape-to-tape correction. Each scene looks very good, but just as in the film lab, there should be scene-to-scene correction.

Q. *When using multiple cameras, must you pre-lay down your time code?*

A. You could shoot with many cameras, and every one of them would have the same time code. All of the Nagras

would have the same time code on them because they are crystal-controlled. You can have the same time code as long as each machine can talk to the others.

This interesting and informative meeting closed at 10 p.m. — Louis F. Wolf, Jr. (Secretary-Treasurer), Universal City Studios, Bldg. 101, 100 Universal City Plaza, Universal City, CA 91608.

Nashville, September 20, 1984 — Jerry Knaus, Eastman Kodak Co., gave a talk on film and tape and the interdependence of the two media. He used slides to illustrate how film and tape complement each other. He predicted that the marriage of film and tape will become increasingly accepted. The meeting was held at Hospital Corp. of America, and following the presentation, members of the audience were given a tour of the studio and control room. — Duane Muir (Secretary-Treasurer), Nashville State Tech., 120 White Bridge Rd., Nashville, TN 37209.

Nashville, October 18, 1984 — The meeting opened with a slide presentation giving an overview of all the companies in Nashville producing television commercials. Following the slide show, Jane Ward, Tennessee Film, Tape, and Music Commission, gave an up-to-date report on feature film productions in Tennessee. — Duane Muir (Secretary-Treasurer), Nashville State Tech., 120 White Bridge Rd., Nashville, TN 37209.

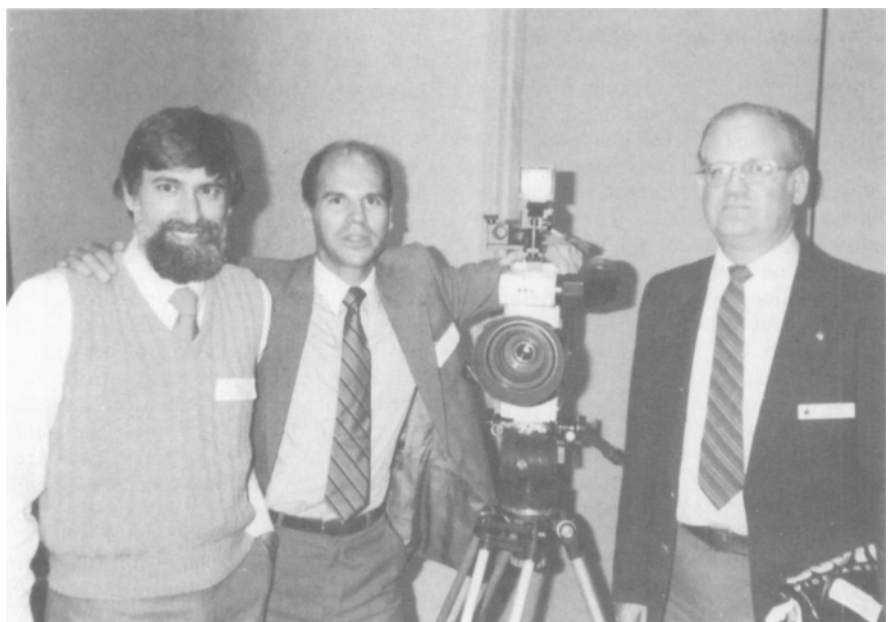
New England, September 12, 1984 — David Acker, FOR-A Corp., gave a presentation on current time-base corrector technology. He discussed color correction, image enhancement, and color dropout

compensation. He gave a brief historical perspective of the development of TBCs and specific descriptions of current techniques as well as some suggestions about possible future developments. — Michael DiIeso (Events Coordinator), Gaffer/Grip Services, 624 Boston Post Rd., #30, Marlboro, MA 01752.

New York, September 19, 1984 — A demonstration of the Montage picture processor was provided for 150 members and guests by Ron Barker, Montage Computer Corp., and Pat Howley, VCA/Teletronics. Barker gave a technical overview and history of the system. The processor, he explained, offers a new way of editing videotape by combining the creative flexibility of film editing with sophisticated computer technology. He then gave a live demonstration of the system, which included videotaping members of the audience.

Since VCA/Teletronics was the first videotape post-production company to install the Montage processor, Howley gave a user's report on the company's operational experience with the new system. A spirited question-and-answer session followed the presentations, and a hands-on demonstration of the equipment was provided for members of the audience. — C. Bradley Hunt, Eastman Kodak Co., 1133 Ave. of the Americas, New York, NY 10036.

Ohio, October 24, 1984 — Anton Wilson, Anton/Bauer Inc., presented a paper entitled "Hows and Whys of Portable Power Supplies." He explained that as a former television cameraman he had experienced battery failure. With that background, he gave an informative talk on what happens



Anton Wilson (center) showed his 25-W on-camera light to Bill Richardson and Dave Ginaven at the Ohio Section meeting.

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inside the battery to cause failures and how the failures can be prevented.

Wilson's presentation included a demonstration of the Anton/Bauer on-camera light that can be operated from the attached camera battery, thus completely eliminating the power cords that have plagued cameramen for years. The on-camera light has interchangeable modules that provide fill light from 25 W (seeing the extraordinary results from 25 W is almost unbelievable) up to 80 W. A lively question-and-answer period followed Wilson's talk. — Ernie D. Walker (Secretary-Treasurer), NASA Lewis Research Center, 21000 Brookpark Rd., Cleveland, OH 44135.

San Francisco, October 16, 1984 — "Computer Videographics and Animations" was the subject of the meeting. Donna Foster-Roizen, section chairman, told of her first contact with videographics

at NASA and the subsequent developments in videographic systems.

Richard Shoup, Aurora Systems, presented the history and evolution of videographic systems, with special mention of the Aurora 100. Following the presentation, Shoup and Damon Rarey demonstrated the Aurora, showing its capabilities from simple shading through complex animation, coloring, and interface with other video systems. Rarey showed how to build a number of effects from various sources, and members of the audience were invited to a hands-on demonstration. — John A. Carlson (Secretary-Treasurer), Monaco Labs, 234 Ninth St., San Francisco, CA 94103.

Washington, D.C., September 19, 1984 — Ralph C. Baxter, Arthur Young & Co., discussed artificial intelligence in a speech entitled "The Great Interactive Whale Train Express." He said that man is very

complex and that to give even a limited intelligence to other entities, such as computers and robots, is an extremely difficult process. Many universities — including MIT, Yale, Carnegie Mellon, and Stanford — and many industries are working on artificial intelligence and have achieved some success with systems such as Catch, Epistle, Prospector, and Dipmeter. "But we are only at the start," Baxter said, "and the challenges are limited only by our imagination."

Representatives of three companies involved in research leading to the development of artificial intelligence — Texas Instruments, International Institute of Applied Technology, and SCION — were present at the meeting to demonstrate equipment and discuss their ideas relating to artificial intelligence. — Arthur E. Florack (Secretary-Treasurer), Eastman Kodak Co., 1555 Wilson Blvd., Arlington, VA 22209.

NEWS



L. Coleman



W. Koch

Leonard F. Coleman and William A. Koch have been promoted to new positions within the new Eastman Kodak Motion Picture and Audiovisual Products Div. Coleman was named general manager, marketing, and vice-president of the new division. Koch is vice-president and general manager of the division. Both men were formerly with Kodak's MP and AV Markets Div. The new division is part of the recent restructuring of Kodak's Photographic and Information Management Div.

Coleman, who has been a member of the SMPTE since 1961, and a Fellow since 1969, has held a number of offices including SMPTE Governor and Financial Vice-President. He served as SMPTE President for the 1983-1984 term.

Koch, who has been a member of the SMPTE since 1952, was also made a Fellow in 1969. Among other activities, he served two terms as SMPTE Governor. He has also been involved in section activi-

ties, serving as Chairman of the Chicago Section while stationed in Kodak's Chicago office, and later as coordinator for SMPTE student chapters.

Blaine Baker, president of Motion Picture Labs Inc., Memphis, Tenn., has been elected president of the Association of Cinema and Video Laboratories to serve the 1985 term. The ACVL was founded in 1953 to provide a forum for the discussion and exchange of ideas on the problems of motion-picture and video laboratories. Baker is currently serving as the SMPTE Financial Vice-President for the 1984-1985 term.



The SMPTE Ottawa Section will host the Ottawa/Montreal/Quebec/Rochester/Toronto Annual Special Meeting for the first time in Ottawa, Ont., at the Westin Hotel, April 26-28, 1985. The theme is "Innovations '85 — Crossroads and Horizons."

The television, film, and sound professions continuously look to the SMPTE to provide guidelines to the future. The objective of this meeting is to examine the status and innovative uses of digital technology and how it will progress into the next half of the decade. Presentations will address subjects such as digital versus

analog technology, digital video, and computerized film and sound editing.

For further information, contact Committee Chairman Ross Mutton at (613) 231-2643, or write c/o SMPTE Ottawa Section, P.O. Box 2427, Station D, Ottawa, Ont., Canada K1P 5W5.

The basic architecture for a digital control network for television is near completion due to intensive efforts by the SMPTE and the EBU, it was announced by Tom Meyer, Dynair Electronics, Inc., chairman of the SMPTE Subcommittee for Digital Control. Two basic documents have already been approved as American National Standards — ANSI/SMPTE 207M, electrical and mechanical interface, and SMPTE Recommended Practice RP 113, supervisory protocol. The remaining basic documents, tributary interconnect and message architecture, are being finalized at this writing.

Three proposed Recommended Practices dealing with common system messages and VTR control messages were presented during the 126th SMPTE Technical Conference in New York City, October 28-November 2, 1984, to initiate industry comment. These comments are expected to form the basis for discussion at the 19th SMPTE Television Conference in San Francisco, February 15-16.

The American National Standards Institute (ANSI) was awarded a Private Sector Initiative Commendation from President Ronald Reagan at a White House confer-