
SECTION MEETINGS

Atlanta, March 11 — Charles Vaughn, Cinetron Computer Systems, gave a presentation on a computerized motion-control system for animation and stop-motion photography. He discussed the various features of Cinetron's multi-processor, distributed intelligence motion-control system for film and video. The system utilizes an IBM PC, PC-AT, or compatible host computer that communicates with multiple slave controllers, each with its own 8080 or 8086 CPU. The 2000 is capable of stop-motion photography and has a mode permitting the controlled blurring of stop-motion images, thus giving the effect of live action.

The Cinetron 2000 utilizes a proprietary method called Free-Motion, whereby the images are recorded "on the fly," allowing the blurring of animation or three-dimensional models. Free-motion operations are repeatable and can be used in combination with conventional stop-motion streak or slit-scan techniques. Image positions can be recorded virtually independent of exposure times, and all frames can be recorded even when the velocity of the object being photographed causes it to move through the next frame position before the previous frame is completely exposed.

The 2000 uses simple conventional animation terms to describe the motion requested, and moves can be entered using a keyboard or digitizing tablet, by positioning the device under control, or by a combination of these methods. The control software is written entirely in assembly language. The support software is supplied in "C." The 2000 controls 18 axes of motion, and 12 on/off contact closures. It can be configured to control up to 256 axes, with appropriate modifications.

Following the presentation, members of the audience were conducted on a tour of the Cinetron facilities. — Earl V. Higgins (Secretary-Treasurer), Ampex Corp., 1872 Montreal Rd., Tucker, GA 30084.

Chicago, February 12 — In spite of the weather, 38 members arrived at the VCA/Technicolor Facility to hear Bruce Fellows' presentation on videotape, which included predictions as to the future of videotape. Fellows, who is a technical service engineer for 3M Co., was delighted that so many were present, especially since his plane had been circling the airport for about 5½ hours before landing.

Fellows used slides to show graphically the effect of foreign substances on the newer, more highly finished, tape emulsions. The microscopic surface of the old video and audio recording tape was ex-

tremely rough in appearance, while the surfaces of the new tapes are almost mirror smooth. To the naked eye, they appear shiny. Foreign substances, such as fingerprints, hair, and dust, appear enormous in size and, attached to the tapes, they cause dropouts.

Fellows also showed a new video case for the single-unit type of camera. Since the case has no static properties, an electrical charge, which could cause glitches, cannot build up. The packaging of videotape by recording services and producers who store cassettes in their warehouses came under scrutiny because of a dust problem. Even though the dust may be on the case (not in it), when the case is opened, the dust is drawn to the magnetic tape inside. Fellows also discussed at length such technical matters as recording curves and frequency response.

This unusually informative meeting was greatly appreciated by the audience. — Norman Thelen (Chairman), Encyclopaedia Britannica Educational Corp., 8513 W. North Terrace, Niles, IL 60648.

Dallas/Fort Worth, February 13 — Harold Vincent, Eastman Kodak Co., showed a 16mm film demonstrating the amazing color fidelity of the underwater Aquacolor film system. This film provided a startling demonstration of the underwater camera filter system that makes it possible to capture the full spectrum of colors on film.

Following Vincent's presentation, Dan Sokol, Video Post & Transfer Inc., demonstrated the Montage picture processor, including a hands-on review of the impressive random editing capabilities of the machine, which triggered a lively discussion concerning the future of video editing. — Neil Feldman (Secretary-Treasurer), Video Post & Transfer Inc., Box 53, Love Field Terminal, Dallas, TX 75235.

Hollywood, February 19 — Guest speaker Ted Fogelman, Fuji Film, discussed Fuji's new high-speed negative film, AX 8514 (35mm) and AX 8524 (16mm). He also mentioned Fuji's new color positive film, LP 8816 (35mm) and LP 8826 (16mm). The new color negative film, with its higher speed and finer grain, replaces the current negative films. It also produces sharper images, he said, and has better push-processing compatibility. Fogelman went into technical detail and showed a series of short film clips that illustrated dramatically the capabilities of the new films.

Following Fogelman's presentation, Art Schneider introduced Ron and Richard Grant, developers of an advanced soft-

ware program. The two brothers, working together, developed a new system called the film composer's time processor. The system works in conjunction with a man/machine environment called the Auricle. It assists composers in the development of scores for motion pictures or television, or in any situation where the music must synchronize with another medium.

The Grants showed, via projection television and a camera, the output of the Auricle system and, on another screen, the top view of the keyboard. They explained that the time processor is chronometrically 500% more resolved than the traditional frame-sprocket technique, and that it simultaneously generates both visual cueing and audible "variable click tracks." Since its introduction in April 1984, the Auricle system has been used by many professional composers and in prime time series on television.

The Grant brothers gave an extremely informative presentation to an audience of 250 members and guests who showed their interest by asking a number of questions. Dinner at the Brown Derby preceded the meeting, which was held at Glen Glenn Sound Studios. — Louis F. Wolf, Jr. (Secretary-Treasurer), Universal Studios, 100 Universal City Plaza, Universal City, CA 91608.

Hollywood, March 14 — Phillip Lucht, Robert Bosch Corp., who, since 1981, has led the design team for the Bosch FGS-4000, a computer animation/digital effects system, gave a brief description of the system and how it works. He showed a tape that demonstrated the system's capabilities, including how the operator can create two- and three-dimensional images.

The second part of the program was on the automatic focusing of cameras through the use of a computer system designed by Richard and Scott Vye. Richard Vye has been working on the system for 3 years, with his brother, Scott, a computer science major at the University of California Berkeley. The system is in the developmental stage, but considerable interest has been shown by representatives of the industry. Designated computer digital focusing, it is designed primarily for sports television to enable tighter shots with lower camera angles.

The system consists of a computer, an optical digitizer with an electronic light pen, and servo-controlled mounts for the camera lenses. The software is a high-speed, 3-D program. By means of the light pen, the digitizer, containing 400 million pixels (coordinates), sends coordinate information to the host computer. This is transformed into exact distances so that each camera lens is focused on the exact spot on the field where the light pen directs. A human being who knows the sport being photographed must direct the light pen.

Tapes provided an impressive demonstration of the focus accuracy on all types of camera shots, especially distance shots on auto and horse races. Another videotape effectively demonstrated the accuracy of variable-focal-length shots taken indoors, leaving no doubt as to the capability of the system.

Both presentations were informative, eliciting a number of questions from the audience. — Louis F. Wolf, Jr. (Secretary-Treasurer), Universal Studios, 100 Universal City Plaza, Universal City, CA 91608.

New England, February 20 — The Hitachi FP-Z-31 portable color camera was demonstrated by John P. Breitenbucher, Hitachi Denshi. He described the new twisted-field Saticon and other features of the camera, including its automatic capabilities and internal character generator. A working demonstration under low lighting conditions was provided.

Following Breitenbucher's presentation, Richard C. Erickson, Hitachi Denshi, presented the HR-230, a Type-C, 1-in. teleproduction videotape recorder. He explained many features of the VTR and described its on-board operator aids. — Paul R. Beck (Secretary-Treasurer), 71 Cross St., Foxboro, MA 02035.

New England, March 13 — The meeting was held at the Massachusetts State House in Boston. George Watson, technical coordinator for WGBX-TV and WGBH-TV, told the audience that the Commonwealth of Massachusetts owns the equipment and arranges with WGBX for the live or taped broadcasting of legislative sessions from the Senate Chamber or from two or more hearing rooms. (The recently completed design, construction, and installation of the equipment and the control rooms was under Watson's charge.) He showed a videotape that illustrated the state-wide microwave system that carries this program service to viewers' homes over WGBX-TV and to a number of cable franchise operators who offer the legislative broadcasts to subscribers on a round-the-clock basis.

Members of the audience were shown the specially designed control room which contains a small Grass Valley production switcher, the Chyron graphics system, and four Ikegami triax-operated HL-79-E camera systems configured in a special arrangement by Watson. Four custom-built remote-control pan-tilt zoom-focus systems were demonstrated. One of them was taken to the control room for hands-on evaluation of the performance. The unit is microprocessor-based and offers several preset situations, allowing the operator almost instant control of several shot compositions. WGBX and the manufacturer of the units are still working out some bugs caused by the extremely long lengths of control cables routed through



George Watson operating two remote-control pan-tilt-zoom-focus HL-79-E cameras at the New England Section meeting on March 13.

the maze of wire-runs within the State House complex.

The final event on the program was a presentation by Art Shifrin, Abekas Video Systems. Shifrin described the Abekas A-62 digital frame store. He then demonstrated the frame store and the A-52 digital effects system using the WGBX facilities. Using the effects system, he showed several dynamic-perspective still images, some with double and triple foldovers, all using a single-channel standard A-52 system. He demonstrated the special move sequence construction, using the reprogrammable key which stores events data. Some viewers of the image-manipulation demonstration found themselves slightly "data overloaded" with the many different scene transitions and picture effects. — Paul R. Beck (Secretary-Treasurer), 71 Cross St., Foxboro, MA 02035.

Ohio, March 14 — Steve Mitchell, Eastman Kodak Co., demonstrated the company's new Instagraph copy stand CRT slide and print imager. The copy stand permits the production of color slides from charts, graphs, and illustrations. Fifteen minutes after exposure, the slide is ready for mounting using the Instagraph slide mounter. CAT copiers are corrected for curvature of the screen and are compatible with 9, 12, 13, and 19-in. CRTs. They permit the production of hard copies from graphic images displayed on a computer or video monitor. Copies are produced without tying up terminal, printer, or plotter, by simply placing the unit against the screen and pressing a button.

The presentation was followed by a showing of the 1984 Clio Awards film. —

Ernie D. Walker, NASA Lewis Research Center, 21000 Brookpark Rd., Cleveland, OH 44135.

Rochester, January 16 — Manfred Lemmin, PFA Labs, Toronto, presented a paper entitled "An Alternative Method of Editing for Television." The paper proposes editing on film, then transferring to tape, a process called electronic film conforming. Using a patented computer-assisted system designed to conform to either film or video elements, the method successfully marries the cost efficiency of film post-production with computer technology to produce automatically assembled videotape programs. Lemmin used slides to show the advantages of the electronic film conforming, including speed of editing. — Robert J. Erskine, 168 Vine-dale Ave., Rochester, NY 14622.

Toronto, February 12 — One hundred members and guests braved a mid-winter storm to gather at The Sports Network (TSN) to hear Peter Laidlaw, Imagineering Ltd., present a paper entitled "Television Signal Impairments: Beginning to End," and another by Terry Snazel and Eric Heidendahl, TSN, "TSN's Broadcast Center: State of the Art on a Fast Track."

Laidlaw's paper dealt with the additive effects of distortion on television signals and examined the accumulated impairments associated with delivery of a live sports program to a distant cable subscriber's home. He emphasized the effects of studio, terrestrial, satellite, and cable system contributions to overall system performance.



Peter Laidlaw speaking at the Toronto Section meeting on February 12.

Snazel and Heidendahl joined forces to describe the design and development of TSN's originating facilities and operation. Several unusual aspects of specialty, sport, and pay TV operations were discussed. Following the presentation, a tour of the facilities was conducted. — David George (Manager), Imagineering Ltd., 20 Rondeau Dr., Willowdale, Ont., Canada M2H 1R4.

Toronto, March 12 — Peter Bartlett and Douglas Catherwood, VTR Productions Ltd., were the guest speakers. Bartlett discussed the firm's post-production facility, and Catherwood described the duplication center.

Bartlett described the post-production facility as "the most modern suite in Canada." He illustrated his talk with a videotape showing the firm's capabilities. Catherwood discussed the 1/2-in. duplication center, described as "Canada's largest," and gave an overview of the home video market. Using an overhead projector, he showed in some detail the problems inherent in the legal reproduction and distribution of videocassettes. He noted the unprecedented market growth (one mil-

lion in 1984; three million in 1985), the establishment of priority markets, and the constant changing of equipment trends, government regulations, packaging, and security.

Jerry Zaludek, president of VTR Productions, conducted a question-and-answer session. Many of the audience's concerns centered around cassette piracy. — Stephen Cook (Secretary-Treasurer), 45 Smithwood Dr., Islington, Ont., Canada M90B 4S1.

Toronto, April 9 — The awesome size of the giant (70-ft) IMAX screen with its audience-involving images provided a memorable experience for the 760 members and guests assembled at the Cine-sphere at Ontario Place, Toronto. This record-breaking attendance is by far the largest reported at any previous SMPTE section meeting.

IMAX was first shown in Osaka, Japan. The first theater in North America was opened in 1971 at Ontario Place — site of the April 9 meeting. Following IMAX, came OMNIMAX, designed as a cinema system for projection inside a spherical dome theater similar to a planetarium. Now there are IMAX 3-D and OMNIMAX 3-D. IMAX 3-D uses a pair of IMAX 65 cameras in the filming and is viewed through polarizing lenses. OMNIMAX 3-D is viewed through red-blue glasses. It is a system for which images can be made only by computer. Currently available cameras cannot provide the varying displacement between left and right eye pictures that is required to create 3-D effects on all parts of an OMNIMAX dome screen.

The meeting was conducted by William Shaw, vice-president of IMAX Systems Corp. Following his introductory remarks, *Hail Columbia*, an IMAX film produced in 1982 was screened. This widely acclaimed film shows the first flight of the space shuttle *Columbia*. The breathtaking liftoff is overwhelming as

the viewer follows astronauts John Young and Robert Crippin into orbit. The viewer becomes involved from the first silent moments when the *Columbia* was being majestically transported from hanger to launching pad. The slow traverse of this huge elegant bird across the screen impressed the viewers as to the enormity of the project and the significantly advanced technology required to create it. The audience shared vicariously in the tense moments before re-entry, and in the joyful excitement when the *Columbia* landed safely in the Mojave Desert.

At the close of the 36-min film, Shaw read a technical paper, supported by slides, on the innovations that IMAX Systems Corp. formulated to conform to conditions and strictures imposed by NASA. Safety controls were extremely stringent, understandably so, considering the stakes. IMAX Corp. also had to invent gear and systems to facilitate cinematography with the bulky camera in the confined quarters of the space shuttle. Bulk is unavoidable since the IMAX camera must transport film 10 times the size of 35mm and three times that of normal 70mm film. — Stephen Cook (Secretary-Treasurer), 45 Smithwood Dr., Islington, Ont., Canada M90B 4S1.

Washington, D.C., March 7 — Herman Badler, CBS, presented a paper describing the CBS Network mobile production studio. This outside broadcast studio was specifically designed to operate efficiently in Washington, D.C., with its narrow streets and small parking areas, at such locations as the White House and the U.S. Capitol. Its primary use is for national news, such as presidential conferences and unusual happenings. It is not used as a routine news-gathering device for daily news programs. The mobile studio is completely self-contained and uses up-to-date technology. — Arthur Florack (Secretary-Treasurer), Eastman Kodak Co., 1555 Wilson Blvd., Arlington, VA 22209.



Terry Snazel (L) and Eric Heidendahl described The Sports Network at the Toronto Section meeting on February 12.



Peter Bartlett (L) and Douglas Catherwood spoke at the Toronto Section meeting on March 12.