Section Meetings

Atlanta, May 13 — The B-MAC system, a baseband system used for satellite transmission, was described by Patrick Bohana, Scientific Atlanta. The system has a bandwidth of 6 MHz and includes digital audio channels, data, and total picture information. Video scrambling is achieved using a horizontal time-shift technique similar to digital time-base correction. The scrambling sequence, which is changed every TV frame, involves storing two lines in the encoding process, and clocking out using dynamic encryption that is then received in a line store and clocked at normal line rate using the transmitted encryption code. Costs are reduced by using CCD devices. Transmission of video is converted into components; audio is digitized along with other data and then time-multiplexed at baseband frequencies.

Because of the complex scrambling, the B-MAC system solves some basic problems relating to satellite transmission: (1) picture scrambling prevents delivery of material to an unsuitable audience; (2) digital audio scrambling renders the program unusable where audio alone could suffice; and (3) scrambling prevents distribution of confidential data.

Since B-MAC is a baseband system, control or encryption is the last element to be lost due to poor SNR. Tests showed that video would be "peppered" with noise and audio, and would produce some distortion when carrier to signal was at 12 dB. Signal integrity was maintained down to 4 dB. — Earl V. Higgins (Secretary-Treasurer), Ampex Corp., 1872 Montreal Rd., Tucker, GA 30084.

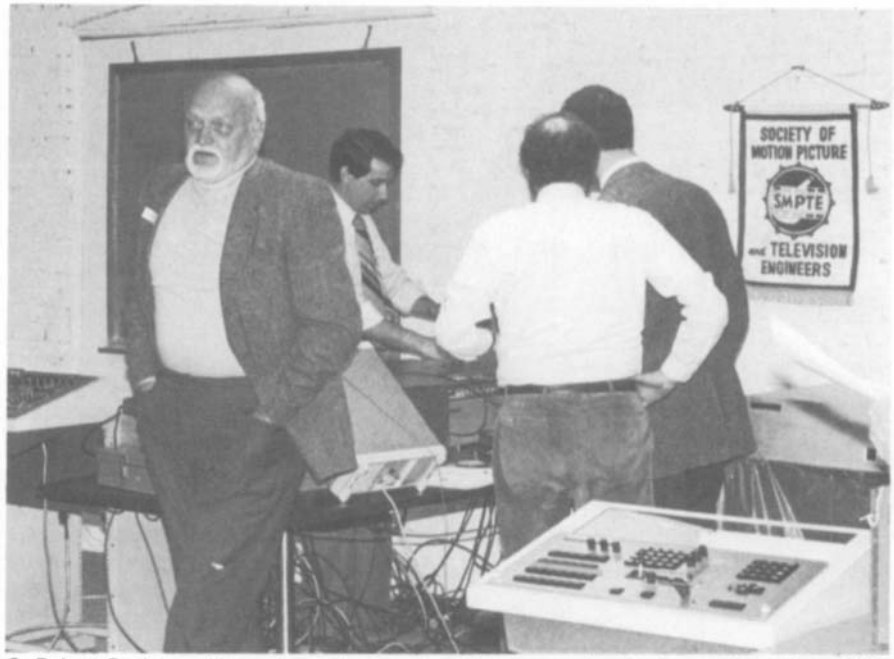
Hollywood, May 9 — Colin Parkhill, RCA Broadcast Systems, traced the beginnings and theory of operation of the RCA CCD camera with a slide presentation. He discussed the attributes of CCD cameras in general, and the RCA version in particular. The RCA camera, Parkhill said, is free from lag, image burn, field-to-field retention, blooming highlights, and magnetic field problems.

Parkhill and Jorge Castenado, RCA, demonstrated the camera in a variety of situations. They presented a picture from the darkest corner of the stage to a close-up of the printing on the surface of a lit photoflood. They panned the camera rapidly across printing, vertical and horizontal lines, lights, and reflecting mirrors without the usual defects found in tube-type video cameras. A lively question-and-answer period followed the presentation. — Charles Kircher (Chairman), Foto-Kem Industries Inc., 2800 W. Olive Ave., Burbank, CA 91505.

Nashville, May 16 — Franc Stratton, Viacom Cablevision, gave a presentation on two-way data transmission via broadband satellite transmission. He described a number of new services, including security, fire, and medical alert services. — Duane Muir (Secretary-Treasurer), Nashville State Tech., 120 White Bridge Rd., Nashville, TN 37209.

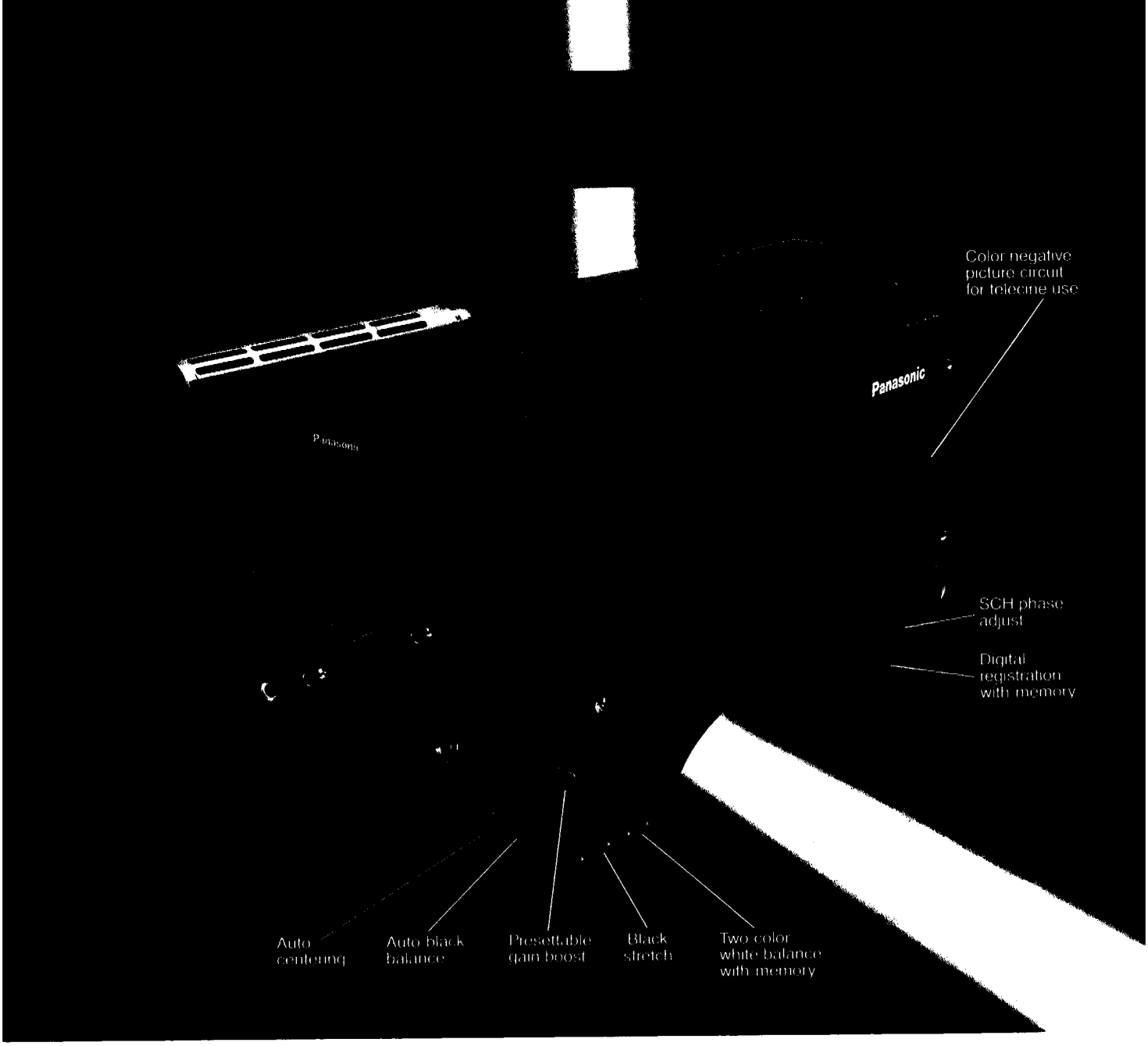
New England, April 24 — The first speaker at the meeting, held at Shintron Co. headquarters, Cambridge, Mass., was C. Robert Paulson, AVP Communications, who gave his impressions of the NAB convention, highlighting CCD cameras and new format VTRs, including the new M-II format VHS-based high-end VTR. He also spoke of trends within the industry that are leading toward standardization of a digital video recording system in the not-too-distant future.

Next on the program was Shintaro Asano, president of Shintron Co., who discussed his firm's activities in the component video technology field. He traced the



C. Robert Paulson addressed the New England Section, giving his impressions of the NAB convention.

Presenters from Shintron Co. at the New England Section meeting. L to R: Jacques Kuchler, P. R. Beck, Morris Sazer, Rob Inches, Shintaro Asano, and Jeff Swift.



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development of the Shintron component production switcher, giving credit to suggestions from and participation with WNEV-TV in Boston, a pioneer user of the component-based M-format VTRs.

Karl Renwanz, WNEV-TV, then explained how WNEV-TV became involved in the standards-setting procedures prior to establishment of the Betacam L and Recam M formats. The next step was the development of component video systems requiring three video channels. He told how Shintron Co. developed prototype units used at WNEV-TV. This led to the presently used configuration of over six M-format off-line A/B roll editing systems, fully component processed (switched/mixed/effected/matte-keyed), using Shintron component production switchers. He then showed the Shintron component frame-store device.

Jeff Swift, Shintron, gave a presentation on the Andromeda 3000 component frame-store/time-base corrector. He discussed the advantages of 3-channel video, each channel capable of passing a flat 30-MHz response and each with immunity to signal-path anomalies such as nonlinear phase error and unwanted artifacts caused by trim adjustments for differential phase and differential gain. He explained that the Andromeda 3000 is the "building block" for various Shintron products, including the built-in frame compression unit and other digital video effects, all employing component video technology, compatible with Betacam, Recam, and U-Matic tape editing formats.

Asano shared with the audience his frustrations with various manufacturers and standard-setting committees, who, according to him, take an unduly long time in developing standards for component video. He then introduced a new concept of using standard U-Matic, configured in the Dub mode as a quasi-component format. He demonstrated an A/B roll editing system using standard Sony VO-5850 VTRs and two slightly modified Fortel Y-688 TBCs, mixed and routed through the standard 3-channel component 390 Empress production switcher.

The presentations and demonstrations were extremely informative and of considerable interest to the audience of more than 40 persons. — Paul Beck (Secretary-Treasurer), 71 Cross St., Foxboro, MA 02035.

Karl Renwanz addressed the New England Section meeting.

(L) John Serafini, member of the American Institute of Aeronautics & Astronautics, and Ernie Walker at the Ohio Section meeting.

New York, May 22 — Warner Johnston, ABC-TV, gave a presentation on a new television transmission test signal developed at ABC-TV by Johnston and the late Hans Schmid. For the demonstration, Johnston used 35mm slides and a live test setup, featuring a digital test generator and waveform/vectorscope displays. The test signal was developed to make it easy for an operator to validate the signal quality with virtually no interpretation. An accompanying audio test signal, useful for rapid automated testing of any audio path, was also demonstrated.

Eric Small, Modulation Sciences Inc., who is engaged in the design, manufacture, and installation of TV stereo systems, discussed the performance requirements of a TV transmitter in order for stereo to work well. He touched also on the requirements for the second audio program (SAP) and professional (PRO) channels. Incidental carrier phase modulation (ICPM), he said, is the best indicator of stereo performance, since poor ICPM will result in audio buzz in the home receiver. He noted that most TV transmitters seem to be capable of adequate stereo separation. He demonstrated a TSG stereo generator and a spectrum analyzer setup that showed the excellent separation. — Earl F. Arbuckle, III (Program Manager), WPIX Inc., 220 E. 42nd St., New York, NY 10017.

Ohio, May 16 — The American Institute of Aeronautics and Astronautics was host to the meeting, which, in addition to SMPTE members and guests, was attended by members of the IEEE, SAE, and ASME. The guest speaker, Ron Thomas, NASA Lewis Research Center, presented an overview of the NASA space station program. He outlined the objectives of the

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ANOTHER BROADCAST INNOVATION FROM MATSUSHITA ELECTRIC

program and discussed the potential benefits to mankind. An interesting point was made about the evolution of the design and the effect on that design by requests for space from American companies and foreign governments. He discussed in detail the power requirements and the impact the expansion of the station is having on the design of the power system.

The presentation was followed by a lively question-and-answer period. — Ernie D. Walker (Secretary-Treasurer), NASA Lewis Research Center, 21000 Brookpark Rd., Cleveland, OH 44135.

Pacific Northwest, June 6 — More than 35 members and guests braved a heavy rainstorm to attend the meeting at Telemation Production's facilities. Most of the meeting was devoted to the CMX 3400A video editing system. Edward Bolger, CMX Corp., combined slides, a verbal explanation, and working equipment to show what the newly introduced hardware can do and how it does it. Steve Weisser, CMX, demonstrated the unit using source material fed from Telemation's control room. Finally, members and guests were invited to participate in a hands-on session. During the question-and-answer period, considerable interest was shown in the almost automatic ability of the 3400A to either compress or extend program material to fill a given time frame.

At the close of the evening, Stan Kronquest, Telemation, and Albert Swanson, consultant, demonstrated the new Nagra T Audio TC unit, which had been received at Telemation on the day of the meeting, the first of these units to be delivered in the U.S. It allows direct transfer of audio information from ¼-in. program material to video. Sync is maintained by the SMPTE time-code unit within the recorder, interfacing with the other equipment in the Telemation editing and transfer suites. — Edward Watton (Secretary-Treasurer), Forde Motion Picture Labs, 106 Fairview Ave. N., Seattle, WA 98109.

San Francisco, May 23 — Peter Jensen, Merlin Engineering, presented a scheme for encoding stereo audio into the vertical blanking period of the video signal. The system has the capacity to make older VTRs stereo-compatible. Bob Orban, Orban Associates, then gave a presentation on television stereo generators, with particular attention given to the BTSC stereo system.

David Large, Gill Cable, discussed problems associated with stereo transmission via cable television. He explained each of the possible approaches to stereo transmission for cable from both quality (SNR) and cost-effectiveness standpoints. Large used slides for graphic representation of these factors and to depict the dilemma of cable stereo television. The meeting was held at KQED's spacious sound studio. — John A. Carlson (Secretary-Treasurer), Monaco Labs, 234 Ninth St., San Francisco, CA 94103.

Toronto, May 14 — Colin Parkhill, RCA Broadcast Systems, discussed CCD technology for video cameras. Comparing CCD design approaches, he outlined the principle of frame transfer, pointing out that it is most suitable for RCA's CCD-S video camera. Design parameters and performance characteristics were contrasted with those of tube-type TV cameras. A videotape demonstration compared solid-state (CCD-S) and conventional (TK86) ENG video cameras to show superior dynamic resolution performance with minimum image lag by the CCD camera. The CCD-S utilizes a fixed and optimized shutter speed (1/500 sec), 403-element (pixel) CCDs, yielding 400 contour-corrected TV lines, with high sensitivity (4 ft/cd). CCD-S camera performance was shown to handle low illumination and intense light source exposures within a wide contrast range (1200:1 max). Standard NTSC and component video outputs are selectable.

Keith Pierce, RCA, joined Parkhill for the discussion period, answering questions that showed considerable interest in the advantages and limitations of CCD camera technology. It was brought out that testing methods need to be developed and standardized to evaluate such parameters as dynamic resolution and aliasing interference pattern associated with most digitized readout devices.

A demonstration tape with typical production scenes made under natural lighting conditions concluded the program. The meeting, held at the Output Restaurant, played to standing room only, with the 110 members and guests exceeding the seating capacity. — Stephen Cook (Secretary-Treasurer), 45 Smithwood Dr., Islington, Ont., Canada M9B 4S1.

Washington, D.C., April 30 — Herman Badler, CBS, and Robert Ruggerio and Edward Dalton, WETA-TV, provided a comprehensive report on the NAB convention held in Las Vegas in April. New equipment and ideas were thoroughly discussed. — Arthur Florack (Secretary-Treasurer), Eastman Kodak Co., 1555 Wilson Blvd., Arlington, VA 22209.

Washington, D.C., May 29 — A program, "Carry the Fire," was presented at the meeting, held at Eastman Kodak Co. The carrying of the Olympic torch from New York to Los Angeles for the Los Angeles Olympics was described. Also on the program was a demonstration, conducted by Michael Johnson, Eastman Kodak, of the Kodavision Camcorder. The demonstration was both live and taped. — Arthur Florack (Secretary-Treasurer), Eastman Kodak Co., 1555 Wilson Blvd., Arlington, VA 22209.

Obituary

James Stone

James Stone, a Life Fellow of the SMPTE, died May 10, 1985, at the age of 82. A pioneer in the motion-picture laboratory industry, his career began in 1930 when he became an assistant engineer at Consolidated Film Industries in Fort Lee, N.J. He remained with CFI until it was taken over by Bonded Services in 1961. He remained with Bonded Services as vice-president until his retirement in 1979.

During his career with Consolidated, Stone held various positions, including chief engineer and, later, general manager. He was instrumental in the planning and construction of a complete laboratory for printing and processing all types of motion-picture film. Among other assignments, in 1942, he installed the film laboratory for the U.S. Army Signal Corps at Wright-Patterson Field, Dayton, Ohio. Later, he engaged in research and development of two-color Trucolor for Republic Pictures. In 1953, he was appointed chief operating officer of the CFI Fort Lee plant.

While with CFI, Stone resided in Englewood, N.J., where he engaged in various community activities. He was a trustee of the Social Service Federation of Englewood, and served on the Board of Managers of the Englewood Community Chest. Following his retirement, he moved to Delray Beach, Fla. He was a member of Variety Clubs International and the Foundation of Motion Picture Pioneers. He joined the SMPTE in 1952 and became a Fellow in 1981.

Stone is survived by his wife, Charlotte, and two sons, Burton and Edward.

Erratum

SMPTE Controversy: Debate or Decision, by Harold J. Eady July 1985 Journal, p. 723

An error in the caption at the top of the page gives the word "compact" instead of "component." The caption should read as follows:

A result of committee work was the component television demonstration at the 19th Annual Television Conference in San Francisco, February 1985.