SMPTE 76th Convention October 18–22 — Los Angeles

The announcement of the general program and sessions will be sent to members in the latter half of August, about a week after this *Journal* is mailed.

Any information about a subject or paper which should be on the program should be telephoned at once to Program Chairman Ralph E. Lovell, National Broadcasting Co., Hollywood. Color — in television, cinematography and exhibition — is the special theme of this convention.

Plans for equipment exhibits are in the hands of Thomas J. Gibbons, 446 North La Brea Ave., Hollywood 36.

The Ambassador is the headquarters hotel. Reservations may be made by direct communication to: Ambassador Hotel, 3400 Wilshire Blvd., Los Angeles 5 (mention the Society and the 76th Convention). Also reservations may be made by writing, wiring or calling:

In New York, 455 Park Ave., MUrray Hill 8-0110

In Chicago, 333 N. Michigan Ave., ANdover 3-6222

In San Francisco, 210 Post St., GArfield 1-6217

In Dallas, 3906 Lemmon Ave., LOgan 5050

In Washington, D.C., Leonard Hicks, Jr., The Barr Bldg., EXecutive 3-6481

In Toronto, 392 Bay St.

The Ambassador's rate schedule per day, all rooms with bath, is:

Main Building

Single room, $9.00, 11.00, 13.00, 15.00, 17.00.

Double room (twin beds), $12.00, 14.00, 16.00, 18.00, 20.00.

Two rooms, bath between (three persons), $17.00, 19.00, 21.00, 27.00.

Parlor, Bedroom (one person), $25.00, 27.00, 31.00, 33.00.

Parlor, Bedroom (two persons), $28.00, 30.00, 34.00, 36.00.

Garden Studios

Room (one person), $15.00, 17.00, 19.00, 21.00.

Room, twin beds (two persons), $18.00, 20.00, 22.00, 24.00.

Room, private sun deck or terrace (one person), $19.00, 23.00; (occupied by two persons), $22.00, $26.00.

Large living room, large bedroom (one person), $35.00; with private sun deck, $45.00.

Large living room, large bedroom (two persons), $38.00; with private sun deck $48.00.

Section Meetings

The Pacific Coast Section's regular monthly meeting was held on June 17th in the El Capitan Theatre, Hollywood. Including the members of the American Society of Cinematographers who were invited in a body and other guests, the total attendance was 625 which is a record for a Pacific Coast Section meeting.

The program was a symposium broadly covering the problems connected with motion-picture films for television. The meeting opened with a delayed telecast of the Dinah Shore show and the Camel Caravan newsreel. Jack Webb then discussed the production of the Dragnet show and the show's director of photography, Edward Coleman, described the photographing of this very popular show.

Next, three Hollywood members of the American Society of Cinematographers discussed the photographing and lighting of the television films which they photograph. In each case, selections from the shows were displayed: Norwood Brodeen for the Loretta Young show; Hal Mohr, the Joan Davis show; and Walter Strenge, Waterfront and My Little Marjie.

Cameron Pierce of ABC-TV then delivered a very informative paper on the problems of projecting and transmitting television films. The paper was illustrated with slides showing the effect of lighting, picture composition and contrast, processing and other factors on the quality of the received picture.

The meeting was then opened for questions from the audience with the above speakers and the following persons associated with television films forming the panel of experts: Oscar Wick of NBC; Gil Wyland of CBS; Sid Solow, Consolidated Film Industries; Harlan Baumbach, General Film Laboratories; and Allan Haines, Pathe Laboratories of California.

Jack DuVall, Program Chairman of the Pacific Coast Section, is to be congratulated for his courage in attacking such an extensive subject on one evening, and for his excellent job of organizing and carrying out the program. A special vote of appreciation is extended by the Section to Ralph Lovell, member of our Pacific Coast Board of Managers and supervisor of Kinescope Recording at NBC, Hollywood, for his very significant contribution to the interest and showmanship of the program. Ralph organized and directed the use of NBC's 35mm film projection, direct-viewing television monitor and large screen projection providing facilities for the various demonstration material shown throughout the program. The selections from television film programs were simultaneously displayed on all three media. Still slides relating to displays were shown on both types of monitor systems.

The Society also wishes to thank Mr. Tom Sarnoff of NBC for the hospitality extended to the Society in placing the El Capitan Theatre and the NBC-TV viewing facilities at our disposal for the program. — *E. W. Templin*, Secretary-Treasurer, Pacific Coast Section, c/o Westrex Corp., 6601 Romaine St., Hollywood 38.

The Atlantic Coast Section Board of Managers held their regular monthly meeting at the Eastman Kodak offices, 342 Madison Ave., New York, on June 3. Everett Miller reported to the Board on the meeting of the Board of Governors held during the Washington Convention. Among pertinent topics reported and discussed were proposals for an administrative code for Boards of Managers of local sections.

The main business of the meeting concerned the nominations for officers and board members for the next calendar year. A nominating committee was appointed to consist of the following members: Everett Miller, J. Paul Weiss, George Lewin, Frank E. Cahill, Jr., William G. Offenhauser, Robert E. Shelby and William B. Lodge.

At the program meeting of the Section held in the evening following the Board of Managers Meeting, there were present 41 members and 6 guests. A paper on "Improved Techniques for Television Recording With Ultraviolet Photography" by John Brumbaugh and R. O. Drew, both of RCA, Camden, was presented by Mr. Drew. A tabulation was also made of comments concerning items of interest for the programs. Heading this list was Television Recording, followed by Sound Recording, Cinematography and Color Films.—*C. W. Seager*, Manager, Atlantic Coast Section, c/o Ansco, 405 Lexington Ave., New York 17.

Review of Proceedings of the Department of Defense Symposium on Magnetic Recording

On October 12-13, 1953, in Washington, D.C., a Symposium on Magnetic Recording was held under the auspices of the Department of Defense. The purpose was to provide a common meeting ground for technical personnel of both industry and the Department of Defense for presentation of papers and discussion on the general subject of research and development in the field of magnetic recording. While the emphasis was always upon military needs, most of the subjects discussed were also of interest to manufacturers and users of recording equipment and media in motion picture and television fields.

The Proceedings of this symposium have been released in a mimeographed report, dated March 1, 1954, by the Department of the Navy, Bureau of Ships, which was responsible for the organization of the meetings.

Two of the papers presented were sponsored by the SMPTE. These were papers #7 and #12 in the complete list given below. Dr. Frayne's paper reviewed much material which has already been published in the *Journal*, but also added some discussion of magnetic striping and electrical printing of multi-magnetic tracks for cinemascope release prints. Mr. D'Arcy's paper presented the various recording and reproducing characteristics which have been proposed and discussed at various meetings of the SMPTE Subcommittee on a Standard Reproduce Characteristic for 16 mm Magnetic Projectors.

Paper #1 by Youngquist and Wetzel of Minnesota Mining & Manufacturing Co. on "Ferrite-core magnetic heads" is substantially the same paper presented previously at the 74th Convention of the SMPTE. It should be of particular interest

at this time since its publication in the SMPTE *Journal* has been temporarily withheld, pending completion of the research work.

Papers #2 and #3 deal with a special Electron Beam Magnetic Reproducing Head which eliminates the low-frequency loss inherently present in conventional magnetic heads, and which makes it possible to reproduce low frequencies down to d-c without equalization.

Papers #4 and #5 deal with a magnetostatic reproducing head which at present is of interest principally for instrumentation work.

Paper #6 describes research work on the development of transistor amplifier circuits for use in playback equipment.

Paper #8 deals with every detail of the design of the tape transport system, from the feed reel to the fully wound take-up reel, including flutter, head contact, and fast forward and re-wind problems.

Paper #9 discusses the factors involved in recording machine performance with respect to flutter, constancy, and amplitude uniformity, as dictated by tape coatings, backings and reel design.

Papers #10 and #11 are of special interest to the field of data recording.

Papers #12 through #18 inclusive, all deal in detail with the general problems of standardization of frequency characteristics, methods of producing standard reference tapes, and using such tapes in the evaluation of commercial tapes and recorders.

Following is a Table of Contents of the Proceedings:

#1. "Ferrite-core heads for magnetic recording" by R. J. Youngquist and W. W. Wetzel

#2. "A vacuum tube for an electron-beam magnetic reproducing head" by L. E. Loveridge

#3. "Core structures for the electron-beam magnetic reproducing head" by J. W. Gratian

#4. "A magnetostatic reading head" by S. M. Rubens and A. B. Bergh

#5. "Performance characteristics of magnetostatic reproducing equipment" by W. R. Boenning

#6 "Playback of magnetic recordings through transistor amplifiers" by C. E. Williams

#7. "Components and mechanical considerations for magnetic sound on 35mm film" by John G. Frayne

#8. "Basic mechanical considerations for tape transport systems" by O. C. Bixler

#9. "Mechanical factors governing tape coatings, backings, and reel design" by J. E. Johnston

#10. "Magnetic recorders for data recording under adverse environments" by G. L. Davies

#11. "Improved performance of magnetic recording system for precision data" by Walter T. Selsted

#12. "Present status of a 16mm standardized reproduction characteristic" by E. W. D'Arcy

#13. "Magnetic tape testing on a comparison basis" by Walter H. Erikson

#14. "Characteristics of recent commercial ¼-inch magnetic tapes — effects of trends on Navy tape standardization" by F. Comerci, S. Wilpon and R. Schwartz

#15. "Some notes on problems encountered in the use of the standard reference tape" by Frank Radocy

#16. "A standard magnetic tape recording for standardizing the characteristics of Navy recorder-reproducers" by F. Comerci, S. Wilpon and R. Schwartz

#17. "Equalization of magnetic tape recorders and general recorder performance tests" by Frank G. Lennert

#18. "Methods of measuring surface induction of magnetic tape" by J. D. Bick

Copies of the Proceedings are being made available to Government and industry groups who are actively engaged in research and development, manufacturing, or direct application of magnetic recording techniques to Department of Defense problems and applications.

Inquiries for copies, with some information on the "need to know" should be directed to: ASTIA Document Service Center, Knott Bldg., Dayton 2, Ohio.— *George Lewin.*

Biographical Note

John George Capstaff has retired after more than 40 years of service in the Kodak Research Laboratories. Mr. Capstaff, head of the Special Photographic Department of the Laboratories, is an outstanding pioneer in photography, a noted inventor, an able experimenter, a meticulous instructor of neophyte photographers, and a well-known technical counselor to the motion-picture industry. He has received numerous awards in recognition of his many outstanding contributions to photographic technology and practice.

In a manner of speaking, Mr. Capstaff joined the Kodak Research Laboratories before they were organized. As a young man in England and in his spare time from his portrait studio, he experimented with photography, inventing several modifications of the photographic process. In 1912, learning from friends that Dr. C. E. K. Mees had been asked by Mr. George Eastman to organize a research laboratory for the Eastman Kodak Co., Mr. Capstaff applied for a position. He was engaged by Dr. Mees to work at Wratten and Wainwright to learn the technique of making color filters to prepare him to come to Rochester to take charge of the production of filters and the experimental work related to them.

Mr. Capstaff had not been long in Rochester before he began experimental work in several fields of photography. By 1914 he was working on processes of color photography, and a two-color portrait process was worked out by him and exhibited at the World's Fair in San Francisco in 1915. It was called the Kodachrome process but is related in name only to the Kodachrome process and materials currently in use. The process was also adapted to motion-picture photography by printing the two color images in register onto opposite sides of double-coated film by means of an optical printer.

Mr. Capstaff's outstanding contribution to photography is his invention of a practical method of making motion pictures for home use. Before 1914, much work had been done in this field by others and while the design of apparatus had progressed satisfactorily, the usual method in photography of making prints from negatives was, for the amateur motion-picture enthusiast, both expensive and complex. In 1914, Mr. Capstaff applied the reversal process to amateur motion pictures and became convinced that this method would be successful commercially where other methods had failed. He felt that the reversal process, which eliminates the need of additional film for the positive print and the printing operation, would reduce greatly the excessive cost of pictures for the motion-picture amateur. Then by making easy-to-use, low-cost equipment, a method would be available to do for the potential motion-picture amateur what roll film and the snapshot camera had done for the amateur still photographer.

The reversal process paved the way for inexpensive home movies, but with the film available at that time provided only limited camera exposure latitude, and the quality of the pictures was adversely affected by the unevenness in the emulsion coating. These difficulties were overcome by Mr. Capstaff by the use of a controlled second exposure which partly compensated for the effects produced by variations in emulsion thickness and, by partially correcting for improper camera exposures, effectively increased the exposure latitude. This improved reversal process gave much better results than could be obtained without the control of the second exposure and led to commercial success. The process was announced in January 1923, and the film and apparatus were introduced in June of that same year.

Mr. Capstaff continued his experiments, and many improvements in the equipment used for exposing, processing, and projecting the film were devised by him. In 1932, "Cine 8" film and apparatus were introduced, the film being processed in the same manner as the 16mm film.

In 1925, he began work on a three-color additive process of color photography which had been developed in principle by French inventors, the rights having been secured by the Eastman Kodak Co. in that year for application in the 16mm Cine Kodak program. This process, in which lenticulated film is used, the lenticules forming images of filters fitted in the lens, was introduced commercially in 1928. Research work on a 35mm lenticular process was carried on