

students who helped in this way included: Hal Arthur, C. J. Belsky, Stephen Coakley, George Cravens, Harry Dorsey, Bill Harnett, Stone Ishimaru, Dick Pollister, Al Richards, J. Reed Rummage, Herb Skoble, Don Wald and Frank Zuber.

Helping particularly on Public Address and Recording were USC Chapter members Ken Miura, Christopher Bristol, Roy George and Bill Leavenworth.

As was the case a year and a half ago, the Society was fortunate to have as Chairman of Public Address and Recording Ed Templin who made all the arrangements with the Statler to employ the Society's equipment to very good advantage. Ed had the help, in addition to the USC Chapter members, of the following from the industry: John Stark of Altec-Lansing, John Wasse of CBS, Jim Pettus of RCA, Chuck Lang of Warner Bros., John Jacobs of Westrex, Jean Valentino of MGM, Jim Larsen of Academy Films and Phil Thomas of Westrex.

The Society's public address and recording equipment has been repackaged by a task committee under George Lewin. A subsequent report will describe the committee's success.

For two "remote" meetings, held at the Academy Theatre, and for two concurrent

sessions (high-speed photography), a double-tape system was supplied through the courtesy of Ralph Lovell at NBC. Helping with the equipment from NBC were Frank Pontius and Gordon Donald. For the session at CBS Television City, Herb Pangborn provided staff and equipment for tape recording.

Equipment and operation for tape recording of the descriptions and discussions for the showings of CinemaScope at Twentieth Century-Fox were arranged by Jim Corcoran. At Universal-International, similar service was supplied through the efforts of Les Carey.

The Convention Program generally and many specific items, particularly those of interest to the general public, received wide attention in the press, as a result of the energetic attention of Harold Desfor, Chairman of Publicity.

The highlight of the week's entertainment was the usual semiannual banquet and dance which were under the Chairmanship of Sid Solow. Attendance at the Banquet was 430. A particular feature of the Banquet was the announcement of the SMPTE Board of Governor's action on April 26, placing the names of J. Arthur Ball and Col. Nathan Levinson on the SMPTE Honor Roll. The citations are given in the following story.

SMPTE Honor Roll

At the Society's 73d Semiannual Banquet the announcement was made that its Board of Governors had added the names of two pioneers to the Honor Roll. This was done upon consideration of a report of the Honorary Membership Committee, Chairman Fred T. Bowditch, and members F. E. Cahill, Lloyd Thompson, William C. Kunzmann and Elmer Richardson. The achievements were described:

Joseph Arthur Ball

J. Arthur Ball had 44 United States Patents granted to him as sole inventor in many cases, and in some cases as joint inventor. He had granted to him many foreign patents as well and four published papers were authored by him.

These published documents record im-

portant and significant contributions to the technical art of color picture photography. These contributions reflect the originality of thinking required and the attention to detail of Mr. Ball's work. The wide scope of the important contributions to the technical art of color motion-picture photography, made by him during his professional career, are a tribute to his versatility and ability. The importance of Mr. Ball's scientific and professional work is emphasized by the fact that many of his important contributions have stood the test of time.

Of prime significance were Mr. Ball's contributions in association with Gerald F. Rackett to the three-strip color motion-picture camera and the necessary optical and mechanical parts, which he invented

to insure successful operation of the basic three-color camera. The three-strip color motion-picture camera was, and is, an outstanding contribution to the technology of the 20th Century. It displays Mr. Ball's combined talents in the fields of mechanical engineering, optical science and photographic art. These cameras, to which he devoted his skill and imagination, have been a basic contribution in making commercial color cinematography a part of the lives of all of the people in the world.

Laboratory facilities and techniques were also improved by the contributions of Mr. Ball. He successfully conceived and developed many film-processing machines, including light-control mechanisms, film printers, film-registering devices, as well as new and novel methods to facilitate the handling of motion-picture films. In a large measure, therefore, the material brought from the motion-picture photographic field, into the laboratory, was significantly improved by Mr. Ball.

It is fitting to note not only the enduring contributions of Mr. Ball, but also that in the true sense of the word he was a pioneer in his field. In the early days of color cinematography Mr. Ball was a leader. In the two-color practices, he was an artisan and craftsman of the highest order. He explored, and contributed to, two-color motion-picture photography by developing taking devices, and improved techniques for registering and cementing together two-color motion-picture films. By 1950, he was actively working on processes utilizing four and five subtractive color components.

It is safe to say that commercial realization of color motion-picture photography was greatly enhanced through Mr. Ball's developments and engineering achievements in the field of optics and particularly in the development of retardation plates and multiple-aperture light dividers. His interest and ability led him into nearly every technical phase of the art of color motion-picture photography. Part of his early work on dye-transfer techniques was instrumental in the development of high-quality color motion-picture release print manufacture. He contributed to the technique of making animated cartoons in color motion pictures by inventing a new cartoon cell. The diversity of his

acquaintance with problems in color motion pictures is evidence of his skill.

Developments in the art of color reproduction have been contributed to by Mr. Ball's work in carbon-type color prints reproduced on paper, plastic or cloth, and mass reproduction methods therefor.

This summary serves only to highlight some of the significant contributions to color-picture progress made by Mr. Ball.

Nathan Levinson

Col. Levinson introduced the late Sam Warner to the sound motion-picture experimental work of the Bell Laboratories in the year 1924, and Warner Bros. started experimental work in sound motion pictures at the Vitagraph Studios in Brooklyn in 1925. After they were convinced that sound motion pictures were a reality, they leased the Manhattan Opera House in New York City, which became the first sound motion-picture studio in the industry and from the work done there under Samuel L. Warner and Col. Levinson, it was possible for Warner Bros. to present the first program of sound motion pictures to the public in the original Warner Theatre on Broadway, New York City, August 6, 1926.

Sound motion pictures were still in the experimental stage at that time. A few very fine short subjects had been made, but the only work done in connection with feature pictures consisted of the addition of musical scores to silent productions such as *Don Juan*, *The Better 'Ole*, etc. The services of competent engineering personnel to carry on this experimental work and extend it to the Hollywood Studios were required, and, after surveying the field of such men, Warner Bros. turned to Mr. Levinson. His entire work from a very early age had been devoted to communications engineering in wire and in wireless telegraphy.

Soon after Marconi discovered wireless, Mr. Levinson entered this field, and, in 1906, when President Theodore Roosevelt visited the Panama Canal, Mr. Levinson was sent by his company aboard the battleship Louisiana to demonstrate the use of wireless, between two ships, to the President. This was the first time that

two battleships out of sight of each other communicated with each other.

His work with the U.S. Army, the U.S. Navy, Western Union, Marconi Wireless Telegraph Co. of America and the Mutual Telephone Co. of Hawaii took him to Alaska and Hawaii, where he supervised the building of wireless stations for the U.S. Government and commercial organizations. The stations in Hawaii enabled this country to communicate with Japan and the South Sea Islands.

Returning to the states in 1915, he was radio engineer at the Mare Island Naval Station for the planning and operation of various government radio stations on the coast. While there, he worked on the plan for the first electric drive for battleships, the first Naval radio direction finder and airplane catapults for naval vessels.

Although his early years were spent working with the Navy, when World War I broke out, he was commissioned by the Army as a 1st Lieutenant and ordered to duty in the office of the Chief Signal Officer. He supervised the building of the Signal Corps Radio Laboratories at Camp Alfred Vail, N.J., now Fort Monmouth, and there attained the rank of Major.

Major Levinson remained on active duty until August 1919, then remained active in the reserve. Upon request of the Signal Corps in 1932, he planned the organization and equipment tables for a photographic general headquarters unit. In laying out this organization, he also planned the absorption by the Signal Corps of motion-picture personnel from

the motion-picture studios in Hollywood with the least possible disruption to any single studio, and the result of this planning proved to be so effective that in 1942, he was presented with a special Academy Award which was handed to him by the Chief Signal Officer of the Army for the Academy in recognition of a job well done over a period of nine years.

In December 1940, he was commissioned a Colonel in the Army of the United States and was active in Signal Corps reserve photographic work until health forced his honorable discharge in 1942.

Col. Levinson brought the first planned and coordinated Sound Department into the picture industry after joining Warner Bros. in 1926. Switching from disc recording to film in 1931, he installed an entirely new system for Warner Bros. with many improvements over such systems then in use by other studios. He again improved the recording of sound from photographic to magnetic film recording which was first used by Warner Bros. in March 1951.

Although he was head of Warner Bros. Sound Department, he had been active in most technical phases of that company. He was President of their subsidiary, the United Research Corp., President of American Camera Co. and Vice-President of Radio Station KFVB.

Just prior to his death, he planned a new color installation and with the assistance of Fred Gage and Albert Tondreau, developed WarnerColor, which is now being used by Warner Bros. on most of their color pictures.

New Index to Standards

All who use engineering standards should have this Index which in its eight full pages gives all American Standards in an index by subjects and in a list by numbers. Also shown are the status and stages of development of each. Dated February 1953, this index should replace the earlier one in all SMPTE binders of standards. The index is available at no charge to all who request it from Society headquarters, regardless of whether it is to go into a binder.

If you have an SMPTE (3-post) binder and would like to receive advance notice of all future new and revised standards, please advise Society headquarters.

The complete assembly of heavy binder and the 75 current standards is now available at \$15.00 (plus 3% sales tax on deliveries within New York City; or plus \$0.50 extra for postage on foreign orders).