

The 108th Technical Conference

A Report From the Conference Technical Programs Coordinator

The 108th Technical Conference and Equipment Exhibit took place October 4 through 9, 1970, at the New York Hilton Hotel. Engineers, scientists and technicians from the fields of motion-picture and television production, sound recording, optics, lighting, audio-visuals, education, photo sciences and instrumentation met, once again, in this metropolitan location in their capacity of engineers and leading executives and managers in the various fields, to exchange experiences and information, to discuss new techniques, to gage trends in the industry, to show the results of investigations, and to exhibit new products and machinery.

Another activity which is not always obvious, but which characterized this conference as much as all conferences of the SMPTE, was comprised of the Society's Board of Governors meeting and the many committee meetings, always held during the conferences — nine Engineering Committees, the Board of Editors, the Publications Advisory Committee, the Affairs Vice-Presidents and other meetings on finances, membership and future Conferences.

On this Conference program there were several special features, first announced in the September *Journal*: papers and panel discussions on "High-Speed Videotape Duplication and Distribution," on "Television Vertical Interval Signals," on "Home Videoplayer Systems" and all the Thursday and Friday sessions devoted to "Cable Television." On Wednesday morning the Equipment Papers and Demonstrations Session was comprised of 14 exhibitors' contributions.

Facilities and services for accommodating the week's activities were the re-

sponsibility of Arrangements Chairman Herbert R. Pilzer of Motion Picture Enterprises, Inc., serving under Conference Vice-President E. B. (Mike) McGreal.

The technical papers program generally was the responsibility of the Society's Editorial Vice-President, Rodger J. Ross, with K. Blair Benson as SMPTE Vice-President for Television Affairs concerned with the two-day Symposium on CATV.

Program Chairmen for the 108th Conference were Joseph A. Flaherty, Jr., and G. Norman Penwell. Their responsibilities were divided between the two segments of the Conference: the three-day overall technical papers portion and the two-day special symposium. Joseph A. Flaherty's responsibility included the 12 papers sessions, which were highlighted by many most interesting presentations (to some of which we will come back later in this report), and G. Norman Penwell was responsible for the four sessions comprising the Symposium on CATV.

The complex task of Program Administrative Associate Chairman fell to Paul F. Wittlig. Other Program Associate Chairmen and Program Topic Chairmen were: Program Associate Chairman for Photography and Film, John G. Baer; and Program Associate Chairman for Television, Edward P. Bertero.

Program Topic Chairmen were: Special Photographic and Television Systems, Leo Beiser; Television Production, K. Blair Benson; Instrumentation and High-Speed Photography, Charles Jantzen; Laboratory Practices, John M. McDonough; Panel Discussions, Rich-

ard T. Monroe; Theater Projection and Screening Room Practices, Boyce Nemeck; Television Systems and Equipment, Irving S. Rosner; Super 8: Picture, Sound and Television, Edgar A. Schuller; and International Liaison, Hans Chr. Wohlrab.

Other Committees, whose untiring efforts make the practical staging of such a complete and complicated conference as the SMPTE's really possible, were efficiently headed by the following persons: Papers Committee Chairman, Allan L. Williams; International Papers Chairman, Leonard F. Coleman; Arrangements Chairman, Herbert R. Pilzer; Equipment Exhibit Chairmen, Dom Capano and Victor James; Administrative Assistants also in charge of banquet, Robert Smith and Kurt Wulliman; Auditor, Norman Stein; Cocktail Party, Paul Kaufman; Entertainment, Burton Stone; Get-Together Luncheon, John Maynard; Golf Tournament, John J. Burlinson, Jr.; Hospitality, Charles Ahto; Hotel Arrangements, Ed Messina; Ladies' Program, Mrs. Herbert R. Pilzer; Membership, Irwin Freedman and Alvin Siegler; Projection, Public Address and Recording, Joseph R. Stiffl, with assistance from students from the Allen School for Motion Picture Projection; Publicity, Paul Meistrich; Registration, Edgar A. Schuller; Short Film Subjects, Nathan Alper; Television Luncheon, Richard S. Marcus; and Transportation, Sheldon Nemeck.

A measure of the success of the 108th Conference is, perhaps, given by the number of people who registered for papers sessions and exhibits; the overall figure for both was approximately 2,300. Here follows a brief description of some of the highlights of the Conference.



At the Get-Together Luncheon, Monday, October 5, left to right: Denis A. Courtney, Executive Secretary, SMPTE; Paul D. McGurk, Secretary, BKSTS; Roland Chase, Past Chairman, BKSTS; Carlos H. Elmer, Vice-President, Photo Instrumentation Affairs; Roderick T. Ryan, Vice-President, Photo Science Affairs; Byron S. Roudabush, Treasurer; William D. Hedden, Sections Vice-President; Kenneth M. Mason, Financial Vice-President; Rodger J. Ross, Editorial Vice-President; H. Theodore Harding, Secretary; and Wilton R. Holm, Executive Vice-President.

Awards and Honors

The Get-Together Luncheon, on Monday, October 5, brought all registrants together to hear Guest Speaker David V. Picker, President of United Artists, present most interesting remarks about the art and science of the motion picture, given with a great sense of humor. The occasion was also for honoring and applauding the recipients of distinctions from the Society. First to be presented by President Deane R. White, assisted by Executive Secretary Denis A. Courtney, were Certificates to the following newly elected Fellows of the Society:

Fellow Membership Awards

Charles Ahto attended Lehigh University and Mechanical Engineering Newark College, where he majored in Engineering. Prior to his present position with Tape-Films, Inc., he was Production Manager at DeLuxe Laboratories. He is at present a Manager in the New York Section of SMPTE.



Guest Speaker David V. Picker, President of United Artists, during his witty and much applauded after-dinner talk.

Raymond Balousek is at present administering the operation of a color laboratory for the production of motion pictures and filmstrips. He has developed techniques and procedures for the production of industrial motion pictures and filmstrips in color since 1936. He is a member of the Association of Cinema Laboratories and assisted in organizing the Detroit Section of SMPTE.

Joseph E. Bluth has published papers in the *Journal* and in the *American Cinematographer* regarding electronic photography and videotape recording. He is a member of the Board of Trustees of the National Society of Television Arts & Sciences, also of the Board of Governors of this Society and a First Vice-President of the Hollywood Chapter of the same. He is at present a Professor and Chairman of the Board of Columbia College at Los Angeles. He has served as a consultant to Home Entertainment Company, Inc., various companies within the motion-picture industry, the United States Navy for training programs, and American Airlines for in-flight picture systems. He has held seminars for motion picture



A Group of those elected as Fellows — 1970: (front row left to right) Paul F. Wittlig, CBS Television Network; Arnold C. Schieman, National Film Board of Canada; Paul H. Preo, Eastman Kodak Co.; John H. Maynard, Eastman Kodak Co.; Jean-Pierre Lavanchy, Bolex International S.A.; Lee H. Schank, accepting for Sherman M. Fairchild; Raymond A. Balousek, Producers Color Service, Inc.; and Charles A. Ahto, MPO Videotronics; (second row, left to right) Charles B. B. Wood, British Broadcasting Corp.; Burton Smith, Cine-Chrome Laboratories Inc.; Emery Meschter, E. I. du Pont de Nemours & Co.; Bernard R. Kantor, University of California; Bruce S. Jamieson, Jamieson Film Co.; Edward H. Reichard, accepting for Lewis Mansfield, Consolidated Film Industries; Frank Davidoff, CBS Television Network; and Petro Vlahos, accepting in behalf of Frank P. Clark, Motion Picture Research Center.



Deane R. White, President; David Picker, Guest Speaker, President, United Artists; G. Carleton Hunt, Past President; E. B. (Mike) McGreal, Conference Vice-President; W. T. Wintringham, Engineering Vice-President; Edward H. Reichard, Vice-President, Motion Picture Affairs; K. Blair Benson, Vice-President, Television Affairs; Herbert E. Farmer, Vice-President, Educational Affairs; Joseph A. Flaherty, Program Chairman; and Herbert R. Pilzer, Arrangements Chairman.

unions, with regards to videotape, electronic cameras and electronic photography.

Frank P. Clark received his Masters in Cinema at the University of Southern California. He is the author of the SMPTE book *Special Effects in Motion Pictures* published in 1963 and has received a Certificate of Commendation from the Society. He is presently the Chairman of the SMPTE Education Committee on the West Coast. He is now conducting research through various disciplines into current problems and into long range studies of more efficient, cost effective motion-picture and television systems. He is owner of a company called Special Effects Electronics since 1960. He made props and handles special effects in studios and independent films from 1964 through 1968. He was elected to membership in Delta Kappa Alpha, a national honorary cinema fraternity, and is a member of the Society of Photo-Optical Instrumentation Engineers.

Frank Davidoff obtained his B.E.E. degree at the City College of New York in 1942 and his M.E.E. degree at New York University in 1947. He designed video test signal generating equipment in 1958 and followed that with an improved monochrome kinescope film recorder in 1962. Recently he developed an automatic wire-lock system for color television. He is presently the Chairman of the IEEE Subcommittee on Video Signal Transmission.

Sherman M. Fairchild is the inventor of the Fairchild Aerial Cameras and Fairchild Motion Picture Cameras on which he has written papers. Among his other engineering achievements is the invention and design of Front Projection Equipment that was the first to be used in the USA and he developed one of the first airplanes with a cabin for the pilot. Many are his achievements in electronics and photography. He is considered by the whole world as an outstanding engineer-industrialist. He is at present Chairman of the Board of the Fairchild Camera & Instrument Corp., and of the Fairchild Hiller Corp. He is also a partner of Front Projection Company, Long Island City, N.Y., a Director of Conrac Corp., owner of the Fairchild Sound Equipment Corp. and of Cine Magnetics, Inc.

Dr. Bela Gaspar is one of the foremost pioneers in color photography since 1926. He showed a multilayer subtractive tricolor film publicly as early as October 25, 1933, at the 118th meeting of the German Kinotechnical Society. He originated two principles now in universal worldwide use in color photography and motion pictures: (1) integral mask of color negatives and (2) filterless layer arrangement. He developed the dyebleach color processes for color motion-picture and still photography, with superior color quality and permanence. He developed and patented material for making automatic color separations with automatic masking as an alternative method to the integral mask.

He also developed and patented a method of making a silver soundtrack in subtractive multilayer film by local redevelopment or reblacking of a silver halide sound image. This method is now in general use worldwide in all multilayer motion-picture processes since its inception in 1931. He holds many patents for these and other inventions, including processing multilayer materials by colorization and decolorization. He is at present a consultant to the industry.

Walter Gentleman received the Higher National Certificate of Engineering at the U.K. School of Art. His work in engineering includes model matte miniatures with the Rank Organisation; rear and front optical and stage process projection. He has conducted travelling matte research as well as optical research and was Director of Special Effects for the National Film Board Systems Engineering Expo '67. In his present position he is involved in many projects, including writing, lecturing and cinematography, as well as directing and producing documentary and educational features. He has received various awards and degrees; to mention a few, the O.S.C., B.S.C., MBKSTS and the ARPS. He is now the President of the Society of Filmmakers and is a member of the Directors Guild of Canada and the Association of Cinetechicians.

Winton Christoph Hoch is at present a motion-picture cinematographer and consultant. He holds a BS in Physics from the California Institute of Technology. From 1931 to 1951 he was a physicist, designer and cinematographer with the Technicolor Motion Picture Corp. Currently, besides being active in freelance cinematography, he also is active in the design of equipment. He exerted great influence on proper lighting for color in early Technicolor pictures and taught many other cameramen how to shoot color motion pictures properly. He won Oscars for the color cinematography of *Joan of Arc*, *She Wore a Yellow Ribbon* and *The Quiet Man*. This last film is memorable for its delicate soft pastel shades of color. He also won an Emmy for the TV series *Voyage to the Bottom of the Sea*. He is today, and has been for years, one of the "great" motion picture cameramen, combining engineering skill with consummate artistic ability.

Bruce Jamieson majored in Mechanical Engineering at the University of Texas from 1942 through 1945 and was commissioned in the U.S. Navy in 1945. He was engaged in various production and laboratory positions with Jamieson Film Co. beginning in 1946, assuming the duties of the chief executive in 1956. Mr. Jamieson participated in engineering and development of new color motion-picture processing machine designs which resulted in the award of a U.S. Patent in 1959. He produced and directed numerous industrial and military films and won the Blue Ribbon Award at the American Film Festival in 1963. As chief executive officer of the Jamieson Film Co., he directs the activities of the company, which is engaged in the production of motion pictures for

business, military and television use, and manufactures color film processing machines for TV stations and networks, commercial laboratories and industry installations. Mr. Jamieson is a member of the Association of Cinema Laboratories and is presently serving on the Board of Governors.

Bernard Kantor has directed several research projects for the United States Office of Education. He is also the Motion Picture Editor for *Compton's Encyclopedia* and the *Encyclopedia Britannica Junior*. In 1955 he developed a process of infrared films of audience reaction to motion pictures in total darkness. He has had an extensive career in the motion-picture industry, having worked professionally in various capacities full time from 1950 to 1958 as cameraman, editor, writer and producer in documentary, educational and television films. He has just written, produced and directed three educational films in teacher training and is currently producing and directing a medical film for Armour Pharmaceutical on the Total Thyroidectomy in the Management of Thyroid Disease. In the very near future, he plans to produce an educational film on filmmaking, *The Soundmen and The Editor* and he is presently engaged in writing a book, in collaboration with his wife, on *How a Motion Picture Studio Works*, for juvenile readers. Bernard Kantor is a member of many professional organizations; the Academy of Motion Picture Arts and Sciences, Writers Guild of America, National Society for the Study of Education, American Educational Research Association, Department of Audio Visual Instruction of N.E.A., to name only a few.

Jean Pierre Lavanchy received a Diploma of Mathematics and Physics at the Swiss Federal Institute of Technology in Zurich. Since 1957 he has been engaged in research and development for Paillard S.A. and Bolex International. At the present time, he is doing research and development work in the audio-visual, television and motion-picture fields. Mr. Lavanchy is a member of the Deutsche Kinotechnische Gesellschaft and of UNI-ATEC.

Lewis Mansfield was educated at the RCA Institute of Engineering and is at present engaged in plant management at the film processing laboratory of Consolidated Film Industries. Film awards with which he has been credited include *Friendship Seven*, General Dynamics, 1962; *The Better Way*, Santa Fe Railway, 1962; *The Voyagers*, General Dynamics, 1963; *Goblin on the Doorstep*, Grumman Aircraft, 1963; and *Living in Space*, General Dynamics, 1966. His films on cinefluorographic film analysis and Production Technics were presented to the Fifth Rochester Symposium on Cineradiology in 1964 and 1965 and won Mansfield a Cine Golden Eagle. He is an Associate Member of the American Society of Cinematographers, Affiliate Member of American Cinema Editors and an Active Member of the Academy of Television Arts and Sciences.

John Maynard was previously Regional Sales Manager for the Motion Picture and Education Markets Division of the Eastman Kodak Company in Chicago. He has been an active participant in SMPTE affairs, has held a number of offices in the SMPTE Chicago Section and is one of those responsible for mounting SMPTE national conferences in Chicago. He is a member of the Academy of Television Arts and Sciences, the American Society of Cinematographers and Radio Television News Directors' Association.

Emery Meschter received his A.B. degree at Amherst in 1930 and his Ph.D. degree in Physics at Cornell in 1937. He has been with du Pont since 1937, working as a physicist in their film division until 1946, when he became the Research Director at the Patterson Screen Division, involved with TV phosphors and x-ray screens. He then went on to become Manager of the Parlin Research Laboratory, where he was engaged in many projects. One of these was the Du Pont synthetic binder color positive release film Polyester base, on which he wrote a paper for the SMPTE *Journal* in 1955. Emery Meschter is a member of the American Chemical Society and is on the Photo Standards Board of the American National Standards Institute.

Otis W. "Duke" Murray holds an M.S. in Chemistry. He has held the post of Research Chemist for E. I. du Pont, that of Assistant Director of Research for the Cinecolor Corp., and became a Vice President of that company. He led Pathe Laboratories as its President and became ultimately a Vice President of Universal Pictures. He has written many papers, alone or co-authored, on color photography, and holds 19 patents, assigned to E. I. du Pont de Nemours & Co., on color technology inventions. Much of the technological development work he carried out has been put to use in today's color technology practice. One of his programs (carried out under Emery Meschter) was the work which led to sharper color films through the use of a top magenta layer (MCY). "Duke" Murray has been a strong supporter of the SMPTE for many years. He has served on the Board of Managers, as a member of the Color Committee, on diverse Section Committees and on several Technical Conference Committees. He was a proficient chemist and is now a capable executive.

Frank E. Pontius is at present Vice President with Westrex, in charge of Marketing (domestic sales) of sound recording and reproducing equipment. He holds a B.S. in Chemical Engineering and is an Active Member of the Audio Engineering Society. He has served the SMPTE as Chairman of the Sound Technicians Subcommittee and as a member of the Sound Committee of which he was made Chairman in 1966. He has published a paper with the title "Improvements in Performance of the Westrex 3-D Records" and holds patents on magnetic recording heads and methods of mounting magnetic

recording heads. He has led the effort on much of the development work that has resulted in the Westrex product line. He is currently involved in evaluating stereo optical sound. Frank is recognized in the Hollywood area as one of our experts in sound. He was worked long and effectively in motion-picture sound and has earned the respect he commands.

Paul Preo attended the University of New Hampshire where he studied Mechanical Engineering for two years. He also studied Photo Technology at the Rochester Institute of Technology. Since 1945 he has worked on the development of motion-picture film lacquers and lubricants and has conducted studies into the behavior of motion-picture film during projection and in cameras. He has engaged in studies relating to motion-picture screen luminance and methods of measuring and has designed tests and apparatus to evaluate and improve film performance in cameras and projectors. Paul Preo has continued studies in the above categories and in human vision behavior during perception of motion pictures. Presently he is working on the development and implementation of test films and film handling techniques designed to improve motion-picture presentation. He is Chairman of the SMPTE Film Projection Practices Committee and is a member of the New York Association of Motion Picture Projectionists.

Stanley Frederick Quinn received his education at the Southall College of Technology (London, England) and is a Graduate of the I.E.E. (London). He has the grade of Chartered Engineer in England and is a Registered Professional Engineer in Quebec. He is at present Chief Development Engineer for the Canadian Broadcasting Corp. Some of his previous positions have been those of Engineer and Senior Engineer, Plant Department of the CBC, and Engineer with the EMI Research Laboratories in England. He is a member of the I.E.E. (London), the Royal Television Society and the Corporation of Engineers of Quebec. He has served the SMPTE in many capacities and on diverse committees such as the one on Color Temperature of Color Monitors, the JCIC Task Force on Colorimetry and the David Sarnoff Award Committee, and is at present a member of the Board of Editors. He has been the author or co-author of numerous papers related to his scientific and engineering work. He designed video switches for the BBC; he designed and developed color flying-spot scanners for telecine. He organized and directed the creation of the Development Department of the Canadian Broadcasting Corp. His latest efforts are concentrated on color rendition in color telecine, film review rooms for color television and on other related fields in broadcast engineering.

Tryggve T. Ramqvist is at present Chief Engineer at FOA, the Swedish Defence Research Institute. He has been a major worker in the entire spectrum of high-speed photographic systems for more

than 20 years. In 1968 he organized and conducted the 8th International Congress on High-Speed Photography at Stockholm. He has published important work under the title "Some Swedish Cameras for High-Speed Photography" in the *Proceedings* of the 4th International Congress in that field. As Chief Engineer of FOA he supervises a large work program that employs all modern approaches to metric instrumentation of weapons testing. Mr. Ramqvist was designated Deputy Chairman of the 9th International Congress on High-Speed Photography, August 1970, in Denver, Colorado, USA. The SMPTE Fellow Award was presented to Mr. Ramqvist by President Deane R. White during the banquet of the 9th Congress.

Arnold Schieman attended the Ottawa Technical School and in 1945 was graduated from the U.S. Army Signal Corps Photographic Center. He joined the National Film Board in 1942 and specialized in special effects until 1959. He was responsible for the research and elimination of "motor boating" on Bell & Howell Model J Printers and later co-authored a paper on the subject. He also developed the NFB 8mm reduction printer with a collimated lens system; designed the NFB additive color filmstrip printer and was responsible for the development of the Board's additive color reduction printer. In his present position, Arnold Schieman is responsible for the Laboratory Services and Equipment development of the plant. He is also a member of the SMPTE 16 and 8mm Committee and the SMPTE Progress Committee. He has been Chairman of the SMPTE Montreal Section and at present serves as a Manager of the Section. He is also a member of the Canadian Standards Association.

Burton Smith received his B.S. degree at San Jose State College in 1937. He then went on to Eastman Kodak Co. in Rochester where he did the initial work on the silver soundtrack-Kodachrome print in 1946. He was in charge of the conversion of the Kodachrome processing machine. He developed the first magenta and yellow complete solution recovery system in 1954. He founded Cine-Chrome Laboratories in 1957 and has remained President of the Company ever since. Burton Smith completes his term of office at the end of this year as a Manager in the SMPTE San Francisco Section and is also a member of the Society of Photo-Optical Instrumentation Engineers, Society of Photographic Scientists and Engineers, National Microfilm Association and the Association of Cinema Laboratories.

Lawrence Weiland received his B.S. and BSEE degrees at Columbia University and has many accomplishments to his credit in the television industry. In 1950 he participated in the designs of some of the first automated television stations; designed the first completely self-contained television mobile unit for the Eisenhower inauguration in 1952 and worked as a member of the NBC-RCA Princeton team colorizing the first 4-head VTR. He

subsequently installed the first videotape network color delay facility in Burbank, Calif., in 1959. Lawrence Weiland has written many technical papers for the television industry; in 1953 he presented a paper to the American Acoustical Society on a self-contained TV mobile unit; in 1961 he had a paper on time-base stability in video magnetic recording and published a paper in *Broadcast Engineering* on time-base compensation in wideband magnetic recording in 1961 and lectured on product planning in 1963. He is a member of the Royal Television Society, the Commonwealth Club of California and the National Association on Educational Broadcasting.

Paul F. Wittlig holds at present the position of Associated Director Production Development, Engineering and Development with the CBS Television Network. Previously, also with CBS Television Network he was Director Special Systems

Development Operations and Director Technical Operations New York Operations, and earlier he was Studio Supervisor, New York Technical Operations, CBS Radio Network. He holds an A.B. from Marietta College. He developed special electronic and optical effects for television and is the inventor of Video Scene and Special Montage, patented as "Methods and Apparatus for Television Montage." He has published papers on "Large Studio Backgrounds Projected From Video Sources" and on "New Horizons in Studio Production." He is currently engaged in engineering development work, other than camera facilities, in the area of television production. He is a member of the National Academy of Television Arts and Sciences (past Trustee and Governor), the Society for Information Display and the I.E.E.E. He has been very active in the New York Section of the SMPTE of which he has been recently elected as Chairman for 1971.

Charles Barrington Bishop Wood is an outstanding figure of Great Britain's broadcasting industry. He went to Sir John Cass College in London. After that he was being trained as a Mechanical Engineer, employed in the Engineering Division of Caltex Oil Co. When war broke out he joined the Royal Airforce Volunteer Reserve where he became a trainee of No. 1 Radioschool Yatesbury. Ever since he has been active in broadcasting and wireless transmission. During the war he was Technical Officer with the RAF and a Radar Assembly Unit Commander. After the war he joined the British Broadcasting Corp. where he is at present Head of the Image Scanning Section, Studio Group, of the BBC Research Dept. His work there is dedicated to research into means of origination of color television signals, telecine, film and recording. He has published an extensive number of papers on such subjects as telerecording, suppressed frame systems,



SMPTE Award Winners (left to right): John Christensen receiving in behalf of Dr. Peter C. Goldmark the Progress Medal Award; Jamison Handy — Eastman Kodak Gold Medal; Willy G. Engel — Herbert T. Kalmus Gold Medal; Charles B. B. Wood — Journal Award; Charles H. Coleman — David Sarnoff Gold Medal; Richard E. Putman is presented by President Deane R. White with a Certificate of Commendation in recognition of his outstanding contribution and dedicated efforts as Chairman of the SMPTE Progress Committee 1964-1969.

transmission of news film over the transatlantic telephone cable, cablefilm equipment, and a number of papers in reference to color film for television. He is an Honorary Fellow of the BKSTS and was awarded the President's Prize of that Society in 1967. He also received the Royal Television Society Geoffrey Parr Award in 1968. (He received during the 108th Conference the SMPTE Journal Award; see below.) As a member of this Society's Color and Television Committees he has provided valuable liaison between British technical committees and the SMPTE.

Next on the program was the annual presentation of medals and awards to those chosen and previously announced by the Society's Board of Governors.

Progress Medal Award

The recipient of the Progress Medal Award was Dr. Peter C. Goldmark, CBS Laboratories. John W. Christensen, Vice-President and Associate Director of Research for CBS Laboratories accepted this Award from President Dr. Deane R. White on behalf of Dr. Goldmark. The President's citation read as follows:

Dr. Goldmark's career has covered a broad segment of scientific endeavor from its origin with Pye Radio in England in 1937, continuing through various positions with the Columbia Broadcasting System to that of President of its Research Laboratories. His research interests covered an enormous spectrum of electronic activities in radio, television, medicine and film. His many patents and scientific awards attest to his success in these endeavors. The Progress Medal Award is in recognition of past contributions to the television industry and the record industry, and especially for the development of the electronic video recording system (EVR).

E. I. du Pont Gold Medal Award

The E. I. du Pont Gold Medal Award had already been presented during the Ninth International Congress on High-Speed Photography to C. David Miller of NASA's Lewis Research Center with the following citation:

The E. I. du Pont Gold Medal Award for 1970 is presented to C. David Miller in recognition of his important contributions to the engineering phases of high-speed photography, and especially for the development of the basic principle of the image-switching camera now in world-wide use for the photography of explosive phenomena.

Eastman Kodak Gold Medal Award

Jamison Handy, The Jam Handy Organization, Inc., was awarded the Eastman Kodak Gold Medal Award with this citation: for his pioneering and continuing efforts in the arts and science of communication for training, education and motivation in industry, schools, churches and the military. With the introduction of mass production methods calling for the training of thousands of sales and service personnel, he formed in 1911 the organization which bears his name and since then has been deeply involved with the production and use of graphics, still photography and motion pictures for the presentation of ideas. He

was instrumental in the development of the present filmstrip format, early slide-film projectors and many different types of training simulators. He has continually sought new ideas and mixtures of techniques to achieve the ultimate in communication.

Honor Roll

The name of Max Skladanowsky was placed on the Honor Roll of the Society with these remarks by the President:

Max Skladanowsky was one of the inventors who belong in the history of cinematography. In 1895, he developed a bioscop projector with which he showed motion pictures for the first time as part of the program at the Berlin Wintergarten Theatre. Beginning about 1890, and without financial aid, he designed and built all equipment from camera to projector, including parts for splitting, perforating, printing and processing of film. He produced many of his films and showed them throughout Germany and many other European countries between 1895 and 1897.

Journal Award

The Journal Award which recognizes the outstanding paper originally published in the *Journal* of the Society during the previous calendar year, was bestowed on Charles B. B. Wood, British Broadcasting Corp., for: "Some Considerations in the Television Broadcasting of Color Film" published in the April 1969 issue of the *Journal*.

Journal Award—Honorable Mention

Journal Award Honorable Mentions went to the following authors of papers published in the *Journal* during 1969:

Ivan G. Ryman and William K. Overturf, Houston Fearless Corp., Los Angeles, Calif., for "A Review of the Drying of Silver Halide Photographic Film" published in the January 1969 *Journal*.

D. H. McRae, Canadian Broadcasting Corp., Montreal, Canada, for "High-Quality Color Rendition in Color Television" published in the March 1969 *Journal*.

Lennart Ljungberg, Svenska Elektronik-Apparatur AB, Stockholm-Enskede, Sweden, for "Standardized Sound Reproduction in Cinema and Control Rooms" published in the December 1969 *Journal*.

Herbert T. Kalmus Gold Medal Award

A very well deserved Herbert T. Kalmus Gold Medal Award was given to Willi G. Engel, Bell & Howell Co. His merits were accredited with these words:

Willi G. Engel, of the Bell & Howell Co., Professional Division, who was personally responsible for approximately ninety (90) design changes to alleviate the performance shortcomings of the original light valve used as a light modulator in additive color printing machines, has, through his ingenuity and dedicated perseverance, earned the respect and gratitude of the industry. His improvements and developments of this light valve have made modern additive color printing a reality.

David Sarnoff Gold Medal Award

Charles H. Coleman, Ampex Corp., received the David Sarnoff Gold Medal

Award, the citation reading as follows: for many original inventions, in particular for time domain electronic signal correction, making possible direct recovery of color signals from videotape, and for the conception and development of highband color videotape recording, now accepted throughout the world as standard in television broadcasting.

Samuel L. Warner Memorial Award

Finally, the Samuel L. Warner Memorial Award was given to Gordon E. Sawyer, Samuel Goldwyn Studios, with this citation:

Gordon E. Sawyer, Technical Director of Samuel Goldwyn Studios, for pioneering and maintaining the highest engineering standards in sound recording for motion pictures through the development of advanced equipment and original techniques; for encouraging the highest possible standards throughout the industry by leadership in technical societies and associations and fostering of joint industry research and development; and for continued promotion of programs for the technical training of sound recording personnel.

Certificate of Commendation

Richard E. Putman was honored by the Society with a Certificate of Commendation in recognition of his outstanding contribution and dedicated efforts as Chairman of the SMPTE Progress Committee from 1964 through 1969.

Honorary Fellowship of the BKSTS

Wilton R. Holm, Executive Vice-President of the SMPTE was presented by Roland Chase, Past Chairman of the BKSTS, a Certificate as Honorary Fellow of that Society.



Wilton R. Holm, Executive Vice-President, and Roland Chase, Past Chairman of the BKSTS.

Technical Program Highlights

The program was one that can be characterized as having numerous special subjects covered in depth by at least several papers and by panels. These will bear description here.

High-Speed Videotape Duplication

One of the sessions immediately following the awards presentation was a highlight of the Conference. There were two most interesting papers on tape duplication: "Thermal Contact Duplication of Videotapes" by William B. Hendershot III, Memorex Corp., Santa Clara, Calif.,

and "Thermoremanent Duplication of Magnetic Tapes" by J. E. Dickens and L. K. Jordan, E. I. du Pont de Nemours and Co., Inc., Wilmington, Del. Both papers described the very interesting properties exhibited by tapes coated with chromium dioxide (CrO₂). Advantages of this new duplicating medium were given by the authors as independence from real-time duplication, or in other words the possibility of much higher speeds during the duplication process, the absence of head-wear on account of the fact that the thermal duplication process is a contact process with no heads involved, and interesting characteristics of signal gain and loss. The papers were followed by a lively Panel and Discussion. Representatives from advertising, broadcasting and manufacturing interests were present and discussed the impact of this new development on tape usage and on the design of tape equipment.



Program Chairman Joseph A. Flaherty, Jr., (right) with Program Administrative Associate Chairman Paul F. Wittlig (left).

Super 8: Picture Sound and Television

This was the title and theme of one of the Tuesday morning concurrent sessions. It turned out to be one of the most interesting sessions on account of its overall content and the varied papers included. These papers covered the whole field of super 8 technology. Reduction printing systems and equipment, operational laboratory procedures, cartridge projection methods, applications of super 8 film in given areas, such as TV, sound recording and reproduction on super 8 were discussed and described before a large audience whose attention never failed. Examples of super 8 color film results were shown on a 6- by 8-foot back-projection screen. Among these, John Lant, Canadian Broadcasting Corp., Toronto, presented some footage with a xenon arc projector, which was distinguished by an image quality in no way inferior to 16mm projection; and Dr. Diether Noack, Geyer-Werke GmbH., Hamburg, Germany, presented prints with optical soundtracks of a notable degree of quality. It is planned to publish these papers as a group in the *Journal* early in 1971.



Some of the members of the Local Arrangements Committee (left to right): Irwin Freedman, Membership; Robert Smith, Administrative Assistant; Sheldon Nemeyer, Transportation; Alvin Siegler, Membership; and Paul Meistrich, Publicity.

Television Vertical Interval Signals

The session with this title was noteworthy for the great amount of thinking which has gone into the many uses the vertical blanking interval can be put to. Color reference signals, data transmission for station-to-station communications, time/frequency signals, test signals for international television transmissions with respect to line-number differences among diverse standards, consumer information systems, automatic performance measurement and control by insertion of test signals, test signals and their analysis, related encoding and decoding systems and others figure among the many fascinating possibilities the blanking interval offers. Nine papers dealing with all these applications were read before a capacity audience; they also will appear as a group in the *Journal*.

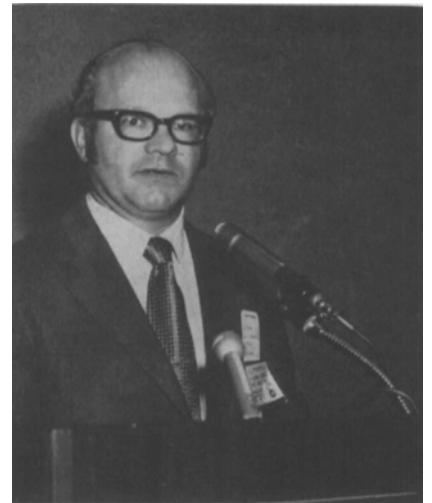


Herbert E. Pilzer, Arrangements Chairman.

Home Videoplayers Systems

This session for which only one introductory paper had been scheduled, and whose main feature was a Panel Discussion on "Prerecorded Image Techniques" attracted an audience of about 200, which followed with undivided attention the panel's development of the subject. The many different image storage systems for home video reproduction were discussed from many diverse angles and points of view. It is natural to expect that such a

theme as this will generate a huge amount of interest, since home video reproduction by means of the omnipresent TV receiver is just coming over the horizon. This panel was informal, without advance manuscripts; it is now in the process of being transcribed from the tape recordings made and is to be scheduled for printing in the *Journal*.



G. Norman Penwell, CATV Symposium Chairman, during his remarks at the TV Luncheon.

Cable Television — Symposium

Following the format of recent programs, the last two days of the conference were dedicated exclusively to a single topic, which this time was Cable TV. Of the 17 authors making oral presentations it is expected that the majority will soon provide manuscripts that can be combined with the transcripts of the two panel discussions for a Proceedings to be published early in 1971.

At the special luncheon on Thursday, President White welcomed those of Cable TV who were coming to a SMPTE Conference for the first time and introduced guest speaker Sol Schildhause, Chief, Cable Television Bureau, Federal Communications Commission. Following are some excerpts from Mr. Schildhause's speech on "Futures." The complete version is planned for publication in the *CATV Proceedings*.

"We're all here because of our common interest in CATV and I'd like to view with

you some of what's going on in this very complicated process of evolving assemblance of a broadband cable system. . .

"I suppose that a presentation like this ought to have a catchy message. Your program chairman thought the word "Futures" would be an appropriate tag. But since this industry is now caught up in a slowdown as the federal government tries to resolve the dilemma of how to open up the big markets without undoing the structure of broadcast TV, I've had to hold off funny guys in my office who suggested that the title ought to be changed to: 'Futures, if any.' I've rejected that, however, and have, instead, opted for the more promising tone of something like: 'Tomorrow is coming, ready or not.'

"What I really mean is, like it or not, all signs are that new advances stand ready to make for new excitement in television and other broadband communications. The potential for change is really startling. . . .

"Cable — with its 12-20 television channels now available and with the near-term prospect of 20-40 channels more — makes for new capacity and gives us the basis for that promised, all-purpose home

and serious consideration is being given to extending the ban to radio stations and to newspapers. (What that means is that a TV station can't own a cable system inside its Grade B contour — and that contour extends out in all directions from the transmitter for a distance of some 70-80 miles. It means, too, that similar separation from cable ownership is being contemplated for radio stations and for newspapers. And it also means that CBS, NBC, and ABC can't own CATV any place in the U.S.)

"And, we're pushing forward so that beginning next April 1 systems of substantial size must begin offering some of their own programming (and, hopefully, at a more sophisticated level than weather and news). So, cable will soon be in the program development and time-selling business.

"If you were present this morning, you heard a lot about that program origination is fast becoming a major interest of cable people throughout the country. About 250 of the 2500 systems do some local origination apart from the automatic services. Surprisingly, most of these systems are reportedly smaller than the 3,500 or larger subscriber group which the FCC says must

"But, that's not so terrible, I guess. A couple of generations of investment and experience in broadcasting and telephone count for something and just can't be thrown away. But neither can we scrub the promise of cables, satellites, and other advances.

"In our complex society, each segment presses for its special place. And a good part of the direction of the new forces will emerge from the hammering and bumping that goes on in Washington.

"And that's where I'd like to leave this as we approach a new closing in on the problem over these next two months."

Mr. Schildhouse was much applauded during many passages of his discourse.

Equipment Papers

Wednesday morning was reserved for equipment papers and demonstrations. There were papers on "Masterel Plastic Film Case" by Robert Gross, Masterel Industries, Inc., White Plains, N.Y.; "The TD 404 OEA Transmission Densitometer" by Roel Elzinga, Macbeth Corp., Newburgh, N.Y.; "Xenon Lamphouse" by Dan Miller, Optical Radiation Corp., Monrovia, Calif.; "Compact Processors" by Fred Ehrman, Bell & Howell Co., Chicago, Ill.; "Steenbeck Horizontal Editing Machines" by William Engstler, General Enterprises, Inc., Kensington Md.; "Krypton Halogen Lamp for Scoop-Type Fixtures" by James L. Davis, Sylvania Electronic Products, Danvers, Mass.; "The KEM Rapid Editing Table" by Robert Rowen, Kem Electronic Mechanic Corp., New York, N.Y.; "PSC/Focatron for Acme Printers and PSC Film Gate Spectrophotometer" by John B. Olson, Producers Service Corp., Glendale, Calif. And there were demonstrations such as: new 16mm Moviola Console Editing Machine; new Nagra equipment; Bell & Howell/Sargent-Welch Transmission Densitometer; Lowell Soft Light; Stellavox SP7 Portable Recorder; new Anton/Bauer Crystamatic Vest and Belt; and finally a Xenon and Halogen Light Source for Kodak Carousel Projector and a Xenon Light Source for RCA 16mm Projector.

Short Film Subjects

Each morning and afternoon session of the conference as a whole, that is the general papers sessions, the sessions of the CATV Symposium and even the equipment papers session, was opened with a short subject film. Short Film Subject Chairman Nathan Alper by arrangements with Industrial Photography magazine, obtained a series of prize-winning films which had won that magazine's Annual Industrial Film Awards. These were the following films: *Amazing Mets* produced by Paramount; *Man from Chimpanzee* produced by Columbia; *People Soup* produced by Columbia; *The Great White Hope* produced by 20th Century-Fox; *Our Aching Backs* produced by Sandia Corp.; *A Misunderstanding* produced by IBM; *It's The Greatest Little City* produced by Ohio State University; *A Shrinking World* produced by A.T.&T.; *The Aquanauts* produced by EMC Corp.; and *WDL in Systems* produced by Philco-Ford. This program of films was supplemented with a film made



Head Table, Television Luncheon, October 8 (left to right): Irving B. Kahn, Tele-Prompter Corp., New York; Wilton R. Holm, Research Center, Assn. of Motion Picture & TV Producers; Sol Schildhouse, Chief, Cable Television Bureau, FCC; Donald V. Taverner, President, National Cable Television Assn.

communications system where papa goes to work by staying home in his study, where mama does her shopping from the kitchen, and where the kids go to school in the den. . . ."

Mr. Schildhouse then went on to discuss some of the problems, inherent in wiring for CATV, its cost and other financial considerations. He then briefly touched the topic of customer response, and went on from there to outline some of the FCC's 'comprehensive federal policy towards cable.'

"For example — and getting over some rather important things quickly:

"We've proposed cable performance standards with a view to getting a higher level of technical excellence in CATV signal delivery.

"We're looking to increased channel capacity — 20 to 40 channel minimums, perhaps — and we are expecting to look hard at possibly requiring that cable make its spare channels available for worthwhile community matters on an open access basis.

"There is now a ban on TV station and TV network cross-ownership with cable,

begin originating by April 1 of next year. The Commission requirement will bring an additional 200 or so more systems into cablecasting."

Mr. Schildhouse followed with remarks about experimentation in program origination, and perspectives and possibilities in CATV programming. He gave a short definition of the "distant signal" and mentioned the problems generated in bringing "more television to any place where people want it and are willing to pay for it." He then mentioned a compromise the Commission is now proposing, the heart of which is, as he posed it, the "commercial substitution switch." He then underlined that: "Our plan, we have said, will not be adopted until Congress settles copyright." An evaluation of the probable perspectives for the copyright settlement was made, and the following were Mr. Schildhouse's final remarks:

"The plain truth is that the technologies that got here first and have their apparatus and plant fully established will not easily yield to being undone or to being made to move over.

by the Eastman Kodak Co., *How Many Words*, and with a Czechoslovakian film titled *Harmonia Pastoralis*, presented by Robert Hardonyi, Engineer, associated with Czechoslovak-Film, makers of the film, in Bratislava-Kolibra. This film was praised by many of the audience for its artistic merits.

Projection Arrangements

Perhaps a few words should be said about the projection arrangements for the 108th Conference. First of all, Projection Chairman Joe Stiffler's efforts in procuring top grade projection and recording equipment through the services of Bergen Expo Systems, Inc., should be recognized. All projection equipment was of the xenon arc type, and that includes film as well as slide projection, 16mm as well as 35mm. The 2 X 2 slide projector in the East Ballroom, where the projection throw was about 90 feet, was provided with a high-intensity xenon lamphouse from Optical Radiation Corp., Monrovia, Calif., which was also one of the exhibitors at the Conference. 35 and 16mm xenon arc projectors in the East Ballroom were lent to the SMPTE, carried and installed in place, through the courtesy of CBS Network, to which are due the sincere thanks of the Society for the excellent projection quality these projectors provided. Thanks are also due the Eastman Kodak Co. which shipped in from Rochester a specially modified xenon arc Super-8 projector and to Honeywell, Inc., which provided a Super-8 Elmo projector with an optical sound reproduction head. No efforts were spared to provide the best projection which could be had, including special installation of screens for front- and back-projection (the latter was used throughout in the Sutton Ball Room).

Equipment Exhibit

The SMPTE Equipment Exhibit was one of the most successful in recent years. The equipment and products exhibited were of a high technical quality and many items attracted special attention. A total of 2,300 persons passed through the Exhibit, and exhibitors expressed pleasure at the large turnout. The exhibit area was jammed during most of the open hours.

Forty seven companies had booths; many had more than one. In all there were 69 booths occupied. An advance listing of much of the exhibitors' equipment appeared in the September *Journal*.

Responsible for the success of the show were the two Exhibit Co-Chairmen, **Dominick J. Capano**, S.O.S. Photo-Cine-Optics, Carlstadt, N.J., and **Victor James**, Arriflex Corp. of America, Woodside, N.Y.

Companies that exhibited at the 108th Conference were:

Amega Corp.
American Photomec Corp.
Anton/Bauer Inc.
A.V.E. Corp.
Arriflex Corp. of America
Atlantic Audio Visual



President Deane R. White, Equipment Exhibit Chairman Victor James, and Conference Vice-President E. B. (Mike) McGreal inaugurating the Equipment Exhibit with a Gala Opening and Exhibitor's Open House on Monday Evening.

Bardwell & McAlister, Inc.
Bell & Howell Company
The Camera Mart Inc.
Cine 60, Inc.
Clean Air Inc.
Eclair Corp. of America
F&B/CECO Inc.
Frezzolini Electronics, Inc.
General Electric Co. (Visual Communication Products Dept.)
General Electric Lamp Div.
General Enterprises, Inc.
Gotham Audio Corp.
Hazeltime Corp.
Hollywood Film Co.
KEM Electronic Mechanic Corp.
Lowel-Light Photo Engineering
Macbeth Corp., Div. of Kollmorgen Corp.
Magnasync/Moviola Corporation
3M Company
Mole-Richardson Co.
Motion Picture Enterprises, Inc.
Nagra Magnetic Recorders, Inc.
National Cine Equipment Inc.
Neptune Corporation
Optical Radiation Corp.
Optronics Technology Inc.
Paillard Inc.
Pako Corporation
Plastic Reel Corp. of America
Precision Laboratories
Producers Service Corp.
Rombex Productions Corp.
Sony Corporation of America
S.O.S. Photo-Cine-Optics Inc.
Supreme Equipment & Systems Corp.
Sylvania Electric Products Inc.
Tele-Cine Inc.
Universal Projector Co.
WRS Motion Picture Laboratory
Wide Range Electronics Corp.
Yardney Electric Corporation

Exhibit Award

Magnasync/Moviola Corp., N. Hollywood, Calif., was the winner of the 108th Conference Exhibit Award for having the best display as judged by a select committee. The award was selected on the basis of technical excellence and total effectiveness. Announcement of the award was made by SMPTE President Deane R. White.

On display at the Magnasync/Moviola booth was their new editing table, which

drew much attention from the crowd. They also showed new editing machines plus a wide range of recording equipment.

An award plaque will be presented to the company shortly after the Conference. Details of the presentation will appear in a future issue of the *Journal*.

Other Events

The Banquet

On Wednesday evening at 7 o'clock the cocktail party, banquet and dance took place in the Grand Ballroom. Within a festive atmosphere a great number congregated for this traditional Society social affair. Entertainment was welcomed with applause and the dance floor was alive up to the last beat of the band.

The Ladies Program

Mrs. Herbert R. Pilzer was in charge of the Ladies Program, which featured a Fashion Show, a tour of "Sleepy Hollow Country," the Philipsburg Manor and the Union Church of Pocantico Hills, as well as a visit to the United Nations. Thanks are due Mrs. Pilzer for the efficiency with which she conducted the weeks program which was a substantial success.

The Coffee Club

The Coffee Club was established Monday through Thursday in the Beckman Room and was a courtesy of the Philip A. Hunt Chemical Corp.

Acknowledgments

The Society expresses its thanks to the following companies and organizations for providing necessary services and equipment:

Audio Visual: Bergen Expo Systems, Div. of Bergen Motion Picture Service
Audio by Port-O-Vox Enterprises
Special Projection and Audio Equipment: CBS Television Network, Eastman Kodak Co.; Photo Products Div., Honeywell Corp., Photographic Analysis Co., 3M Company Magnetic Products Div.
Secretarial Services: CBS Television Network
Recording Tape: 3M Co.
Closed-Circuit Television System: Shibaden Corp. of America
Ladies Gifts: Agfa-Gevaert, Inc., Bonwit Teller, Chemical Bank New York Trust Co., Cue Magazine, Eastman Kodak Co., First National City Bank, Fuji Photo Film USA, Inc., Japan Air Lines, 3M Company, Motion Picture Enterprises, Inc., New York Magazine, Pan American Airways, Trans World Airlines, Vacuumate Corp.

Note: This is the first report from the first Society Conference receiving the benefit of the services of a new and important staff member. The newly appointed Conference Technical Programs Coordinator, Pablo Weinschenk-Tabernero, was hard at work throughout conference week, and for some time previously as well, making sure that films and slides illustrating papers were shown in the best possible manner. His first objective was to make sure that projection conditions conformed with screen brightness standards.—*Rodger J. Ross*, SMPTE Editorial Vice-President