Awards Presentation

The Awards Presentation, a ceremony observed annually at the Society's Conferences, took place 30 October. The awards were presented following the Get-Together Luncheon, according to a long-standing tradition of the Society. SMPTE President William Hedden presented the awards to the recipients. Eighteen newly elected Fellows of the Society received certificates from President Hedden at the Fellows Luncheon held 31 October at the Warwick Hotel. The Award citations and brief biographies of the recipients appear below.

Honorary Membership

It is the purpose of election to Honorary Membership of the Society to honor an individual who has performed a lifetime's work of eminent service in the advancement of engineering in motion pictures, television, or in the allied arts and sciences.

Honorary Membership in the Society of Motion Picture and Television Engineers is awarded to John A. Maurer for his seminal contributions to the theory, design, and development of 16mm motion-picture equipment and related systems. His analysis and definition of basic parameters of the recording, transfer, and presentation functions, combined with innovative practical application of these principles, provided an international foundation for professional use in this format.

John A. Maurer was educated at Adelbert College and Western Reserve University. From 1929 to 1932 he was at RCA Research Laboratory. Further work on a system of double-4mm motion pictures with optical sound on 8mm film and on 35mm to 16mm optical-reduction picture and sound printers led, in 1934, to his joining Eric M. Berndt in founding the Berndt-Maurer Corporation to manufacture professional 16mm cameras and sound recording equipment. The 16mm recorders developed by his company and its successor, J.A. Maurer, Inc., established the standards of performance for the 16mm industry.

Mr. Maurer played a prominent role in the standardization activities of the Society, including the designing of equipment for the production of test films. He also designed cameras and a high-speed focal plane shutter for aerial-reconnaissance photography, widely used by the U.S. Navy during and after World War II. He has been granted some 70 patents, mostly relating to optics and photographic equipment.

For Precision Film Laboratory, a property of Berndt-Maurer Corp., Mr. Maurer designed and built a large number of 16mm printers, while his own company, Optronics, Inc., developed a 16mm to super-8 quad continuous optical-reduction printer.

In 1971 he received the Eastman Kodak Gold Medal Award. He was awarded an honorary degree of Doctor of Science by Western Reserve University in 1953 and another honorary D.Sc. degree from Ohio State University in 1972, in recognition of his work in the development of the art and technology of the 16mm film with emphasis on its contribution to education.

In 1947 Mr. Maurer was awarded the first Samuel L. Warner Memorial Award established by the SMPTE and served the Society as Engineering Vice-President from 1945 to 1949.

John A. Maurer accepting his certificate of Honorary Membership in the Society from SMPTE President Hedden.

Progress Medal

It is the purpose of this award to do honor to the individual by recognizing outstanding technical contributions to the progress of engineering phases of the motion-picture and/or television industries.

The Society's Progress Medal is awarded to Robert E. Gottschalk in recognition of his notable engineering contributions to the design, development, and production of the Panaflex professional motion-picture camera, various improved photographic optics, and numerous other equipment innovations related to motion-picture cinematography.

Robert E. Gottschalk accepting the Society's Progress Medal.

Robert E. Gottschalk, President and Chief Executive Officer of Panavision, Inc., and a Fellow of the Society, went to Hollywood upon graduation with honors from Carleton College in Minnesota in 1939. He immediately began writing, producing, directing, and photographing short subjects and was a pioneer in the process of photographing in 16mm Kodachrome, which was then blown up to 35mm Technicolor for commercial release. Experimenting with the very first Aqua-lung underwater breathing device in the USA, Gottschalk built the first free-moving underwater camera and supplied underwater scenes for motion-picture productions.

His underwater photography led him to explore the field of anamorphic optics, and his experiments coincided with the introduction of CinemaScope. It was at this time in 1953 that he founded Panavision, with the purpose of producing anamorphic projection lenses for the brand-new CinemaScope process. He led his company to the development of the first non-distorting anamorphic photographic lenses.

From lenses he led Panavision to produce motion-picture cameras, and in 1972, after six years of research and development, introduced the Panaflex silent professional motion-picture camera. The Panaflex's success motivated him to design and manufacture other associated Panavision motion-picture equipment.

He is a holder of 15 patents and the recipient of numerous Academy of Motion Picture Arts and Sciences Technical Awards and two awards from the BKSTS.

The Agfa-Gevaert Gold Medal

It is the purpose of this award to honor to the recipient by recognizing the individual's outstanding leadership, inventiveness, and/or other achievements in the research, development, or engineering of new techniques and/or equipment which results in a significant improvement to the interface between motion-picture film and television imaging systems, whereby the combined advantages of both contribute to the further development of visual communications systems.

The Agfa-Gevaert Gold Medal is awarded to Donald B. Milliken in recognition of his achievements in developing the fast pulldown camera for the elimination of kinescope "shutter bar." By increasing exposure time, this development also facilitated color shadow-mask recording.

D.B. Milliken pioneered the application of 16mm high-speed photography for space-age research. Pulse cameras of his design were standard equipment on all Mercury flights and have been used on virtually all the nation's major aerospace programs, including the Titan and Apollo/Saturn programs, to observe launch, stage

Robert J. Ringer accepting the Agfa-Gevaert Gold Medal on behalf of Donald B. Milliken.

Kenneth M. Mason accepting the Eastman Kodak Gold Medal Award on behalf of Reid H. Ray.

Mrs. Betty C. Calvin accepting the John Grierson International Gold Medal Award for her late husband.

separation, chute deployment, and many other critical functions.

In addition to a broad range of intermittent high-speed motion-picture cameras, with frame speeds from 2 to 500 frames/s, Mr. Milliken designed a unique television film recording camera that eliminates the shutter-bar problem and provides the rapid film transport required for optimum television film recording. He has also designed a complete video film recording system incorporating his fast pulldown camera.

Eastman Kodak Gold Medal Award

It is the purpose of this award to honor the recipient by recognizing outstanding contributions which led to new or unique educational programs utilizing motion pictures, television, high-speed and instrumentation photography, or other photographic sciences.

The Eastman Kodak Gold Medal Award is presented to Reid H. Ray in recognition of his major contributions for more than half a century to the educational and nontheatrical motion-picture field as a pioneer film producer, educator, and leader in professional organizations.

A film buff since boyhood, **Reid Ray** gained his first experience photographing and editing football game training films while a student at the University of Iowa. From the beginning of his professional career, with a producer of documentary and newsreel material in St. Paul, Minnesota, he produced and directed more than 1000 films, winning numerous national and international awards. He obtained a controlling interest in the company for which he worked, which subsequently became Reid H. Ray Film Industries, Inc.

In the course of his long career, Mr. Ray introduced and assisted in perfecting the commercial adaptation of many color processes, beginning with the bipack Cinecolor-Multicolor process. Later he helped in the development of Technicolor's Monopack, followed by Ansco's reversal and negative-positive material, along with the early duplicating of 16mm Kodachrome.

After 45 years of producing documentary, training, and sales films, Mr. Ray left his company to accept a Professorship at Rochester Institute of Technology in the College of Graphic Arts and Sciences, where he remained until his retirement in 1975. Under his stewardship a major program of professional instruction in the field was fashioned, with a greatly expanded faculty, curriculum, and facilities, and a dramatically increased enrollment.

Mr. Ray has long been active in industry associations, notably the Association of Cinema Laboratories and CINE, in both of which organizations he served as president, and the University Film Producers Association. In the SMPTE he held several executive positions, in addition to being a member of the Board of Governors, and served as the Society's president in 1963 and 1964.

John Grierson International Gold Medal Award

It is the purpose of this award to honor the recipient by recognizing significant technical achievements related to the production of documentary motion-picture films.

The John Grierson International Gold Medal Award is given to Forrest O. Calvin posthumously. A pioneer, through his vision, ability, and determination, he enhanced the beginning and growth of the 16mm nontheatrical film industry which was the heart of documentary films. Because of his foresight, he led the development of new techniques and procedures as well as many equipment items, all of which promoted the use of documentary films.

Noticing one of the early 16mm cameras during his employment with an advertising agency in 1929, **Forrest Calvin** envisioned the possible industrial applications for 16mm motion pictures. The agency did not survive the depression, but his idea led to the formation of the Calvin Company in 1931 in Kansas City, Missouri. Born near Pleasanton, Kansas and educated at Kansas University, Calvin pioncered the early use of 16mm industrial motion pictures.

Eugene Leonard accepting the Journal Award.

Karel Staes accepting the Journal Award Honorable Mention.

Roderick T. Ryan accepting the Herbert T. Kalmus Memorial Award.

Tsuneyoshi Uyemura accepting the Photo-Sonics Achievement Award.

Masahiko Morizono accepting the David Sarnoff Gold Medal Award.

Ray M. Dolby accepting the Samuel L. Warner Memorial Award.

When his company was first started, Forrest divided his time between convincing industrial clients that 16mm movies could benefit their companies, and then producing the films. Somewhat later the company introduced production services such as sound recording, editing, animation, and a laboratory for print duplication. As support equipment was almost nonexistent, the company designed and constructed most of its own equipment. Much of the design originated from Calvin's practical use experience.

The Movie Mite 16mm projector was another of his creations. Small, lightweight, and portable, this 16mm projector was designed for the salesman. Many thousands of these projectors were sold in the 1940s.

While his company was producing many training films during World War II, Calvin was invited by the U.S. Navy to form a 16mm production unit at the Naval Photographic Science Laboratory in Anacostia, D.C.

Following the war, the rapid growth of audiovisual applications brought many inexperienced industrial producers into the market. Sensing this as an industury quality problem, Calvin invited anyone interested to attend a meeting in 1947 where his workable production procedures were explained. This started the Calvin Workshop, which continued in the same format until 1975.

During the years prior to his death in 1963, Calvin pursued his wealth of ideas in new industrial applications for 16mm and 8mm film.

The Journal Award

It is the purpose of this award to recognize the outstanding paper originally published in the *Journal* of the Society during the previous calendar year.

The Journal Award for 1978 is presented to Eugene Leonard for his paper entitled "Implications of Digital Video Graphics," published in the October 1977 issue of the SMPTE Journal.

Journal Award—Honorable Mention

Honorable Mention was awarded to K. Staes for his paper entitled "Light Sources as an Integral Part of the Color Photographic System," published in the August 1977 *SMPTE Journal.*

Herbert T. Kalmus Memorial Award

It is the purpose of this award to do honor to the recipient by recognizing outstanding contributions in the development of color films, processing, techniques or equipment useful in making motion-pictures for theater or television use.

Dr. Ryan has been chosen for his continuing substantial contributions to color film printing and processing systems. Significant of his work is the 1977 Focal Press publication, A History of Motion Picture Color Technology.

Dr. Roderick T. Ryan holds a Bachelor of Arts degree, Master of Arts, and Ph.D. from the University of Southern California. During thirty years with the Eastman Kodak Co., he has been closely associated with the business and technical aspects of motion-picture films in both the feature film and television industries.

As a quality control engineer in the Color Print and Processing Division in Hollywood, he was responsible for the printer and process control of all the early Kodachrome processes and, subsequently, in the Color Technology Division for the introduction of new photographic film systems including the Eastman Color Film and Process System. As Coordinator of Engineering Services for the Motion Picture and Audiovisual Markets Division, Dr. Ryan has been responsible for the coordination of all technical services in the Pacific Southern Region.

Dr. Ryan has been a frequent lecturer on films and film systems at the American Film Institute, UCLA, USC, and University of California, Irvine. In 1974 he edited the third edition of the Society's book *Principles of Color Sensitometry,* and in 1977 Focal Press Ltd. published his book, *A History of Motion Picture Color Technology,* covering some 75 years of the development of practical color technology, through the numerous separation systems up to the latest multilayered subtractive processes, in all parts of the world.

Photo-Sonics Achievement Award

It is the purpose of this award to do honor to the recipient by recognizing outstanding contributions in the development of new techniques or equipment which have contributed to the improvement of the engineering phases of instrumentation and/or high-speed photography.

The Photo-Sonics Achievement Award is presented to Tsuneyoshi Uyemura, Professor at the University of Tokyo, in recognition of the significant contributions he had made to the advancement of high-speed photography and photonics for over twenty years.

Dr. Tsuneyoshi Uyemura's early accomplishments include the design of several drum cameras and continuous-writing, ultra-high-speed framing cameras of unique construction. He was also instrumental in the design of a 16mm rotating-prism camera manufactured in Japan by Hitachi. While serving as Visiting Professor at MIT in the United States, he collaborated with Professor H.E. Edgerton in the development of an elegantly simple method for recording transient displacement characteristics of certain mechanical objects by photographing a suspended string with a still camera using a single-flash exposure. More recently, Professor Uyemura's attention has been directed toward two diverse fields of interest: the study of rapid events using holographic methods and the design of optical tracking systems for rocket research. His accomplishments in both of these areas were reported at the 12th International Congress on High-Speed Photography in Toronto in 1976. Dr. Uyemura's continuing efforts and achievements in the broad field of high-speed photography and photonics qualify him for the Photo-Sonics Achievement Award in 1978.

David Sarnoff Gold Medal Award

It is the purpose of this award to honor the recipient by recognizing outstanding contributions toward the development of

Julius Barnathan accepting a Special Commendation Award.

Dr. Georges Broussaud accepting a Special Commendation Award.

Linwood G. Dunn accepting a Special Commendation Award.

new techniques or equipment which have contributed to the improvement of the engineering phases of television, including theater television.

The David Sarnoff Gold Medal Award is presented to Masahiko Morizono for his leadership and engineering achievements in the development of television electronic newsgathering (ENG) equipment, especially in the development of portable helical-scan VTR systems with associated versatile editing capabilities, thereby facilitating the wide use of ENG throughout the world's television broadcasting industry.

Masahiko Morizono, General Manager of the Sony Corporation's Video Products Division, joined the company in 1953 where he was first active in the design and development of audio and instrumentation recorders. Following Sony's pattern of diversifying its engineers, he worked on dozens of products, both consumer and professional. In 1959 he was given the responsibility of developing the first helical-scan VTR, and in 1972 the company brought out, under his direction, its U-matic cassette recorders and electronic editing machines.

With the advent of ENG, Mr. Morizono became the primary developer of Sony's broadcast line, including studio and portable one-inch VTRs, time-base correctors, cameras, and accessories. In connection with his interest in the development of one-inch VTRs, he played an important role in the SMPTE working group which resulted in the C-format standard of compatibility.

Mr. Morizono has an M.S. in electrical engineering from the University of Tokyo. He is an Active Member of the SMPTE as well as of the Audio Engineering Society. In 1977 he was the recipient of a special citation at the 10th International Television Symposium in Montreux.

Samuel L. Warner Memorial Award

It is the purpose of this award to do honor to the individual by recognizing outstanding contributions in the design and development of new and improved methods and/or apparatus for sound-on-film motion-pictures, including any step in the process.

The Samuel L. Warner Memorial Award for 1978 is presented to Ray M. Dolby in recognition of his development of a noise-reduction system for use in motion-picture sound recording of music and sound effects.

Ray M. Dolby was born in Portland, Oregon in 1933 and received his B.S. degree in electrical engineering from Stanford University in 1957. From 1949-52 he worked at Ampex Corporation on various audio and instrumentation projects, and from 1952-57 was mainly responsible for the development of the electronic aspects of the Ampex videotape recording system. Awarded a Marshall Scholarship, followed later by a National Science Foundation Graduate Fellowship, he left Ampex in 1957 for further study at Cambridge University in England, where he received a Ph.D. degree in physics in 1961.

Working in the Cavendish Laboratory at Cambridge from 1957-63, Dr. Dolby studied various properties of long-wavelength x-rays, particularly as applied to electron microprobe analysis. In 1961 he was elected to a Research Fellowship of Pembroke College, Cambridge. During his last year in Cambridge, Dr. Dolby was also a Consultant to the United Kingdom Atomic Energy Authority.

In 1963 he took up a two-year appointment as a United Nations Adviser in India, serving as a member of an advisory team to the Central Scientific Instruments Organization. In 1965 Dr. Dolby left India and returned to England to establish Dolby Laboratories. He holds a number of patents and has written papers on videotape recording, long-wavelength x-ray microanalysis, and noise reduction.

Dr. Dolby is a Fellow of the Audio Engineering Society and a recipient of its Silver Medal Award. Recently, he was awarded a Fellowship of the British Kinematograph, Sound and Television Society. He also received the Lyre Award of the Institute of High Fidelity and the 1972 Berliner Maker of the Microphone Award.

Special Commendation Awards

It is the purpose of these awards to recognize outstanding contributions to motion-picture and television technology in all parts of the international industrial community.

To **Julius Barnathan,** President, Broadcast Operations and Engineering, American Broadcasting Co., for contributing in outstanding fashion to engineering progress in all phases of television — broadcasting, research, and design of equipment and facilities. He is particularly noted for his leadership in developing new technologies and his willingness to share his knowledge through lectures and public appearances.

To **Dr. George Broussaud,** Director of Research, Thomson-CSF, for having pioneered the development of the videodisk system since 1969. His energy and enthusiasm in persuading people in production and applications of the importance of the videodisk concept have made possible its industrial development.

David W. Samuelson accepting a Special Commendation Award.

John Corso, Jr., accepting a Citation for Outstanding Service to the Society.

Fred M. Remley, Jr., accepting a Citation for Outstanding Service to the Society.

Paul F. Wittlig accepting a Citation for Outstanding Service to the Society.

Kurt Wulliman accepting a Citation for Outstanding Service to the Society.

To **Linwood G. Dunn,** President, Film Effects of Hollywood, for his innovations in the creation of special optical effects in motion-picture and television production. He has made outstanding contributions to the industry as a cinematographer, inventor of printing equipment, developer of new techniques, and as an executive.

To **David W. Samuelson,** Director, Samuelson Film Service Ltd., in recognition of his lifelong achievements as cameraman and producer, filming, in over 40 countries, newsreels and documentaries covering aviation and motor sports and every type of news event, including the coronation of Queen Elizabeth II. He is a past president of the British Kinematograph, Sound and Television Society.

Citation for Outstanding Service to the Society

It is the purpose of this award to provide recognition of individuals for outstanding contributions of major benefit to the Society.

John Corso, Jr., W. A. Palmer Films, Inc., for his many contributions over the years to the San Francisco Section, as an officer, manager, and program chairman, and for his overall assistance in the continued success of the Section.

Frederick M. Remley, Jr., University of Michigan, for his involvement in all phases of the SMPTE: Engineering activities, Topic Chairman and Program Chairman for the Television and National Conferences, Board of Editors, Board of Governors, and Section activities.

Paul F. Wittlig, Consultant, CBS Television, for his involvement in New York Conference programming for many years as well as his active participation in the New York Section.

Kurt Wulliman, 3M Co., for his overall assistance to the New York Section and his commitment and involvement in all phases of the New York Conferences.

New Fellows of the Society

John G. Baer, President, Century Projector Corp., was with Bausch & Lomb and TCF previous to assuming his present position in 1972. He was a member of the U.S. Delegation to ISO/TC-36 in Williamsburg, Va. in 1973 and Acting Chairman of PWG-4 on Projection in Paris in 1976. He is presently Chairman of ANSI Committee PH22, Motion Pictures. The Pioneer Motion Picture Projectionists Twenty-Five-Thirty Club presented Mr. Baer with their Plaque and Award in 1976, recognizing his "excellent accomplishments." He is chairman of the SMPTE Committee on Theatrical Projection Technology and Applications, and a member of the Film Technology Committee and the Audio Recording and Reproduction Technology Committee.

Sherwin H. Becker, Vice-President and Director of Engineering, Allied Film Laboratory, Inc., Detroit, has been active in the industry since 1951. In his present position he has been instrumental in the conception and/or development of many significant engineering achievements, including manual light valves, nonsprocketed processing drive systems, automatic chemical replenisher systems, and panel printers for filmstrips, 16mm, and super-8 motion-picture films. Mr. Becker has presented a number of technical papers to the Detroit, Chicago, and New York Sections, as well as at a national conference; and, as Consultant to the Kodak Marketing Education Center, prepared a training program on laboratory practices and economics.

Hobson J. Bello, Research Associate, Eastman Kodak Co., has been a chemist, research chemist, and research associate in the Color Photography Division of the Kodak Research Laboratories since 1953. He has performed research and contributed ideas to the entire family of Eastman color motion-picture films. In particular, his work has contributed to the excellent image structure of intermediate and internegative films. Mr. Bello has published technical papers in the SMPTE and SPSE Journals, as well as contributing portions of the SPSE book on *Color Theory and Imaging Systems* and the *Handbook of Photography and Reprography*, published by Neblette.

Jean-Jacques Bessire, Managing Director and Director of Design and Development, Produits Perfectone S.A., Switzerland, founded his company in 1943 and has done much to develop and improve techniques of magnetic sound recording and allied production methods. He developed a ¼-in tape recorder for film production and, parallel with it, the Pilot Tone sync system, followed by a complete range of tape-to-film transfer equipment. More recently, Mr. Bessire has been engaged in the development of film projection and sound recording equipment with very high speed capabilities and complete interlocking between the two mediums. He is the author of several technical papers.

Robert G. Buckley, Technicolor Supervisor, Technicolor Inc., has been with the company in various positions since 1936. Under his technical supervision, Eastman's ECP II process was first put into commercial use. Subsequent work has been in computerization of timing procedures and the establishment of positive printing parameters. Mr. Buckley has described the development of chemical control procedures for the Technicolor dye process and was a contributing editor to the SMPTE book *Principles of Color Sensitometry*.

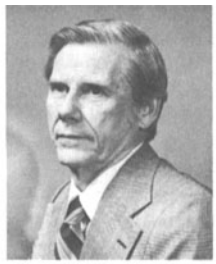
Albert H. Chismark, Manager of Technical Services, Meredith Corp. Broadcast Group, and Director of Engineering, WTVH–Syracuse, has had a distinguished career in the design and construction of AM, FM, and TV stations. He was President of the Society of Broadcast Engineers in 1968-69, Chairman of the NAB Engineering Advisory Committee, Chairman of the NAB Operator Relicensing Committee, and a member of the Association of FCC Consulting Engineers, the Technical Committee of National Service Telecasters, and the NAB Conference Committee. Mr. Chismark is Chairman of the SMPTE Television Video Technology Committee.


John G. Baer


Sherwin H. Becker


Hobson J. Bello


Jean-Jacques Bessire


Robert G. Buckley


Albert H. Chismark


William G. Connolly


Ray M. Dolby


Gideon Fiat


David K. Fibush


Arthur L. Ford


Abraham A. Goldberg


Joseph M. Polonsky


Franklin R. Reinking


Walter A. Seys


L. Merle Thomas


Yozo Yasuda


Heinrich L. Zahn

William G. Connolly, Managing Director, Development, CBS Television Network, has a worldwide reputation in television technology, contributing to improved program production. Besides a paper published in the *Journal* in 1976 on a digital system for the storage and display of still pictures, Mr. Connolly has presented numerous papers at national and international broadcasting and technical conferences around the world and participated in panels at SMPTE conferences. In 1971 he received a National Academy of Television Arts and Sciences "Emmy" Award for the development of the CBS Color Corrector.

Ray M. Dolby, President, Dolby Laboratories, Inc., was a major contributor to the development of videotape recording at Ampex from 1952 to 1957. He established his company in London where he developed the Dolby Noise Reduction System, now used to improve the quality of recorded audio material ranging from consumer records to motion-picture sound. Mr. Dolby has published two papers in the *Journal* on videotape recording equipment and numerous papers in the field of x-ray electron microscopy and noise reduction in audiotape recording, theater film soundtracks and FM radio.

Gideon Fiat, Director of Electronic News Gathering, ABC News, worked with Space Technology Laboratories and Photo Research Corp. on systems for photographic and cinematographic light and color measurements before joining the CBS Television Network in 1964. There, he developed a computerized technique for correcting the quality of color reproduction by TV systems. Mr. Fiat joined the ABC Television Network's News Department in 1968 as Associate Director and Technical Manager with additional responsibility for the Optical and Colorimetry Departments. Since 1977 he has had the responsibility for establishing worldwide coverage using ENG. He has published a number of papers in the *Journal* and other professional publications.

David K. Fibush, Engineering Section Manager, Ampex Corp., has been at the forefront of successful introductions of products for ten years. As a research engineer in the advanced Technology Division, he made substantial contributions to the development of electron-beam recorders for signals of extreme bandwidth and, as a Section Manager in the Audio Video Systems Division, he had overall responsibility for the development of the ACR-25 cassette recorder and the AVR-3 quadruplex recorder. As a member of the SMPTE Video Tape Recording Technology Committee, Mr. Fibush played a major role in the standardization efforts on the Type C helical format. He is presently Chairman of the Helical Recording Subcommittee.

Arthur L. Ford, Chief Engineer, DeLuxe General Inc., designed and developed a system of 35/32mm film processing equipment used by General Film Laboratories in the early 1950s. Subsequently, while with Unicorn Engineering Corp., he was issued patents for an air vacuum squeegee, a perforated tape reader and a videotape splicing machine. As a design and research engineer with Computer Measurements Co., Panacolor Inc., and Technicolor Inc., he was involved with a wide variety of equipment including digital printout machines, viscous processing and dye-transfer processing machines. At DeLuxe General, Mr. Ford designed all demand-drive developing machines and a wash water recycling facility using ion exchange.

Abraham A. Goldberg, Manager, Digital Television Development, CBS Technology Center, started his television engineering career in 1945 developing field sequential color TV systems and has been active in the design of television, audio and magnetic recording systems ever since. He is a member of EBU Subgroup CI on Digital Coding, U.S. Representative to CMTT, U.S. Chairman of CMTT-F and IWP/CMTT/I, and Chairman of Digital Technology Subcommittee G-2.1.6 of the IEEE Broadcasting Group. Mr. Goldberg has been issued 25 U.S. patents in the field of audio and television technology and is the author of some 27 technical papers, five of which were published in the *Journal*.

Joseph M. Polonsky, Technical Director, Broadcast and TV Division, Thomson-CSF, has been a leader in the development of advanced technology equipment such as triax and portable ENG, field and studio cameras, and is internationally recognized for his efforts in awakening interest in the system aspects of new television technology. In 1959 he was a co-founder, with Dr. Zworykin, of the Society and International Institute of Medical and Biological Electronics. Mr. Polonsky has received the Route du Succès Award for his pioneering work in the TV mobile microwave link and portable TV cameras; the Royal Television Society Award; a citation from the Montreux Television Symposium; and the grade of Chevalier of the Ordre du Mérite for his general contributions to science and technology.

Franklin R. Reinking, Vice President and General Manager, PSI Film Laboratory, Inc., Dallas, was an engineer at Kodak Park from 1957 through 1965, organizing manufacturing testing programs for many new Eastman color films. Subsequently as administrator/engineer for the Eastman Kodak Co. in Dallas, he assisted users of motion-picture and television equipment throughout the greater Southwest. Mr. Reinking has presented technical papers before SMPTE national and Section meetings, national ACVL meetings, and the Texas Association of Film and Tape Professionals. He is now a chief executive of a major motion-picture laboratory.

Walter A. Seys, International Product Manager, Motion-Picture Division, Agfa-Gevaert N.V., started his career as a photochemist in the Color Photographic Research Division. In 1952 he became Agfa-Gevaert's representative to the Centre des Recherches Cinematographiques, Paris. In 1953 he installed and took charge of India's first color motion-picture laboratory. From 1959 on he initiated the operation of the laboratories in many countries of the Middle East and Far East. In 1960 he took the initiative to establish a factory technical training facility for motion-picture production and processing technicians from all over the world. Mr. Seys has published three technical papers in the *Journal* and has presented two of these to meetings of the BKSTS, ACVL, and UNIATEC.

L. Merle Thomas, Associate Director, Technical Operations, Public Broadcasting Service, has been in television broadcasting for fifteen years and has contributed very greatly to the development of national and international standards in the magnetic videotape recording field. Most recently in this respect he was Chairman of the SMPTE Working Group on One-Inch Segmented Helical Scan Video Systems, which resulted in the development of the standards specifying the one-inch Type B format. Mr. Thomas has been a U.S. Delegate to two meetings of IEC/TC 60 and has participated in several panel discussions at meetings of the NAB, NAEB, and IEEE. He is chairman of the SMPTE Video Recording and Reproduction Technology Committee as well as of the Working Group on Quadruplex Formats.

Yozo Yasuda, President, Yasuda Research, Inc., is President of the Society of Motion Picture Sound Engineers of Japan. His technical accomplishments include the early development of magnetic sound recording for motion-picture film and of magnetic stereo sound for CinemaScope in Japan; the development of a recording system to form invisible waveforms for editing with a pen; the development of a magnetic material containing cobalt; and the design of an 8mm magnetic sound recorder used as a reference tool by 8mm camera manufacturers in Japan. Mr. Yasuda has been issued three Japanese patents, has published material in a number of handbooks and encyclopedias, and has received three awards from the Japan Society.

Heinrich L. Zahn, Director of Technical Development, Bosch-Fernseh, is regarded as one of the prime movers of German television technology and has made important contributions in almost all major areas of television broadcast equipment. He holds some 30 patents and has presented 16 papers at meetings of the SMPTE and other societies, principally on film scanners and helical VTR recording. He has made major contributions to the flying-spot slide scanner in 1952, the Model KOA image orthicon camera in 1953, the Model KOD image orthicon camera in 1956, the fast pull-down projector in 1964, the fast-start sepmag device in 1965, continuous-motion projectors in 1970, and the helical scan VTR in 1975. Mr. Zahn was a member of the SMPTE Working Group on One-Inch Segmented Helical Scan Video Systems, for which he supplied the engineering data, and also of the Working Group on non-segmented systems and the Subcommittee on helical VTR.