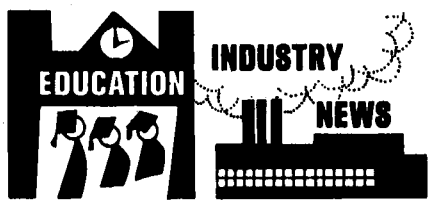

One Class II Academy Award and five Class III Academy Awards for scientific or technical achievements were presented in 1972. The Class II award was presented to John N. Wilkinson of Optical Radiation Corp. for the development and engineering of a system of xenon arc lamphouses for motion-picture projection. The award-winning lamphouse consists of a specially designed xenon arc bulb, horizontally mounted on the axis of a computer-designed aspheric metal mirror which nearly surrounds the bulb. The mirror is able to collect over 85% of the light energy from the high-intensity xenon arc and direct it to the film gate to provide extremely high aperture efficiency and light uniformity. The lamphouse is capable of projecting 55,000 lm of light output. (See p. 584 of the July 1972 *Journal.*)

The Class III Awards were presented to (1) Thomas Jefferson Hutchinson, James R. Rochester and Fenton Hamilton for the development and introduction of the Sunbrute system of xenon arc lamps for location lighting in motion-picture production; (2) Photo Research, Div. of Kollmorgen Corp., for the development and introduction of the film-lens balanced Three Color Meter; (3) Robert D. Auguste and Cinema Products Co. for the development and introduction of a new crystal-controlled lightweight motor for the Arriflex 35mm camera; (4) Producers Service Corp. and Consolidated Film Industries, and to Cinema Research Corp. and Research Products, Inc., for the engineering and implementation of fully automated blowup motion-picture printing systems; and (5) Cinema Products Co. for a control motor to actuate zoom lenses on motion-picture cameras.

The Society of Photographic Scientists and Engineers, 1330 Massachusetts Ave., N.W., Washington, DC 20005, has announced forthcoming events through February 1974. The planned colloquiums and symposiums include: The Physics and Chemistry of Silver Halide Crystals, Aug. 23–25, 1972; Photographic Science and Engineering in the Graphic Arts, Oct. 25–26, 1972; Color: Theory and Systems, Nov. 2–4, 1972; Micrographic Science — 1973; Feb. 1–2, 1973; SPSE Annual Conference and Seminar, May 6–11, 1973; Specialized Photographic Topics (international colloquium to be held in Tokyo), Sept. 13–15, 1973; Photographic Color Technology — TV, Processing, Finishing, Oct. 24–27, 1973; Space Flight Photographic Science and Engineering, Feb. 13–15. Further information is available from Russell P. Cook, Polaroid Corp., 730 Main St., Cambridge, MA 02139.

The University of Southern California is the recipient of 30 taped interviews with famous filmmakers presented by the American Society of Cinematographers. The collection of tapes will be housed in the library of the USC School of Performing Arts. The collection was received on behalf of the university by Robert Knutson, Head of the USC Library Special Collections Dept., and Sol Lesser, producer, USC Cinema Professor and Chairman of the USC Performing Arts Coordinating Council. The Council is dedicated to acquiring historical artifacts and documents from all the arts for future study in the Performing Arts Library. ASC was represented at the presentation ceremonies by Hal Mohr, Past-President and Charles C. Clarke, Treasurer.

The Photographic Process as a Scientific Instrument, an intensive program designed to assist engineers, scientists and technicians in applying photography to the acquisition of data, will be held Sept. 18–22 at the Rochester Institute of Technology. The program is sponsored by RIT's College of Graphic Arts and Photography and is open to persons with the B.S. degree or its equivalent experience in physics, chemistry or engineering. Subject matter to be covered will include sensitometry, statistics, chemistry, color, image evaluation and photographic instrumentation. Further information is available from William D. Siegfried, Training Director, Graphic Arts Research Center, Rochester Institute of Technology, One Lomb Memorial Dr., Rochester, NY 14623.

The Film School, 1001 Massachusetts Ave., Cambridge, MA 02138, has announced the Recording Techniques Workshop as part of its planned fall program. The Workshop provides intensive training in location and studio recording, for both sync and non-sync applications. Topics include: acoustics and their modification; basic audio electronics; microphones vs. the ear; vocal and music recording; and special effects, including the synthesizer. Students will have access to Nagra recorders, a full complement of microphones and a complete 8-track studio. The students will be able to produce soundtracks for film being made in other workshops. The class will be offered, depending upon the enrollment.

The Film School is expanding its fall program to include intensive one- and two-year programs in addition to part-time film study. Courses will include super-8 and 16mm Filmmaking Laboratories; Video Workshop; A Media Workshop for Teachers and a series of seminars in Film History and Genres.

The Rochester Section of the SMPTE and the Rochester Chapter of the Society of Photographic Scientists and Engineers (SPSE) have jointly presented awards to six seniors in the College of Graphic Arts and Photography in the Rochester Institute of Technology, for theses submitted in the annual Awards Contest. Ira M. Long and Alan F. Turner together received first prize for their thesis, "An Investigation into the Image Diffusion of a Kalvar Emulsion Upon a High Intensity Short Duration Exposure." Other prizes were awarded to David A. Turbide and Michael T. Williams for their thesis on "A Real Time Investigation of the Kinetics of Lith Development" and to Mary A. Maier for her thesis on "Luminosity and Color Rendering Capability of White Light." Harvey Duze received an award for his motion picture, *Subway.*

The Kodak Silver Recovery System using two pieces of equipment — the Kodak Chemical Recovery Cartridge, Type P or Type 3, and the Kodak Circulating Unit, Type P — is described in a 12-page illustrated brochure available from Eastman Kodak Co., Professional, Commercial and Industrial Markets Div., Rochester, NY 14650. The system is intended especially for use in removing silver from the overflow streams of automatically replenished processing systems. The recovery cartridge functions by chemically replacing the silver in solution with another metal. The Kodak Chemical Recovery Cartridges are designed so that they do not generate combustible or explosive gases, such as hydrogen, during the recovery process.

Video Engineering Co., Riggs Rd. at First Pl., N.E., Washington, DC 20011, has an-

Directory for Members

The Directory for Members, containing the alphabetic list of individual members, will be available in August as a separate publication and not as Part II of the *Journal* as in previous years, a change made necessary because of the tightening of postal regulations. Another change is that the Directory is available in August rather than in July, a delay resulting from conversion to computer operation.

The Directory containing the complete list of members, in addition to the list of Officers of the Society, Sustaining Members and other reference material, is published biennially. On alternate years, the Directory contains all reference material with the exception of the list of individual members. A list of new members appears from time to time in the *Journal.*

The Directory is published as a service to the membership of the Society as a means of providing information about the Society and as a means for facilitating communications among the members. The changes noted above will not affect the contents of the Directory.

Booklet About Membership Information

SMPTE Membership Information, a 16-page booklet providing information about the Society and its membership, is available from SMPTE Headquarters. The booklet is especially useful to officers and managers of the Sections, as well as to other officers and members, since it expresses in a succinct style basic information for prospective members of the Society. It answers questions that might occur to prospective members and it is also useful to members as a means of refreshing their memories concerning specific aspects of the Society. The booklet is available upon request, in any quantity deemed useful, from the Membership Secretary, SMPTE, 9 East 41 St., New York, NY 10017.

nounced availability of the *CCTV Buyers' Guide*, an illustrated, ringbound volume of some 500 pages, 8½ by 11 in, describing thousands of items from hundreds of individual manufacturers of closed-circuit TV components. The *Guide* is priced at $25; the price includes update service.

Video Engineering Co., established in 1948 and a pioneer in the design and marketing of packaged TV systems, recently acquired ITV, Inc., of New York, and Riker Information Systems, of Clifton, N.J. The firm was also a pioneer in the development of TV microscopy techniques.

Magnetic Recording of Acoustical Data on Audio Frequency Tape by Edwin D. Burnett, Edith L. R. Corliss and Raymond D. Berendt (National Bureau of Standards Technical Note 718) is a 29-page booklet containing sections on: The Recording Medium; Tape Format; Tape Speed; Recording Levels; Recorder Adjustments; Tape Recorders for Research Purposes; Rerecording; Tape Editing; and Microphone Techniques. The booklet also contains references and a glossary. It is available from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402 at a price of 40 cents (SD Catalog No. C13.46:718), or as a microfiche copy from National Technical Information Service, Springfield, VA 22151, at a price of 95 cents.

Electro-Craft Corp., 1600 Second St. South, Hopkins, MN 55343, manufacturer of servomotors and control systems, has developed a Servo Control Experimenter Kit and Course Manual for use in college level and technical-vocational education, as well as for industrial training and in-plant use. The kit includes a dc motor-generator, a transistor control unit and miscellaneous parts necessary for the experiments outlined in the course. The accompanying 144-page text includes 20 student-tested experiments. Each is preceeded by an explanation of the physical principles involved and presents detailed descriptions of the necessary operations in each experiment.

Newsfilm Laboratory, 516 N. Larchmont Blvd., Hollywood, CA 90004, has announced availability of a complete line of super-8 printing and processing services, in addition to 16mm services, according to a recent announcement. The firm has installed a new high-speed contact printer to allow super-8 prints to be made from single- or double-rank originals. A & B printing is available with fades and dissolves from 12 to 96 frames. Scene-by-scene timing is available and optical effects are now possible. The services are all for Ektachrome color printing and processing, but release prints can be made on Ektachrome color stock from any color or black-and-white film.

The Jensen line of cinematographic auxiliary equipment manufactured by Georg Jensen Electronics, Copenhagen, Denmark, will be exclusively imported into the United States by Image Devices Inc., 811 Northwest 111 St., Miami, FL 33168, according to a recent announcement. The line includes such items as the Multisync crystal control for Arriflex BL cameras, a synchronizer/self-resolver for professional recorders, a time-sync generator for linkless sync recording with professional recorders, a camera-speed indicator, drive motors for Arriflex cameras with internal crystal speed control, radio slating equipment and a number of other products.

The Earth Resources Technology Satellite (ERTS-A), launched in July, was provided with high-resolution lenses specially designed by the Space and Defense Systems Div. of Fairchild Camera and Instrument Corp., 300 Robbins Lane, Syosset, NY 11791, for the satellite's three-camera system. The return beam vidicon (RBV) camera system, built by RCA Corp., uses three vidicon cameras in three spectral bands and a multispectral scanner in four spectral bands. The Fairchild 5-in T/3.2 lenses consist of one lens with a bandpass of 475 to 575 nm (green), one with a bandpass of 580 to 680 nm (red) and one in near-infrared with a bandpass of 690 to 790 nm. The satellite's objective is to obtain multispectral images of the earth's surface with high-resolution remote sensors and to process and distribute the images to scientific users. The satellite orbits at about 500 mi above earth. Data is telemetered to ground stations and then relayed to NASA's Data Processing Facility at Goddard Space Flight Center, Greenbelt, Md. Some 300,000 photographs are produced each week.

Rupert Neve Inc., Berkshire Industrial Park, Bethel, CT 06801, has announced the opening of a branch office at 1800 N. Highland Ave., Hollywood. John Marston has been appointed Los Angeles Sales Manager. Rupert Neve Inc. is a wholly owned subsidiary of Rupert Neve & Co. Ltd., Cambridge, England.

VidExpo 72, a video marketing conference sponsored by the Billboard Publishing Group, will be held Aug. 21-24 at the Hotel Roosevelt in New York. Highlights of the conference will include a report on the Billboard Group's study of the probable requirements of the European audio-visual market for hardware and software through 1980. Audio-visual equipment will be exhibited by some 25 manufacturers. Further information is available from Stephen Traiman, Director of Public Relations, Billboard, 165 W. 46 St., New York, NY 10036.

F&B/Ceco Industries, Inc., has acquired FRP Productions, Inc., a total production service company providing services, equipment and materials to film producers. Announcement of the acquisition was made by Arthur Florman, President of F&B/Ceco Industries. Everett Rosenthal is President of FRP Productions. The firm has provided film-production services for Universal Pictures, Twentieth Century Fox, Columbia Pictures and CBS as well as for independent producers.

Electro Mechanical Products Co. (EMPCO), 929-935 Atlantic Ave., Atlantic City, NJ 08404, has appointed Bancolini, Via Milazzo, 17-19, Bologna, Italy, as exclusive agents for all EMPCO products in Italy, Yugoslavia, Bulgaria, Roumania and Turkey and has appointed Lecerf, 5/7 Cite Raynaud, Paris 14, France, as exclusive agent in France. EMPCO manufactures automatic computer exposure controls and an automatic replenishing system for film processors among other products.

Spindler & Sauppe, 13034 Saticoy St., North Hollywood, CA 91605, has appointed Omega Associates, Hawthorne, Calif., as exclusive representative for its television products in California. Omega Associates will represent Spindler & Sauppe's Ultrabright TV Background Projection System directly to the end user and the line of film-chain slide projectors to both dealers and end user.

John A. Maurer has been granted the Honorary Degree of Doctor of Science by Ohio State University, Columbus, Ohio, in recognition of his "vital contributions to the media of communication," as stated at the ceremonies at Ohio State University on March 17, when the degree was conferred upon him. He was honored particularly for his work in the development of the art and technology of the 16mm film with emphasis on its contribution to education. It was also stated at the ceremonies that he is a "pioneer in motion-picture engineering and a lifelong advocate of photography and cinema as a force in American science, education and culture."

Mr. Maurer holds 60 United States patents, most of which are in the fields of sound recording, camera design and chemistry. He organized the J. A. Maurer Co. in 1940 and earned citations for his work during World War II for the Office of Scientific Research and Development. Through lectures, demonstrations and publications he instigated film production and instructional programs in many universities and colleges, including Ohio State University during the period of 1940-1950. Mr. Maurer is presently with Optronics Technology, 118 W. 29 St., New York, NY 10001.

Peter C. Goldmark has been elected to membership in the National Academy of Sciences. Dr. Goldmark, who is President and Director of Research of Goldmark Communications Corp., One Communication Plaza, Stamford, CT 06904, is known throughout the world for his scientific contributions. He holds more than 160 patents, including the long-playing phonograph record, the first practical color television broadcasting system and Electronic Video Recording (EVR). Election to the Academy is one of the highest honors that can be accorded an American scientist or engineer in recognition of distinguished and continued achievements in original research.

The National Academy of Sciences was established in 1863 by a Congressional Act of Incorporation signed by Abraham Lincoln which calls upon the Academy to act as an official adviser to the Federal Government in any matter of science or technology. Fewer than 1000 scientists and engineers have been elected to the Academy during its 109-year history. Its headquarters are at Washington, D.C.

Lewis S. Goodfriend has resigned as President of L. S. Goodfriend & Associates Div. of Enviro-Engineers, Inc., a Zurn Industries, Inc., subsidiary, to open an office as consultant in acoustical engineering. The new firm, known as Lewis S. Goodfriend, P.E., Consulting Engineers in Acoustics, 140 Morris St., P.O. Box 2167, Morristown, NJ 07960, offers consulting engineering services in all areas of acoustics. It specializes, particularly, in environmental noise including community, airport and traffic evaluation, industrial noise control, product quieting, auditorium acoustics, building noise control and office landscape acoustics.

Mr. Goodfriend was Vice-President, Noise Quality Management of Zurn Environmental Engineers during 1969 and 1970. Before then he had been head of his own acoustical engineering firm for 16 years. He has also been Editor of three audio and noise-control publications, the latest being a five-year term as Editor of *Sound and Vibration*. He is co-author of the book, *Acoustics for the Architect*, and is presently working on a book on noise pollution.

Neal McLain has been elected President and Charles Whitcomb has been elected Vice-President of the newly formed Mediatech, 824 Busse Highway, Park Ridge, IL 60068. The new firm specializes in videotape-to-film transfers via the new Teledyne CTR-2 color telefilm recorder. The Board Chairman is Stuart McLain, President of Nuclear Management, Inc. Neal McLain was Chief Instructional Media Systems Engineer at Northeastern Illinois State University and Charles Whitcomb was engineer for WTTW Recording Services, Chicago Educational Television Assn.

The Bajus-Jones Film Corp., 4640 W. 77 St., Minneapolis, MN 55435, has announced two new personnel appointments and the acquisition of equipment to give it in-house facilities for producing an animated film from concept to final print. Jim Engstrom has joined the company as Vice-President for Sales and Account Supervision and Tom Olson is Camera Director. Both men were formerly with Studio One, Inc., Minneapolis. Bajus-Jones was founded in 1970 by Don Bajus, President, and Mike Jones, Vice-President. The expanded staff and the addition of an Oxberry Aerial Image Animation Stand make it possible for the studio to provide complete in-house service from concept and character formation to technical optics, the announcement stated. The studio serves a national and Canadian market as well as the Midwest.

Rupert F. Goodspeed, Division Manager of the Fernseh Div. of Robert Bosch Corp., Broadview, Ill., has announced two new appointments to the post of Service Manager for the Fernseh Div. Robert Bass has been appointed Eastern Service Manager, with headquarters at the Eastern Regional Office of Robert Bosch Corp., 111 Crossways Park West, Woodbury, L.I., N.Y. He was formerly Director of Training for Philips Broadcast Equipment Corp.

G. Ray Walker, Jr., has been appointed Western Service Manager for the Fernseh Div. with headquarters in Fernseh's Los Angeles office at 12530 Beatrice St. He was formerly Field Engineer for Philips Broadcast Equipment Corp.

Milton Forman, 708 N. Alpine Dr., Beverly Hills, CA 90210, a consultant to the motion-picture industry, has returned from a four-week tour of Europe where he engaged in a broad range of discussions with leaders in the motion-picture industry in Europe. One of the main subjects of discussion was the possibility of adapting computerization techniques for professional motion-picture production and possible post-production application with special attention given to the problems of creativity and the economics involved.

Frank Giovanelli has been appointed General Manager of the Bebell, Inc., Motion Picture Lab Div., 416 W. 45 St., New York, NY 10036. He was formerly Quality Control Manager at DeLuxe General in New York. In his new post he will direct all phases of laboratory operation including timing, quality control, negative preparation, printing, developing and finishing. Mr. Giovanelli entered the motion-picture laboratory industry by working at Canaima, his father's laboratory in Caracas, Venezuela.

J. Karl Justin has been appointed Vice-President of Administration of the New York Office of John Carl Warnecke and Associates, Architects and Planners, 745 Fifth Ave., New York, NY 10022.

Biographical Notes

Hans Chr. Wohlrab

In our Industry there is a tendency for names to become closely identified with processes, techniques, or equipment, e.g., Mitchell with cameras, Oxberry with animation, Van Leuven with processors. One could fairly ascribe such an association between Hans-Cristoph Wohlrab and color additive printing.

Dr. Wohlrab's work and interests, from the time he attended the University of Leipzig, have been with virtually all the disciplines encompassed by our Society. In his undergraduate days he worked on Television. His dissertation for the degree of Doctor of Philosophy was on photographic recording of sound and it anticipated MTF. He developed stereophonic sound on film in the mid 30s.

During what many of us know as "the war," Dr. Wohlrab worked in the German Air Force, first on the development of cameras, lenses, films and laboratory equipment; later during the war, he worked on radar, infrared devices and proximity fuses. He produced training films, and was associated with Werner Von Braun at Pennemunde. After the war and up to 1956, Dr. Wohlrab worked with Klang Film in Berlin as head of the recording equipment department. He had been associated with Klang Film before the war.

From 1956 to 1968 "Doc" was Director of Engineering of the Professional and Instrument Division of Bell & Howell. It was at this time that the Model "C" Automatic Additive Color Printer was developed and became *the* printer in laboratories throughout the world. In recognition of these efforts, in 1963 Dr. Wohlrab received an Oscar from the Academy of Motion Picture Arts and Sciences.

In 1968 Dr. Wohlrab joined Hollywood Film Co. as Director of Engineering. At that time Hollywood Film became engaged in the production of continuous contact printers, a program made feasible by the tremendous backlog of experience and knowledge of Dr. Wohlrab. Programs were also initiated then to culminate in an excellent super-8 magnetic sound transfer system, a manual additive light system, processing equipment, modifications of the continuous reduction printer which enable printing of dual strand super 8 (1-3) and, very interestingly, quad 8. Other significant contributions are in areas having to do with projection, slitters and loop cabinets, as well as improvements in the electronic logic circuitry associated with automatic printer control.

Dr. Wohlrab's scope, talents, experience, efforts and achievements are unique in many respects. His career encompasses early television, sound on film, radar, rocket guidance, stereophonic sound, and that work which we best know him for — automatic additive printing.

As a further measure of his catholic talents, there are his linguistic abilities — English, German, French and Italian. He has given papers in and has been published in all four languages.

If one were to prepare a bibliography of publications and articles it would probably take more space than this biographical note. Some of the organizations before which he has presented papers which, subsequently, have been published include the SMPTE, ATIC, MIFED, UNIATEC, BKSTS and AFITEC.

Dr. Wohlrab has lectured at several universities on various aspects of film.

His activities with the SMPTE have included work as a Governor, Manager of the Chicago Section, as a member of Engineering Committees, and as a catalyst in international relations with foreign cinematic societies. In partial recognition of these efforts, Dr. Wohlrab was made a Fellow of the SMPTE in 1959.