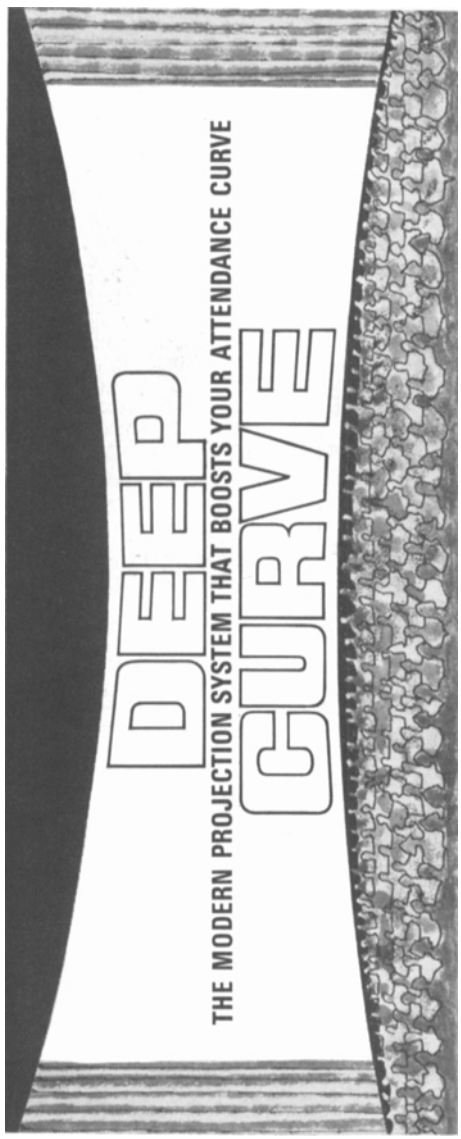


SMPTE Members Vote Not To Merge

Minutes of the Special Meeting of Voting Members of the Society of Motion Picture and Television Engineers held at The Engineers Club, New York City, Friday, August 12, 1966-10:30 a.m.

President Ethan M. Stifle, presiding, called this Special Meeting to order at 10:30 a.m. The Legal Counsel for the Society was present. The President reiterated the explicit purpose for which this Special Meeting was called and immediately entertained a motion from the floor relative to the proposal of merger of the Society of Motion Picture and Television Engineers and the Society of Photographic Scientists and Engineers.

Prior to his calling for a motion, President Stifle reported for the record that there were 3,129 voting members of SMPTE as of July 31, 1966; that a quorum requires 208 voting members, either present or represented by proxy; that 1,635 substantiated, valid proxies have been received; and that a two-thirds majority of 1,635 is 1,090.

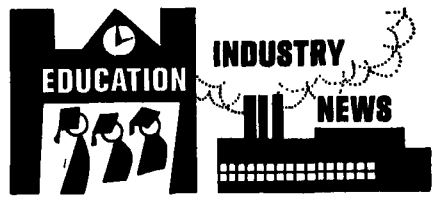
It was moved and seconded from the floor that the Society of Motion Picture and Television Engineers merge with the Society of Photographic Scientists and Engineers, in accordance with the plan submitted to the voting members on July 11, 1966.

The President then recapitulated the results of the balloting by proxy on this motion. As of August 12, he reported, 537 proxies had been received in favor of merger; and 1,098 proxies had been received against merger.

The President requested that any voting member present who had not voted by proxy cast his vote at that time. Two votes in favor of merger were cast. The President then asked if anyone present who had voted earlier by proxy now wished to change his vote. No one present changed their vote at this meeting, the President reporting thus that the motion was hereby not carried.

There being no other business, President Stifle adjourned this meeting at 10:45 a.m.

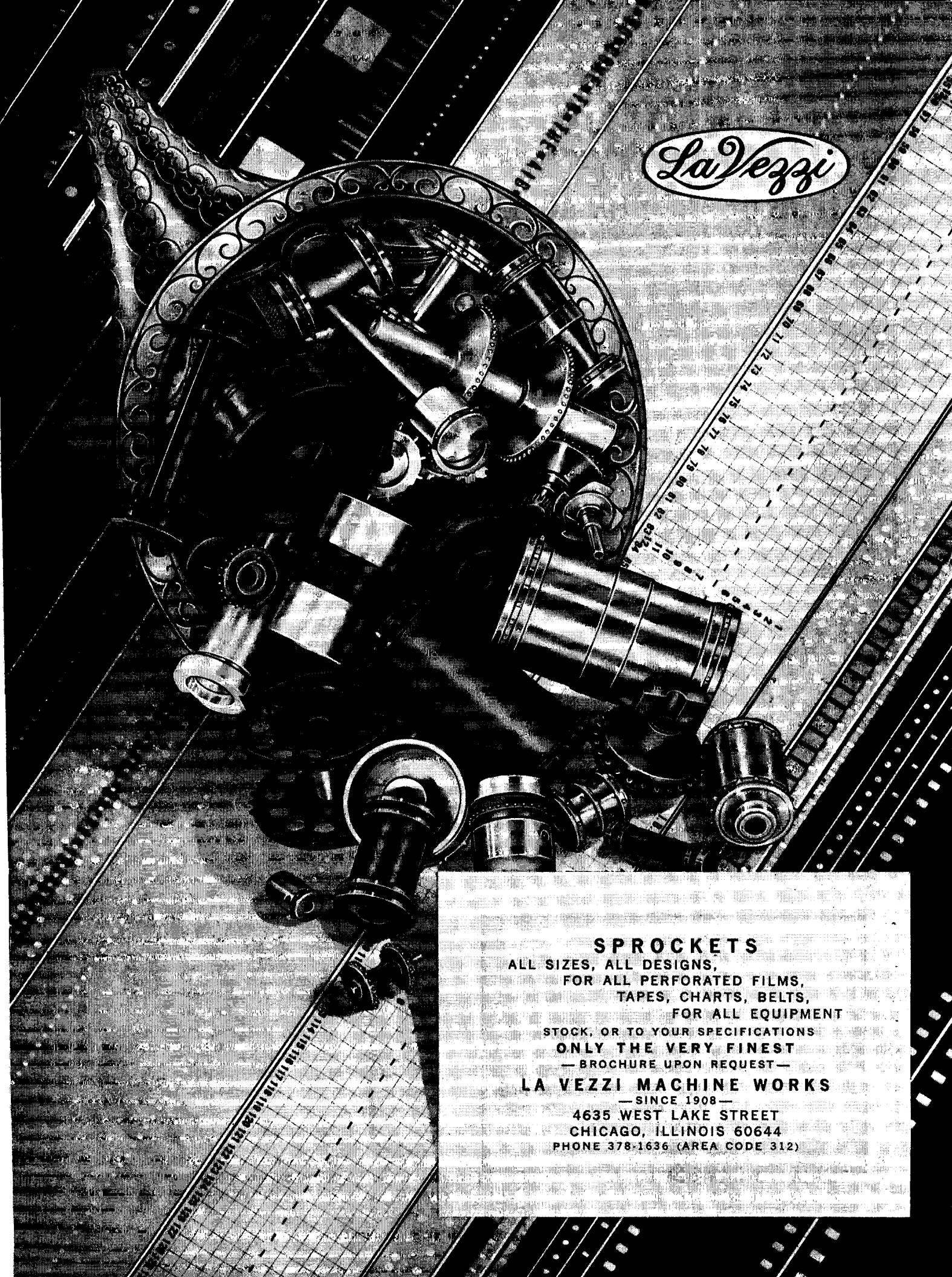
Lewis A. Bernhard
Executive Secretary



Recipients of the second scholarship award to be granted under the scholarship program established by the Education Committee of the Society (*Journal*, p. 1032, Nov. 1965) are Lincoln Perry, Watertown, Mass., and Robert Van Arsdell, Malvern, L.I., N.Y., who share in the award because of the similarities in their past and present scholastic achievements. Both young men are undergraduate students in the Photographic Science course at Rochester Institute of Technology. Mr. Perry plans to specialize in chemical and electronic applications of photographic science as related to computer methods in photographic problems. Mr. Van Arsdell plans to enter government service with a view toward participating in photographic programs. The first scholarship award went to Jan Leith Meades (*Journal*, p. 258, March 1966).

The International Congress on Photography and Cinematography in Industry and Technology will be held October 6–8 in Cologne, Germany, as part of the 1966 Photokina. Invited papers will be presented by 79 photographic scientists and technologists, ten of whom are Americans. Subjects will include: "Photography of Cathode-Ray-Tube Images" by J. C. Barnes and T. G. Veal; "Infrared Color Photography" by Walter Clark; "Use of Aerial Photography in Solving Technical and Industrial Assignments" by R. N. Colwell; "The Interaction of Tone- and Micro-Image-Quality" by Robert J. Kohler and Gregory R. Johnson; "The Application of Photographic Photometry to Electronic Display Systems" by David I. Harvey and Lloyd C. Stanford; "Film in Research Development and Production in the USA" by William G. Hyzer; and "Photographic Methods for the Production of Microcircuits" by L. E. Martinson.

The Society of Photographic Scientists and Engineers has announced a Colloquium on The Photographic Interaction Between Radiation and Matter to be held October 26–29 at the Marriott Twin Bridges Motor Hotel, Washington, D.C.



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Cosponsored by SPSE and the Air Force Office of Scientific Research, Directorate of Chemical Sciences, the event will be international in scope. Participants will include well-known physicists and chemists from the United States, Germany, Switzerland and Japan. Further information is available from: William S. Dempsey, Chairman, Public Relations, SPSE, 1330 Massachusetts Ave., N.W., Washington, D.C. 20005.

Formation of an Industry Education Committee to examine ways and means of encouraging the study of film and television sciences has been proposed by Saul Jeffee, President of Movielab, Inc., 619 W. 54 St., New York, N.Y. 10019. The proposed committee would examine ways and means to encourage the study of film and television sciences both on the elementary level in vocational schools and on the highest engineering levels in colleges and universities. Responsible groups in the film and television industries would be urged to participate. According to Mr. Jeffee, the motion-picture and television industries are neglecting vocational technical education as well as advanced study in film and television. He pointed out that high school industrial courses in film and television are nonexistent. He attributes industry lethargy to lack of recognition that film technology is still in its infancy and future engineering improvements will far surpass past and present achievements. Mr. Jeffee, who recently returned from a Cultural Exchange visit to the USSR (*Journal*, pp. 561–580, June 1966), stated, "Future film progress will come from those countries which concentrate their efforts and resources to teaching the science in technical schools and colleges."

Mr. Jeffee has already met with representatives of all industry groups and government officials to discuss the proposed committee and has offered to provide substantial material for vocational laboratory curricula for the benefit of the industry.

The Association of Cinema Laboratories, Inc., 1925 K St., N.W., Washington, D.C., has announced publication of the 2d (revised) edition of *Recommended Standards and Procedures for Motion Picture Laboratory Services*. The revised handbook contains detailed instructions on marking workprints to indicate effects; preparation of original A&B rolls and 16mm printing leaders; shooting techniques and laboratory practices for films for television; printing flow charts for 16mm and 35mm black-and-white and color films; and American Standard nomenclature. The handbook is available from ACL at a price of $1.00.

The San Francisco International Film Festival will be held October 20–30 in the Masonic Auditorium in San Francisco. Twenty-one theatrical films will be shown on a noncompetitive basis, in addition a retrospective program will be presented each afternoon by a leading filmmaker. The Festival is sponsored by the Greater San Francisco Chamber of Commerce, 420 Montgomery St., San Francisco, Calif. 94104. William C. Boyd is Executive Director and David M. Sacks is General Chairman.

The Optical Society of America has announced that it has reprinted some of the back volumes of its journal and these are now available from Johnson Reprint Corp., Dept. SL, 111 Fifth Ave., New York, N.Y. 10003. Volumes now available include Vols. 1–28, covering the years 1917 through 1938, available as an unbound set at a price of $750. Paperbound volumes for each year are available at prices ranging from $20 to $40 per volume.

New Spaces for Learning, a report originally published in 1961 by Center for Architectural Research, School of Architecture, Rensselaer Polytechnic Institute, Troy, N.Y. 12181, under a grant from Educational Facilities Laboratories (EFL), 477 Madison Ave., New York, N.Y. 10022, has been revised under a subsequent grant and has been made available without charge by EFL. The report's main tenet is that large group instruction in colleges and secondary schools can reach its full potential as an educational tool only through the creation of new, specifically designed spaces in which are integrated the total range of visual and aural electronic aids and media.

A case study of Rensselaer's Experimental Classroom is included. This facility, which embodies the design principles outlined in the first edition, is evaluated and described. Factors involved in the design and construction of classrooms for large numbers of students including seat and desk placement, lighting, acoustics, climate control, screen, monitor and instructor position as well as many others are analyzed. Several design studies of model classrooms and production and support areas for the preparation of films, graphics, slides, tapes and other aids are included.

Alan C. Green, Director of the Center, supervised the revision of the original report.

Water Pollution: A Selected List of Recommended and Related Films, compiled by Madeline S. Friedlander, Film Utilization Consultant for the New York City League of Women Voters, is a recent addition to a list of about 50 publications (books, pamphlets and published reports on 16mm) available from Educational Film Library Association, 250 W. 57 St., New York, N.Y. 10019. Other of the EFLA publications on 16mm include *EFLA Film Evaluation Guide*, a 535-page volume, and *Feature Films on 16*, a 100-page directory. A new publications catalog is available from EFLA upon request.

The Auxiliary Publications Program of the American Documentation Institute (ADI), 2000 P St., N.W., Washington, D.C. 20036, was established in 1937 to solve editorial and publication problems caused by the amount of supporting documents, such as maps, tables, diagrams, bibliographies, etc., often presented with scientific papers. The problem has increased with the years. The ADI project provides a central depository in the Library of Congress where research material supplementary to or logically related to a published book, thesis or article can be processed and the material made available as on microfilm or photoprint. Notice of the avail-

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Lawley Unicon Daylight Operated Film Processing Machine.

The Lawley Unicon is the latest in the range of 'Lawley' processing machines and is of unit construction. It has been designed and fully tooled with a view to: a. Complete interchangeability of parts. b. Simplicity of installation. c. Ease and reliability of operation. d. Accessibility for maintenance.

By using the appropriate modules, in combination, the exact processing requirement for any film stock either black/white or colour can be met at any requirement output. Should a film process requirement change or the output demand increase, additional sections can readily be incorporated into any existing machine.

Construction.

The machine is made from photographic quality stainless steel and P.V.C. The Lawley Unicon can be erected on any level suitably faced floor of sufficient load bearing strength with access to adequate power and water systems and with a head-room of over 8′0″. The machine can be of any length in modules of 2-bank units from a minimum of an 8-bank wet section and can be supplied for either double 8mm, 16mm, 35mm or dual gauge use, three separate depths of tanks are available, 3′9″; 5′0″ and 6′0″. Machines can be positioned against a wall or built back to back.

Performance.

The machine speed can operate from 20′ per minute to well in excess of 100′ per minute. Main drive is through a Kopp Variator with servo motor control for increase or decrease of speed which is operated from either end of the machine. Drying is by means of impingement from plenums. Temperature control, recirculation units, air knives, impingement bars, sound track development, etc., etc., can be built-in using standard units. Magazines of 1,200 ft. and 3,000 ft. capacity. 'Take-up' to 3,000 ft. capacity.

Output for output and floor area for floor area the Lawley Unicon is more economical than any other film processing machine in the world.

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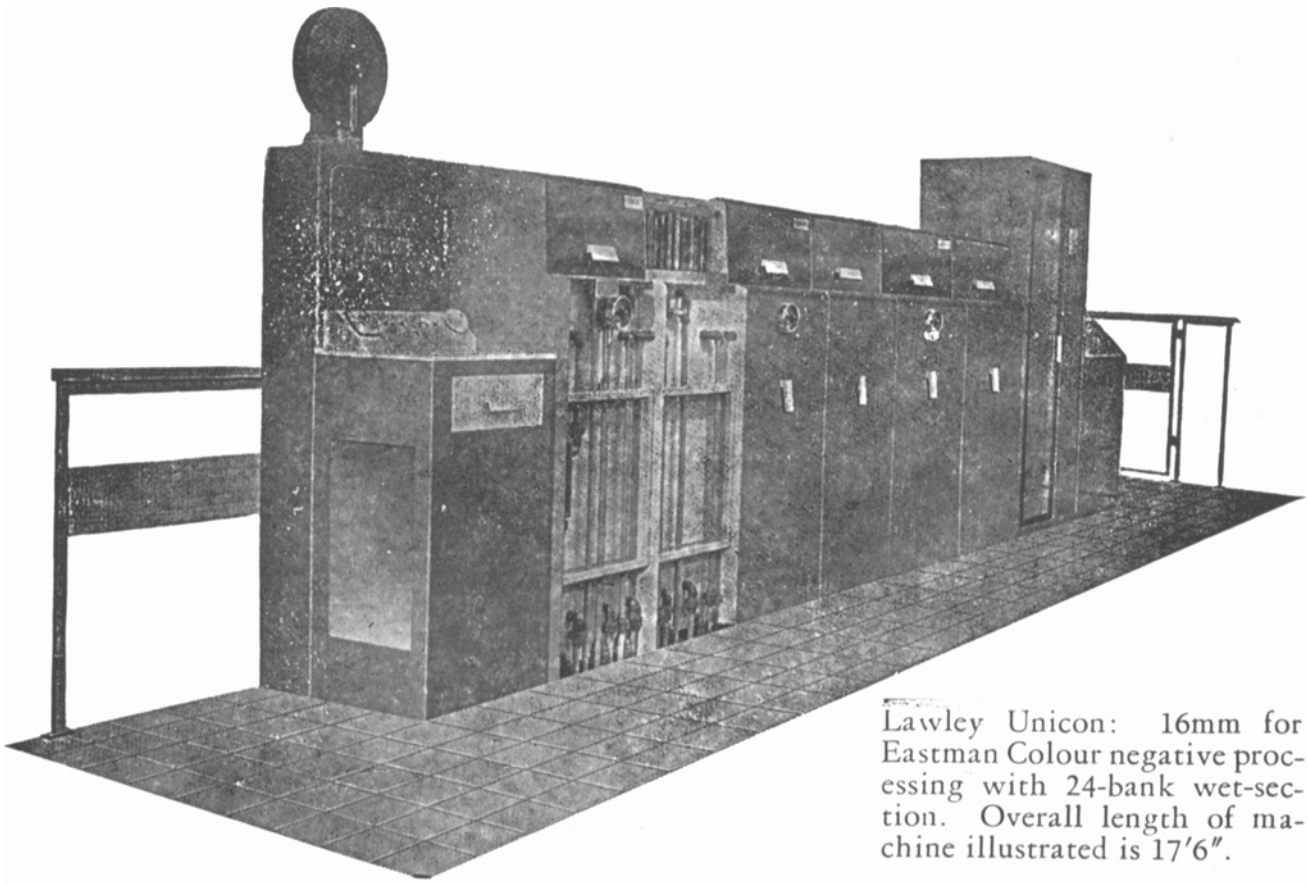

Lawley Unicon: 16mm for Eastman Colour negative processing with 24-bank wet-section. Overall length of machine illustrated is 17′6″.

ability of auxiliary documents is included in the published paper. The supporting material can be submitted for deposit only by the editor. Types of supporting material accepted for deposit include raw data tables *in-extenso;* analyzed data, extensive contingency tables or data summaries; photographic illustrations; nomograms, charts, schematic diagrams, cross sections, etc.; maps; mathematical derivations too long to publish; translations and similar documents.

Microtechniques in Serology, an 8mm film produced by the Public Health Service Audiovisual Facility in cooperation with the Laboratory Branch, Communicable Disease Center, Atlanta, Ga. 30333, was awarded the blue ribbon in the 8mm film category at the 1966 American Film Festival held May 11–14 in New York. The film was chosen from a field of some 24 8mm films selected for showing at the Festival. The film demonstrates the use of a new microtitration technique that is more economical of time and reagents than conventional serologic tube-tests. Two 16mm films, *Miracle in Tonga* and *Cholera Today: Bedside Evaluation and Treatment* (*Journal*, p. 522, May 1966) were also shown. *Miracle in Tonga* shows the immunization of the Tongan people against smallpox.

Hawaii, a film based on a book by James Michener, will be released in October by United Artists, according to a recent announcement. Produced by Mirisch Corp. for roadshow presentation, the film has special effects by Film Effects of Hollywood. One highly realistic storm system involved use of the Color-Difference Matte System for more than 100 complicated traveling-matte shots, the announcement indicated. Filming of the special effects required more than a year to complete.

A technique for restoring naturalness to speech distorted by a helium atmosphere has been devised at Bell Telephone Laboratories for possible use on such deep sea vessels as the Navy's Sealab II where the aquanauts breathe a mixture of 80% helium, 15% nitrogen and 5% oxygen. ("Normal" air is about 79% nitrogen and 21% oxygen.) The helium atmosphere is required to prevent nitrogen narcosis, a strange condition often called "rapture of the deep." The velocity of sound is higher in helium; this causes the human voice to sound strangely like that of Donald Duck. In studies to determine how to correct this and make speech more intelligible, it was found that helium changed the resonant frequencies but had little effect on the fundamental voice pitch. To restore the natural quality of the voice, the helium speech was processed through a special vocoder (voice coder). A vocoder separates and codes fundamental vocal cord pitch and resonant frequencies produced in the vocal tract. Naturalness was restored to helium speech by modifying the vocoder so that it returned the resonant frequencies to where they would have been in normal air.

The effectiveness of the vocoder in increasing the intelligibility of human speech was tested without constructing an operating model by means of a computer programed to simulate components in the pro-

posed vocoder system. The output from the computer was reconverted to electrical signals which then produced the improved helium speech.

Computer-made three-dimensional animated motion-pictures of the basiler membrane (that part of the inner ear that translates sound waves into audible sensations) have been produced at Bell Telephone Laboratories. The basilar membrane is a delicate, spiral structure about ½-in. in diameter. It is extraordinarily difficult to observe because it is within a part of the ear called the cochlea which is deeply imbedded in the temporal bone of the skull. Georg von Bekesy, a Nobel laureate now at Harvard, was the first to measure basiler membrane movements. With data obtained from Prof. Bekesy, a mathematical model of the basiler membrane was devised. A computer, programed with the model, generated a magnetic tape containing data describing a sequence of drawings depicting the movements of the membrane. The tape was fed to a microfilm plotter which converted the digital data into line drawings on the face of a special CRT. A motion-picture camera, also controlled by the computer, photographed the drawings, thus producing a motion picture.

The three-dimensional effect is created by presenting a different picture to each eye. The two pictures show what the object looks like from two slightly different positions. When the film is viewed with stereoscopic glasses, both pictures appear to fuse and the minute difference in perspective is translated into a realistic depth effect.

The film depicts the basilar membrane as a conical spring tilted at about 45°. A sound wave entering the ear travels from the base of the basilar membrane to its summit, causing the various parts of the membrane to vibrate in different ways. One of the advantages of the computer-generated film is that the complicated motions of the basilar membrane can be seen clearly and studied in detail by slowing down small rapid changes and exaggerating the movements. For example, even the loudest sounds move the basilar membrane by an amount measured in microscopic dimensions. Yet there may be thousands of movements in the basilar membrane each second. Without a computer, it would be impossible to calculate, let alone plot, the movements of the basilar membrane in response to even ordinary speech sounds. The movements are so fast that to show clearly what happens when the spoken word "to" is heard takes two minutes of film time.

Using these movies, the movements of the membrane can be related to frequencies and intensities of sound. By studying these movements, scientists are able to understand the correspondence of physical motions to psychological phenomena.

New Gunn-effect oscillators that generate continuous microwaves at higher frequencies and power levels than previously reported have been developed at Bell Telephone Laboratories. The devices, made of gallium arsenide epitaxially grown to form a three-layer sandwich structure, are being studied for use in microwave communications systems. The active region of the devices, made from intermediate-resistivity

gallium arsenide, is sandwiched between two layers of low-resistivity gallium arsenide. The device fabrication starts with an n^+ substrate. An n layer of gallium arsenide is then grown epitaxially onto the substrate by a hydrogen-water vapor process. The n layer is the active region in which microwave energy is generated. Finally, a layer of n^{++} gallium arsenide is grown epitaxially onto the active region by a liquid growth process.

Eastman Kodak Co. will join with the Ford Foundation in support of a new Visual Communications Education Project centered at Western Washington State College, Bellingham, Wash., according to a recent announcement. Donald E. Hyndman, Assistant Vice-President and General Manager of the Kodak's Motion Picture and Education Markets Div., revealed that Kodak will provide $76,000 in support of the Ford Foundation project which involves pilot program work in public school systems in five West Coast area cities and two junior colleges. Earlier the Ford Foundation announced a grant of $490,000 to Western Washington State College for development of a new curriculum in visual communications.

Frank Herrnfeld Engineering Co., 5716 Camille Ave., Culver City, Calif., recently announced a change in management by which Irving J. Lieberman has become the new president of the company. The firm is continuing production of its line of sensitometers, densitometers and motion-picture printing equipment. It will also continue to specialize in prototype and development work. Former president Frank Herrnfeld is now acting as consultant to the company.

The firm of Newman & Guardia, Harlow, Essex, England, is one of 115 British firms presented with the Queen's Award to Industry and one of 18 cited for both Technological Innovation and Export Achievement. The Queen's Award plaque was accepted by Stanley G. Fitch, Managing Director, on behalf of the firm, during presentation ceremonies. Presentation was made by Colonel Sir John Ruggles-Brise, Lord Lieutenant of the County of Essex, who said, in part, "Lawley machines of superb design and construction and relative cost are second to none in the world . . . Your goods are not bought for sentimental reasons, but because they are competitive in price, in design and in quality. It is your sustained efforts that have enabled you to compete with any company in the world..."

The recently created firm of Motion Picture Camera Supply, Inc., has moved to larger quarters at 424 W. 49 St., New York, N.Y. 10019, according to a recent announcement. Founder of the firm is Gene Levy who was formerly General Manager of Camera Equipment Co. Al Nathanson, who also was formerly with Camera Equipment Co., is a partner in the new venture. Jack Goldman is General Manager of the firm's rental department. The firm's new quarters include offices, a showroom and a service facility that provides off-the-street loading.

Mid-America Color Labs is a recently established division of Wilding Inc., 1345 Argyle St., Chicago, Ill. 60640. The firm's former laboratory facilities have been more than doubled, the announcement stated. Harold Kinzle, a Wilding Vice-President, has been named Manager of the new division.

Capital Film Laboratories, Inc., has opened its 35mm color laboratory at Studio City, Miami, to provide overnight processing of 35mm color films. Headquarters of the firm are at 470 E St., S.W., Washington, D.C. The laboratory is now capable of processing 96,000 ft of color film per day, the announcement stated. Laboratory equipment includes Bell & Howell Model C additive color printers; Agnew Higgins Laminar/Flow clean room air filters; and a special Cuematic cuing system. An Onan generator has been installed that starts within 5 s if normal power fails due to a storm or other causes. Recently installed equipment for the laboratory's "daily" sound transfer capability includes an Ampex ¼-in. playback machine and a Westrex 35mm recorder used to transfer ¼-in. studio or location recording to 35mm magnetic film and to transfer 35mm magnetic film to ¼-in. for protection. The firm can also provide a complete location recording crew which will utilize Nagra equipment.

Fast processing of color motion-picture film for producing locally originated TV news in color was the topic of the first of a series of four-day courses held recently at General Aniline & Film Corp.'s photographic technical center in Binghamton, N.Y. Interest in locally originated TV color newscasts has led many stations to consider installation of their own color film processing facilities or to investigate local processing of color newsfilm. The GAF courses in laboratory practice are designed to provide broadcaster photo staffs and commercial processors with information on how to handle and process Anscochrome color motion-picture films. One class discussion centered around the AR-2 process for Anscochrome films which develops them in 22 min wet-to-wet.

Electro-Netic Labs, Inc., is a newly formed affiliate of Radiant Manufacturing Corp., Morton Grove, Ill. The new affiliate is located at Palatine, Ill. Functions of the new firm are to design and develop new products for the parent firm's photographic and audio-visual lines and to provide engineering and design services. Officers of the new firm are: Vice-President and General Manager, Electrical Div., Harold Garbarino; Vice-President and Assistant General Manager, Mechanical Products, Bob Baenziger; and Vice-President and Consultant, John Rieger.

In separate announcements, Radiant Manufacturing Corp. revealed that Tom Horton has been appointed Vice-President of Products and Merchandising and Glen Cota, Vice-President of Marketing, will direct the marketing of Pathe and Pathe-Noris motion-picture cameras and projectors in Paris, France, and Nürnberg, Germany.

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Full-coated films and "B" oxide-type magnetic recording tapes manufactured by Reeves Soundcraft, Great Pasture Rd., Danbury, Conn., are now Micro-Plated, it was recently announced. Micro-Plating is a process developed at Reeves to achieve improved film-to-head contact during recording and playback as well as to provide higher output and better SNR. The process was originally developed for use on video tape, but is now used in the manufacture of Golden Tone sound recording tape and 5-mil acetate base magnetic film in 35mm and 16mm sizes.

Diazo microfilm duplicating machines produced by CBS Laboratories, High Ridge Rd., Stamford, Conn., will be marketed by Tecnifax Corp., Holyoke, Mass., a wholly owned subsidiary of Scott Paper Co., according to a joint announcement. Machines developed at CBS Laboratories include the Model 303 Diazo Roll Microduplicator, Model 601 Diazo Card Microduplicator and a desk-top Model, the 400 Diazo Roll Microduplicator. The announcement pointed out that use of the diazo principle gives microfilming a medium which is handled in room light and develops almost instantaneously, with high resolution and at lower costs than conventional microfilm duplication. The announcement also pointed out that since diazo film does not use silver, its use in information processing will help to relieve pressure in the silver market.

Scopitone, Inc., a subsidiary of Tel-A-Sign, Inc., 3401 W. 47 St., Chicago, Ill., now holds worldwide distribution rights for Scopitone ("A New Automatic Multifilm Projector for Audio-Visual and Entertainment Purposes," by Roger Duval, *Journal*, pp. 1104–1107, December 1965) except for France and French Africa, according to the terms of a contract with Cameca, a division of C.S.F. Industries of Paris. Scopitone, a French development, is a coin-operated color soundfilm rear-view projector used for entertainment to show recording artists in musical productions in color and sound. American-made Scopitone machines are manufactured at a Chicago plant of Tel-A-Sign and its films are presently produced by Harman-ee Productions, Inc., of Beverly Hills, Calif.

The Cine-Kodak K-100 Turret Camera, a 16mm professional camera, is again available, according to an announcement from Motion Picture and Education Markets Div., Eastman Kodak Co., Rochester, N.Y. 14650. The 6-lb camera features simple film loading, interchangeable telescopic finders, a long-running motor, 3-way exposure lever, full-speed range and selection of lenses. It is available from Eastman Kodak Educational Markets Dealers at a price of less than $530 with 25mm *f*/1.9 lens and 25mm viewfinder.

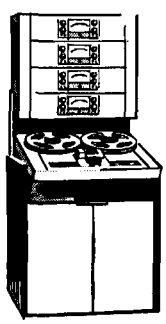
Plans for a merger of DeVry Technical Institute, Inc., into Bell & Howell Company, 7100 McCormick Rd., Chicago, Ill. 60645, have been formally ratified by Bell & Howell's Board of Directors and by the shareowners of DeVry, according to a recent announcement. The transaction in-

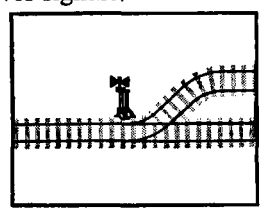
This is not a whispering campaign...

but you might think so. The way word has gotten round from one audio engineer to another, one station exec or record mogul to another . . . about the blessed quietness of the new 3M Professional Tape Recorder. How it has increased signal-to-noise ratio 15 db. How our younger generations are the equal of anyone else's master. How it makes a 10 or more decibel difference in noise on your finest LP pressings. And you needn't plug in the oscilloscope – this difference you can *hear!*

An ingenious two-track system – "Dynatrack" mastering—extends the weighted dynamic range of audio tape systems to at least 80 db below third harmonic distortion. This means, of course, that *our third generation dub equals anybody else's master.*

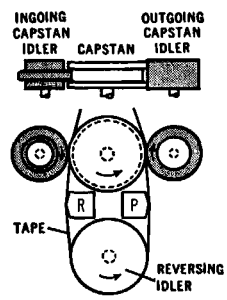
The "Dynatrack" system keeps you on a clear track, virtually distortion-free. Here's how: a single signal is recorded simultaneously on a high or "H" track at normal NAB-standard level for higher level signals; and on a low or "L" track with a pre-emphasized response – high frequencies as much as 15 db – the better to record lower sound level signals.





On very soft sounds usually lost when recording at NAB levels, the low track puts out a clean, undistorted signal. However, when the low or "L" track approaches distortion, an automatic circuit anticipates and switches to the high or "H" track – noiselessly and in milliseconds. The reserve volume capability of the "H" track thereby provides an extension of the dynamic range.

"Isoloop" foils flutter. The unique 3M "Isoloop" – virtually an isolated loop of tape in the most critical part of the recorder – is controlled by a differential drive capstan that also keeps tape loop tension constant. The loop hugs the tape heads snugly, and isolates the tape from the rest of the transport. The tape path in the loop is very short. Unsupported tape is reduced to 3½ inches. Less tape free to shimmy, shake over the heads! Unprecedented tape support like this considerably lessens flutter rate from that in ordinary professional recorders.



NAB tapes? Si! Yes, your present prerecorded tapes *will* play, and with new brilliance, on the 3M Recorder. And you can record standard tapes, to be played on NAB-standard machines. Plug in 2 new circuit boards to convert from the expanded range of the 3M Recorder to conventional recording.

Merely everything is here. Amplitude linearization for lower distortion. Phase correction for cleaner sound. Silicon solid-state circuitry. Overdub sync is available. Modular electronics. Epoxy glass circuit boards. Photoelectric tape position sensing. Interlock tape safety—go directly from "fast forward" or "rewind" to "play." Vernier precision editing location and marking. Etc. All made-in-America.

Now offering: Complete console. Portable units, complete in two shock-mounted carrying cases. You may also purchase the "Dynatrack" electronics system, or the "Isoloop" tape transport separately. The coupon will bring you a descriptive brochure.

(NAB Compatibility, too!)

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volves acquisition by Bell & Howell of all of the assets of DeVry in exchange for an undisclosed number of Bell & Howell common shares. Completion of the merger is now pending, subject to the receipt of a favorable ruling by the Internal Revenue Service.

An Electronic Recording Products Department has been formed within the RCA Broadcast and Communications Products Div. to accelerate product development and marketing of television tape equipment, according to a recent announcement. Andrew L. Hammerschmidt has been appointed Department Manager. He was formerly Manager, Operation Plans, for the Division. Arch C. Luther has been appointed Manager, Engineering, for the new department and Henry H. Klerx has been appointed Manager, Merchandising. Prior to joining the RCA Division in Camden, N.J., Mr. Hammerschmidt had been Chief Engineer for the RCA Surface and Missile Radar Division in Moorestown, N.J.

The Engineering and Merchandising Department is a newly formed unit within the Broadcast and Communications Products Division, Radio Corp. of America, Camden, N.J. Created to consolidate engineering and merchandising activities for major products, the new department brings together planning, development and design of new and improved products for the broadcast and communications industry. Andrew F. Inglis, a Division Vice-President, will head the new department.

Arthur Nalven has been named Assistant General Manager of Associated Screen Industries Ltd., 2000 Northcliffe Ave., Montreal 28, Que., Can. For the last two years Mr. Nalven has been in charge of the color plant of Du-Art Film Laboratory, New York, the firm's parent company. The appointment was made as part of an expansion which includes present conversion of 16mm Eastman color printing from subtractive to additive and 35mm Eastman color printing and processing facilities planned for the near future.

Frank J. Bosek has been appointed Product Manager, Amateur and Professional Products, Agfa-Gevaert, Inc., 275 North St., Teterboro, N.J. 07608. Mr. Bosek was formerly employed by Ciba Corp. as Director of Marketing Development in charge of the Photochemical Dept. Before that he was with Paillard, Inc., first as Southwest Regional Manager and later as Administrative Assistant to the General Sales Manager.

Phillip J. Wingate has been appointed Assistant General Manager of the Photo Products Dept., E. I. du Pont de Nemours and Co., Wilmington, Del. 19898. He was formerly Assistant General Manager of the Elastomer Chemicals Dept. He is succeeded by Lyle E. King, formerly Director of Sales of the department. Dr. Wingate has been with du Pont since 1942 when he joined the company as a research chemist at the Jackson Laboratory, Deepwater, N.J., and subsequently held various research and administrative posts.

David C. Groot has been appointed Executive Producer of Fraser Productions, a television and film production company with headquarters in San Francisco. Mr. Groot has previously held posts as creative director and production coordinator for various motion-picture and design studios in Los Angeles and San Francisco.

Al Pezzuto has been appointed Program Manager, Advanced Planning, for Photo-Sonics, Inc., Burbank, Calif. He was formerly with Bendix Corp., Radio Div., as Range Systems Department Manager for Operations and Technical Support at the Pacific Missile Range. Before that he was with the U.S. Naval Ordnance Test Station at China Lake.

Hy Shaffer has been appointed Vice-President in charge of Marketing and Sales for ULE, Inc., 21 Spencer St., Stoneham, Mass. The firm specializes in consultation services, research, design and manufacturing in photooptical and medical instrumentation. The firm has recently been expanded to include marketing and sales activities. Mr. Shaffer was formerly with Smith's Photographics and Camtech of Boston.