Panoramic view of the SMPTE Get-Together Luncheon. The Marine Corps Band is on stage at left; the dais of SMPTE officers is on the right. (Photograph by John J. Kowalak).

99th Semiannual Technical Conference

Washington, D.C., May 1–6

THE SOCIETY'S 50TH ANNIVERSARY got off to a successful start last month with the 99th SMPTE Technical Conference and Equipment Exhibit. Returning to the city of its birth, the SMPTE held this milestone conference in Washington, D.C., May 1–6, at the Sheraton Park Hotel.

The first of two anniversary conferences, the 99th was heralded for its excellent papers program, comprehensive equipment exhibit, and attendance which surprised most prognosticators.

The local Washington committees, from Arrangements to Program, were lauded for their hard work and dedication in arranging a conference that can proudly take its place with the successful conferences in SMPTE's 50-year history.

Two special announcements were made during the conference as a result of the Sunday Board of Governors' meeting. First, the Board approved plans for proceeding with merging with the Society of Photographic Scientists and Engineers, action which was followed a week later by the approval of SPSE's Board. Next, the memberships of both societies must vote on the consolidation of the two societies before it can take effect.

Second, the Society announced a new education award, to be known as the Eastman Kodak Gold Medal Award (see p. 616 of this issue). It is hoped a recipient of the award can be named before the Society's annual awards program which will be held at the 100th SMPTE Conference in Los Angeles, Oct. 2–7.

Total attendance for the 99th Conference was approximately 1,800 persons, which included about 800 persons who registered for the sessions (170 in advance), and another 800 who visited the Equipment Exhibit.

The Conference officially began at 9 Monday morning and gained momentum at the Get-Together Luncheon Monday noon. This event was attended by more than 400 members and guests.

As everyone was seated for lunch, the Marine Corps Band, attired in bold red uniforms, entertained from a special stage at the rear of the vast dining hall. Then reinforcements arrived: the Marine Corps Drum and Bugle Corps, another team of precision instrumentalists, also dressed in red. The two military ensembles played stirring patriotic music, to the delight of all in attendance.

When all were seated, Associate Program Chairman Paul Christman sang the National Anthem accompanied by the tandem Marine Corps corps of musicians, while the traditional Marine Corps Color Guard bore the colors.

Immediately after lunch, SMPTE President Ethan M. Stifle delivered a short talk before introducing the afternoon's guest speaker, Senator George Murphy. An extract of the President's remarks follows, after which appear excerpts from Senator Murphy's speech.

Get-Together Luncheon Speaker Senator George Murphy with Executive Vice-President G. Carleton Hunt and President Ethan M. Stifle.

Remarks of President Stifle

In 1916, the Society of Motion Picture Engineers was founded by Mr. C. Francis Jenkins for the purpose, as expressed in the Constitution, of advancement in the theory and practice of motion picture engineering and the allied arts and sciences, the standardization of the mechanisms and prac-

Officers' dais at Get-Together Luncheon. (Photograph by John J. Kowalak).

Q: How would you advertise a brand-new camera?

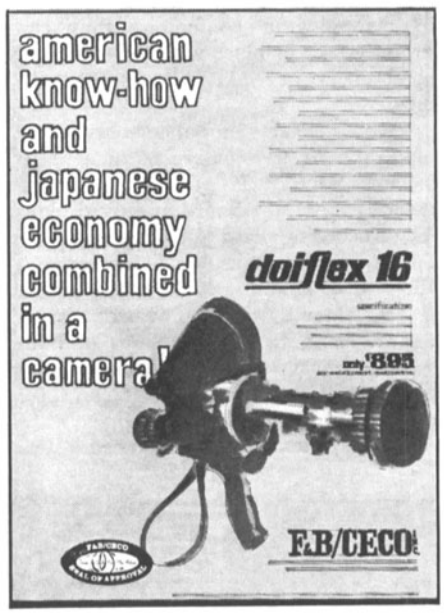
Neat!... But the price tag is too small.

Not bad! It features the really low, low price, but is it too "bargain-basement?" Which comes first . . . a camera's quality or its price?

The only one who liked this ad was the boss. Overruled!

The Avis technique... people are getting tired of "second-best"... besides, the Doiflex 16 is as good as the NUMBER ONE camera!

High class! Lots of white space! Soft sell!... But we can't afford it at these prices!



True enough! F&B/Ceco worked with the Doi company over a year in design and engineering... but the double cliché does sound corny.

tices employed therein, and the dissemination of scientific knowledge by publication."

I shall not recount our Society's history during the intervening years, except to say that it promoted the establishment of its sister society in England in 1930—the British Kinematograph Society—which resulted from the establishment some months previously of a London Section of the SMPE. The British Kinematograph Society has been a strong organization in its own right ever since.

On the way from 1916 to 1966, our Society, with remarkable wisdom and foresight, has broadened its outlook tremendously with perhaps its greatest broadening being the addition of television to its area of interest. High-speed photography and instrumentation have occupied a prime position in our activities from the very beginning of this discipline. Photographic science and education have also been important activities through the years, but added emphasis has been placed on these areas as the result of the establishment of vice presidencies for each, along with vice presidencies for motion pictures, high-speed photography and instrumentation, and television. Great progress has already resulted from the establishment of these vice presidencies and tremendous progress and growth can be foretold with absolute certainty.

I wish to cite these recent events that have added to the illustrious history of our Society which has reached its zenith on its Fiftieth Anniversary. I might say also that progress in our efforts is accelerating and that it is safe to predict an even more glorious fifty years ahead of us.

These recent events are worthy of note:

(1) The 97th and 98th Conferences held last year in Los Angeles and Montreal set all-time success records. We expect new records from our 99th and 100th this year.

(2) Coincidentally with the color explosion that has overrun the TV industry and signalled the death of black-and-white in the industries of which we are a part, a committee of our Society has established temporary standards for color film for TV broadcast and produced test motion pictures and slides for industry use to put these standards into practice.

(3) We have set up a special engineering committee to recommend a means of bringing our talents to bear on the problem of standardization in community antenna television systems and educational television systems.

(4) We have inaugurated a procedure whereby prints of papers presented at our Conferences can be acquired during the Conference and prior to publication in the *Journal*.

(5) The visit to the Soviet Union by an SMPTE delegation under the U.S./U.S.S.R. Cultural Exchanges agreement and our participation in the ISO (International Standards Organization) meetings in Milan, Italy—both of which occurred last fall—dramatize our international stature.

(6) As the result of the intense national interest in education, we have put into being the following four programs:

(a) Bringing to fruition the dreams long held by our Society and strengthening our educational program was the establishment this year for the first time in the history of the U.S., courses in an educational institution on the college level leading to Bachelor of Science and Advanced Degrees in Photographic Science and Engineering. In this connection, I quote from a 1930 *Journal* of the SMPE written by the then President, J. I. Crabtree, as follows: "It is also encouraging to note that the motion picture technician has at last been given the spotlight and is receiving some of the recognition which he deserves." With the establishment of the courses cited above we have given our practicioners the opportunity to move from the motion-picture technician level to the level of motion picture engineers and scientists or, more broadly, to photographic and television scientists and engineers.

(b) The Society has set up a fund to promote education in the sciences we embrace, a part of which has already been allocated to the establishment of scholarships for study in these areas.

(c) We are further giving evidence of putting a large portion of our energies in the educational area by establishing a Gold Medal Award for presentation to individuals making outstanding contributions to the advancement of education through the employment of the sciences we embrace.

(d) Further, in the field of education and with the purpose of bridging the gap between educators and engineers which many feel has been the chief stumbling block in preventing the full use of science to advance education, I have just yesterday set up a committee of renowned scientists in our Society to explore with educators the means of bridging this gap. Our committee will meet with a committee appointed by DAVI of NEA for this purpose. This is an outgrowth of a meeting I had recently with Don Ely, President of NEA, implementing a suggestion of Bob Wagner of Ohio State University, made in a paper presented in our 98th Conference in Montreal.

In the above recitation I have purposely omitted the association of names with accomplishments inasmuch as credit goes to so many that mention of a few would be unfair to the others.

These and many other noteworthy accomplishments play up the accelerating pattern of our work over our first half-century. This is only a small taste of the work that our Society is certain to encounter in its second half-century. The SMPTE, in its 50th year, is stronger than ever before on all counts and thus well prepared to make its second half-century even more illustrious than the half century just completed.

Associate Program Chairman Paul Christman singing the National Anthem to the accompaniment of the Marine Corps Band, at the Get-Together Luncheon.

Senator George Murphy addressing the SMPTE at the Get-Together Luncheon.

Get-Together Luncheon Chairman Fred Garretson and Conference Vice-President Kenneth M. Mason, before the Luncheon.

Excerpts
Get-Together Luncheon Speech: Senator George Murphy

I am pleased to congratulate today all of you — all of you present — and those of you who are not present — for the tremendous contribution that you have made, and continued to make over the past fifty years. I am conscious of it. I did learn enough engineering to understand some of the complications and the problems and the achievements. And I have had experience on all sides of the motion-picture industry, as an actor, as an executive, in the sales end, and I know a good deal about the effect of the accomplishments that you men have had. In these days of speed and scientific advancement and, I sometimes think, of almost complete confusion, we hear a great deal more about putting a man on the moon; building an aircraft that can fly three times the speed of sound; how to keep a crew up there at seventy thousand feet in the air; how to bend laser lights around corners — all sorts of uses of exotic chemicals and medicines which we did not know about ten years ago, and cures. Far too few of us realize the basic contributions that have been made in the scientific areas of advancement which have been helpful in all of these cases by members of your community.

Track scientific spectaculars more clearly on CRONAR® Type 140

There are times when tailing a missile is like photographing a white-bond kite in a snowstorm.

We make a special emulsion for missile tracking. It separates similar tones by rendering subjects with maximum contrast. You get it by asking for Du Pont CRONAR Type 140.

You also get protection from film breaks, because the CRONAR polyester base absorbs start-up torque. Other important advantages are 20% more footage on standard reels, smooth film transport even at –40° C., and great durability under extended usage in projectors and other analysis equipment.

Next time you have to film a flight, specify CRONAR 140. The result will be electrifyingly clear.

CRONAR 131—Medium contrast, medium speed. Unusual ease of processing, either as negative or reversal. Ideal for field use.

CRONAR 136—All-purpose negative with very fine grain, medium speed, wide latitude.

CRONAR 140—High-contrast, fine-grain negative, especially for photographing missiles against a sky background where object is both front- and back-lighted in the same sequence. Extended red sensitivity.

CRONAR 225—Fine-grain positive for multiple prints with excellent dimensional stability. Used as optical programming tapes in automation for precise yet flexible scales on measuring equipment. Many other unique applications.

Write for brochure describing "CRONAR" motion picture films in detail.
E. I. du Pont de Nemours & Co. (Inc.),
Photo Products Department,
Wilmington, Delaware 19898.

Photo Products Department

DU PONT

Better Things for Better Living
. . . through Chemistry

Vice-President for Television Affairs Richard S. O'Brien, Vice-President for Instrumentation and High-Speed Photography Affairs William G. Hyzer, and Vice-President for Motion-Picture Affairs Richard J. Goldberg.

Program Chairman Arthur L. Foster, Editorial Vice-President Herbert E. Farmer and Vice-President for Photo-Science Affairs J. S. Courtney-Pratt.

Scientific advances, as I have experienced over the years, are generally not the result of one great outstanding breakthrough; they are not usually the result of any individual activity or any small team of men. They usually are the result and the reflection of a cumulation of skills, experience and knowledge gathered over the years, realigned in a new formation, like building blocks and materials, if you will, so as to produce an entirely new and formally unknown condition or still or knowledge of the arts, and therefore, a new and important advance in what we term scientific knowledge and application — rather than an invention.

The important contributions that you have made in these areas are so numerous that I would not even have time to retell the ones that I have had experience with.

As I look back over the last few years, I am convinced that we have reached a stage in our development where man's achievement has surpassed his imagination. I have seen things as I have been here that I am forced to say that I don't understand and could not imagine had I not seen them.

In the field of photography, of course, . . . I have had the good fortune to be associated with some of the . . . finest technicians in the business, certainly some of the finest gentlemen that I have had the pleasure of knowing and working with. There are a couple of them here today, . . . my good friend Sid Solow is here . . . , Carl Hunt, of course, I have known for years. Dick Goldberg here is one of your vice-presidents. I had the privilege of working with him at Technicolor. I watched the progress that has been made in materials, the basic film quality, dyes, lenses, the application and use of speed cameras, the combat camera, cartridge loading of both cameras and projectors and all the other accumulations of skill that make it possible now for a child practically of 8 years to walk out on a day and take a picture which in many cases is better than the picture taken by the top photographers when I first went to Hollywood.

The advancement is unbelievable, ladies and gentlemen. I was present, of course, when the great breakthrough took place in Hollywood with regard to the different proportions of the film picture, instigated by Mr. Spyros Skouras and you know what that started. I had to travel from town to town and hold the hand of all the exhibitors. They would say, "Murph, which lens should I buy?" And I used to say, "Don't buy any. Make them standardize." And that is exactly what you have done. And not through the efforts of the heads of the studios, but through the good sense of you ladies and gentlemen which made it possible for these fellows who have the job of showing the end results of our efforts to the people . . . .

Sometimes working so close to the industry, we do not realize the achievement of our people but I do. I do because I am constantly amazed and constantly proud to have been a member of this industry. And I have seen the ability to reproduce a picture from the original negative 25 years later and get a better film than you had at the outset.

Of course, the advances in sound now are moving even faster than the advances probably in photography. I could go on and on about these skills and knowledges but I would . . . like to talk to you for just a minute about a serious thing that I consider more important. And this is the final application of the experience, the skill and the knowledge and all the combined abilities and capabilities that we have through the great work of you gentlemen combined with the writers and the producers, the imaginative people of our industry and of our nation. And I hope I live long enough to see the day where full use is made of this great medium, or I should say, of this media because television has now taken its place . . . .

There is no greater instrument, the potential of which has not even been discovered in many cases, than the use of the knowledges, the skills of you gentlemen, combined with the imagination of our writers.

. . . And as time goes on we are going to have to use this method [by motion pictures] of teaching our youngsters, because they now have to learn much more than in the days when I went to school and in a shorter period of time. There is no way to compare with the audio-visual advances and possibilities. These are the fields of tomorrow.

I hope to see as we go along as I serve you in the Congress, from time to time, better use made of these media. And I am going to work as hard as I can to schedule through speeches, through introduction of bills to see that we get the full value and use it the way it should be used, to tell the story of this great nation of ours, this great land of opportunity.

And so as you continue with your meetings here, keep this in the back of your mind, America is in a position in world affairs today where at all times we must be conscious, we must be knowledgeable, we must be sensitive to the needs of not just the government, not just the administration — it is not just up to the President, it is not up to the Congress. It's up to all of us because we are this kind of a Country.

Local Arrangements

A conference of the scope and quality of an SMPTE Conference requires sacrifice and diligence from many persons, particularly the local committee members who spend long hours planning the conference and six full days during the conference insuring the plans are carried to fruition.

The 99th Conference in Washington was no exception. This conference, as others in the past, had so many details and ramifications that it was a wonder to see it come off so smoothly. The person responsible for all conference arrangements at the 99th was General Arrangements Chairman Arthur Rescher, Byron Motion Pictures, Washington, D.C.

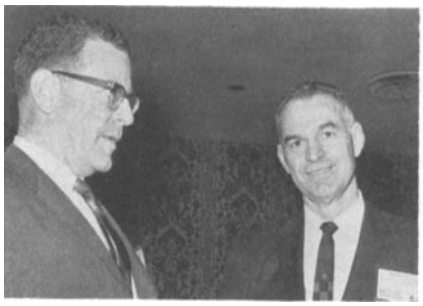
Under Rescher were several committees responsible for arrangements in specific areas. The committees and their respective chairmen were: *Hotel Arrangements*, R. C. Smith, ITV-USIA; *Registration*, Jack Jiruska, Ram Engineering Corp., Annapolis, Md.; *Projection*, Wilson E. Gill, Wilson Gill Inc.; *Presentations*, William E. Youngs, USIA; *Banquet and Entertainment*, Dudley Spruill, Byron Motion Pictures; *Get-Together Luncheon*, Fred W. Gerretson, E. I. du Pont de Nemours & Co., Washington; *Public Address and Recording*, Al O'Eth, retired; *Hospitality*, Don C. LeFebre, Westinghouse Defense Center, Baltimore; *Ladies Program*, Sam Gale, Capital Film Laboratories; *Transportation*, Lt. Simms Howell, Naval Photo Center, Naval Air Station; *Publicity*, Robert Harman, National Education Association; and *Membership*, I. S. Rosner, Rosner TV Systems, New York City.

Assisting Rescher in his myriad duties was Associate Arrangements Chairman Nelson Funk, Rodel Productions, Inc. In addition, Rescher was aided by Wesley R. Sandell, Eastman Kodak Co., Chairman of the Washington Section.

Other assistance was given by Amir Dowlatshahi, Capital Film Labs, in Public Address and Recording; Mrs. Regis Jiruska, Ram Engineering Corp., Annapolis, Md., in Registration; Miss Joan Andrews, Westinghouse Defense Center, Baltimore,

Hospitality; Robert Kaplow, Naval Ordnance Lab, Chief Projectionist; Ernest Inman, Naval Ordnance Lab, Projectionist; Ed Beckman, Carl Bushung and Tom Dickson, NASA, Projectionists; and Miss Adrian Borneman, Byron Motion Pictures, in the registration area.

Supervision of the Conference Arrangements was by Conference Vice-President Kenneth M. Mason, Eastman Kodak Co., New York.



Arrangements Chairman Arthur Rescher and Program Chairman Arthur Foster.

Financial Vice-President Joseph T. Dougherty and former SMPTE President John W. Servies.

Past President Reid H. Ray and Engineering Vice-President Dean R. White at the Conference.

Papers Program

Program Chairman of the 99th Conference was Arthur L. Foster, Chief of Laboratory, U.S. Dept. of Agriculture, Washington, D.C. assisted by Associate Program Chairman Paul Christman, General Aniline and Film Corp., Cheverly, Md.

The 99th Conference Papers Program contained approximately 70 technical papers which were arranged into 13 separate sessions.

The Papers Program is under the jurisdiction of SMPTE Editorial Vice-President Herbert E. Farmer of the University of Southern California, and Papers Committee Chairman C. Loren Graham, Eastman Kodak Co., Rochester.

Session topics and their respective topic chairmen were: *Aerospace Cinematography*, William M. Sheahan, RCA Missile Test Project, Patrick AFB, Fla.; *Applications of Motion Pictures and Television in Education*, James A. Moses, Dept. of the Army; *Instrumentation and High-Speed Photography*, Thomas Liddiard, U.S. Naval Ordnance Laboratory, Silver Spring, Md.; *7th International Congress on High-Speed Photography*, Max Beard, U.S. Naval Ordnance Laboratory, Silver Spring, Md.; *Laboratory Practice*, Garland C. Misener, Capital Film Labs.; *Motion Pictures and Television in Medicine*, Harold E. Dixon, Walter Reed Army Medical Center; *New Materials and Processes*, John L. Forrest, General Aniline & Film Corp., Binghamton, N.Y.; *Television Developments*, Ernest Acquisto, USIA; and *Historical Report*, Eugene Ostroff, Smithsonian Institution.

The Advance Program was published in the March SMPTE *Journal*. Papers were presented as published with the following changes.

Papers added to the Program after the Advance Program was published are: "Cine Photography in Research at Aldermaston," George H. Lunn, Atomic Weapons Research Establishment, Aldermaston, England; and "Two Camera Video Teaching Techniques for Recording and Teaching Procedures Involving Fluoroscopy," A. C. Kittleson and L. R. Griewski, University of Michigan Medical Center, Ann Arbor, Mich.

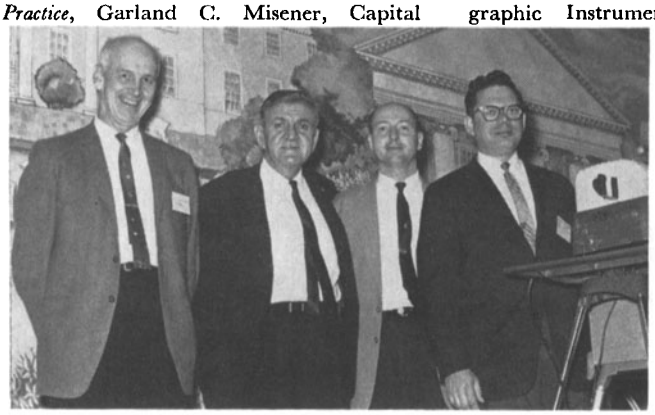
A paper added after the Final Program was published is "A System for Creating Optical Effects in A and B Printing Without Duplicate Negatives," Howard Anderson and Bob Richard, Howard A. Anderson Co., Hollywood, Calif.

Papers listed in the March *Journal* but subsequently cancelled were: "Surface Irregularity Tracking System," Myron J. Rosenbloom and Steven R. Croopnick; "Motion Picture Prints From Thermoplastic Original," Harry Somber; "Optics and Electrooptics at the Eastern Test Range," Rodman W. Stuhlmuller and Robert A. Smith; "A New High-Speed Black-and-White Reversal Film," C. M. Kretchman and W. M. Wall; and "Photographic Instrumentation at the U.S. Naval Ordnance Laboratory, White Oak," Max Beard, Paul H. Cords, Jr., Charles G. Grover, Robert L. Kaplow and Allen M. Erickson. The paper "35 to 70mm Panavision Blowup Step Printer," by Walter Eggers, C. L. Luton and Robert Gyori, was combined with the paper "Pan and Scan Step Printer" to form a paper "Pan and Scan Re-Editing and Printing System," by the same authors.

Lens Design Panel

A panel discussion on automatic methods of lens design on Tuesday afternoon was one of the highlights of the Conference Program. After introductory remarks by Dr. J. S. Courtney-Pratt, Bell Telephone Laboratories, Inc., Murray Hill, N.J., most members made a report by turn on a specific area of lens design, after which there was a discussion.

Members of the panel were: D. P. Feder, Eastman Kodak Co., Rochester, N.Y.; Dr. B. Brixner, Los Alamos Scientific Laboratory, University of California, Los Alamos, N.M.; C. A. Lehman, Los Alamos Scientific Laboratory; J. C. Holladay, Institute for Defense Analysis, Arlington, Va.; A. B. Meinel, Steward Observatory, University of Arizona, Tucson, Ariz.; H. F. Bennett, IIT Research Institute, Chicago; J. Meiron, Perkin Elmer Corp., Norwalk, Conn.; W. Brouwer, Diffraction Ltd. Inc., Bedford, Mass.; R. R. Shannon, Itek Corp., Lexington, Mass.; H. A. Unvala, University of Rochester, Rochester, N.Y.; E. W. Bechtold, Columbia University School of Engineering, New York City; E. Eisner, Bell Telephone Laboratories, Murray Hill, N.J.; J. H. Hett, Hett Associates, Cresskill, N.J.; J. B. Kruskal, Bell Telephone Laboratories,

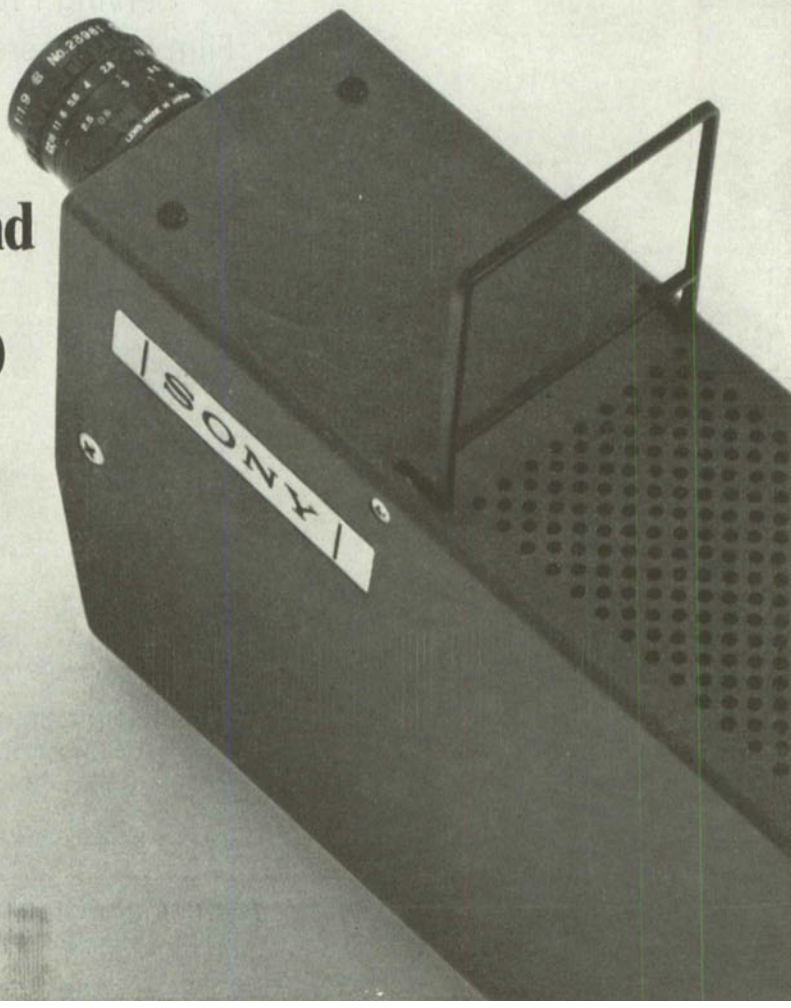


Conference Projection Committee: Edwin J. Beckman, Wilson Gill (chairman), Ernest Inman and Robert Kaplow (chief projectionist).

Arrangements Chairman Arthur Rescher at Hospitality Desk with Hospitality Chairman Don LeFebre and his assistant, Joan Andrews.

Imagine.

Instant Movies in Sound (produce your own or tape them off the air)



The new Sony Videocorder® is a complete Home TV Studio™: a video tape recorder, built-in monitor, and optional camera outfit. Takes TV pictures and sound right off the air, and puts them on tape. And with the TV camera attached, and microphone plugged in, you can do the same with live action.

When you're done–presto, switcho, rewind, playback! And there, on the TV monitor screen, is the same picture with the same sound, as easy as operating an ordinary tape recorder.

First unit ever designed for the home. There's nothing really new about taping sight and sound. TV stations have been doing it for years. But the equipment costs tens of thousands of dollars. That's a long way from home.

But, when you can bring the complete system—recorder and monitor—down to under $1,000, plus an optional $350 for the camera outfit, you're home. And that's exactly what Sony did. They achieved the most exciting home entertainment concept since television.

How did Sony do it? Know-how, that's how! The same imaginative know-how that has innovated all kinds of new things for people to enjoy: pocket transistor radios, incredibly small, personal TV sets, and high fidelity tape recorders—many of them memorable firsts.

Best known as a pioneer in transistor developments, Sony is also one of the foremost producers of tape heads, tape transports and the tape itself. Sony also manufactures TV picture and vidicon tubes. Sony drew from this specialized experience to create this all-new, all-Sony TV tape system for the home.

New recording/playback technique. It was out of this same resourceful know-how that the ingenious idea of alternate-field recording and repeat-field playback was conceived. Combining it with helical tracking, it made possible the development of a unit that would use standard ½-inch video tape at conventional 7½ ips speed, yet capable of storing more than 60 minutes of program material on a 7-inch reel. The dream of a home TV tape recorder became a reality.

How it works. The Videocorder has a rotating 2-head assembly. Only one head is used for recording. It picks up every other field—30 fields per second. For "playback," both heads are used. As one head completes scanning a recorded field, the second takes over and rescans the same field. This reproduces 60 fields per second on the screen as completely interlaced 525-line pictures.

Similar to movie technique. The principle is very much the same as in movies, where the camera operates at, let us say, 24 frames per second. The movie projector also shows the film at 24 frames per second, but projects each frame twice. Thus, the observer receives 48 image impressions per second.

This is done to minimize "flicker" and enhance the illusion of smooth, uninterrupted motion. The Videocorder records 30 fields per second, and double-scans each field to produce 60 impressions each second.

Complete tape interchangeability. So precise are the sync constants provided by the circuitry and by the mechanical speed controls, that any tape recorded on one Sony Videocorder can be played back on any other Sony Videocorder.

The rotating heads are belt-driven by a hysteresis motor. The head assembly, in turn, is servo controlled to maintain locked-in 30 rps speed accuracy and correct angular orientation with relation to the recorded track.

The same motor also drives the tape capstan via a coupling idler wheel. The combined effects of the capstan-mounted flywheel and the self-speed-regulating characteristics of the motor provide smooth, unvarying 7½ ips tape movement.

Unlimited Applications. The Sony Home Videocorder adds a thrilling new dimension to home entertainment. Want to relive some telecast event? Watch a space launch again? A ball game? A presidential speech? Some selected program? Tape it with your Sony Home Videocorder.

You can even use a timer attachment to record a program while you're out. For, once it's on tape, you can watch it at any time. And you can erase the recorded material, and reuse the tape over and over again.

And with the optional camera outfit, you can also record picture and sound of live events—family functions, social shindigs, community activities—you name it. You can also apply it to your business or profession or your hobby interests.

Playback versatility. Moreover, you're not limited to watching playback on the built-in Sony 9-inch screen monitor. You can connect the Videocorder to any monitor, regardless of size. A competent TV technician can even adapt your Videocorder to work with your TV set.

Now available. Prices start at under $1,000. The basic Sony Home Videocorder (model TCV 2010) is priced at $995 complete with 9-inch screen monitor/receiver. A deluxe version (model TCV 2020) in oiled walnut cabinet, and equipped with built-in timer for taping programs in your absence, is priced at $1150. Optional camera outfit including tripod, microphone and cable, is $350. A 7-inch reel of tape, a full hour of recording, costs only $39.95.

Visit your Sony dealer today for an unforgettable demonstration. For free booklet describing the many uses for your Sony Videocorder, write: Sony Corporation of America, 580 Fifth Ave., N.Y., N.Y. 10036

SONY® VIDEOCORDER®

Participants in the Lens Design Panel, left to right, E. W. Bechtold, Harold F. Bennett, W. Brouwer, B. Brixner, E. Eisner, D. P. Feder, and H. A. Unvala.

Murray Hill, N.J; and S. Rosin, Bell Aerosystems Co., Niagara Falls, N. Y.

This discussion originated with correspondence about several papers contributed by B. Brixner on lens design methods. The divergence of points of view expressed and the consequent desirability of airing these and finding what common ground existed led Dr. J. S. Courtney-Pratt to organize this panel discussion. From the comments submitted before the Conference and from the audio recording of the discussion, a full report will be prepared for publication in the *Journal*.

Seventh Congress Review

A report on last September's Seventh International Congress on High-Speed Photography, held in Zurich, Switzerland, was presented Wednesday afternoon and Thursday morning at the Conference. Max Beard, U.S. Naval Ordnance Lab., U.S. National Delegate to the Congress, was topic chairman and presided over the group of reporters who gave their impressions and the highlights of the papers presented at the Congress.

Presentations were given by: J. P. Barbour, Field Emission Corp., McMinnville, Ore.; Francis D. Harrington, U.S. Naval Research Laboratory, Washington, D.C.; Paul D. Flynn, Frankford Arsenal, Philadelphia, Pa.; P. L. Clemens, Von Karman Gas Dynamics Facility, Arnold Air Force Station, Tenn.; Bernard Drimmer, Bureau of Naval Weapons, Navy Dept., Washington, D.C.; William G. Chace, Space Physics Laboratory, Laurence G. Hanscom Field, Bedford, Mass.; William G. Hyzer, Consulting Engineer, Janesville, Wis.; J. S. Courtney-Pratt, Bell Telephone Labs, Murray Hill, N. J.

Selected reports on the Congress were published in the April SMPTE *Journal*, pp. 349–372.

Historical Review

Those thrilling days of yesteryear were brought back to life at the Conference Tuesday night as an historical report of the Society and the industry was presented in a special session. What could be more appropriate for a Golden Anniversary celebration?

Members and guests were first treated to excerpts from films of previous SMPTE Conferences, edited by Philip Martin. Then the work of the SMPTE Historical Committee was detailed by Glenn Matthews, retired from Eastman Kodak Co., Rochester.

"Preserving our National Heritage on Film: The Role of the National Archives" was presented by James B. Rhoads of the National Archives and Records. Special guest at this presentation was Major General Benjamin Foulis, the country's first military aviator who explained filming and the flight of the Wright Brothers' plane in 1909.

A film program, "Celluloid and Paper: The Preservation Program of the Library of Congress" rounded out the evening's session. John Kuiper of the Library of Congress made the presentation and SMPTE Financial Vice-President Joseph T. Dougherty, E. I. du Pont de Nemours, New York, accompanied the films on the piano.

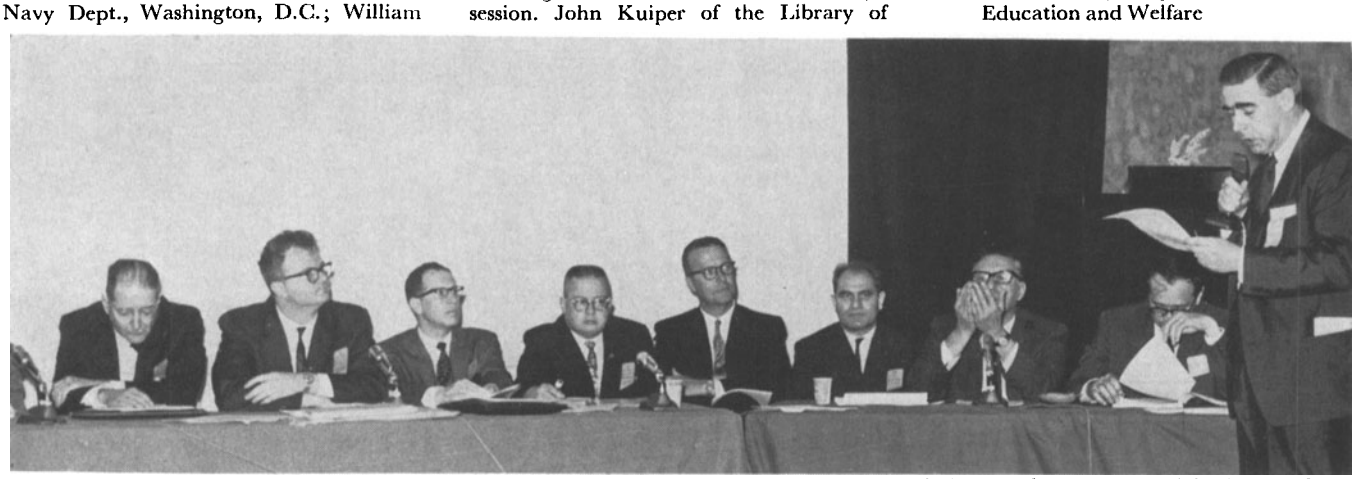
Chairman of the session was Eugene Ostroff of the Smithsonian Institution; Vice Chairman was William E. Youngs of the USIA.

Short Film Subjects

Before each technical session, a short film was shown. Responsible for arranging for these short film subjects was Philip Martin, Jr., President, Norwood Studios, Washington, D.C.

The films were:

How to Succeed Without Re-Inventing the Wheel, Dept. of Defense;
This Is Kansas City, Calvin Productions, Inc.;
Blue Monday, Norwood Films;
Scene From Space, Cook Electric Company;
Creativity, U.S. Dept. of Agriculture;
Newsclips From Past SMPTE Activities, Edited by Philip Martin;
Molecular Spectroscopy, University of California;
Photoelasticity, Pitman-Dunn Research Laboratories;
Dolphin That Joined the Navy, U.S. Navy;
Science and Instrumentation, Battelle-Northwest;
A Child's Introduction to the Cosmos, University of Southern California; and
Men and Mobility, Department of Health, Education and Welfare



Participants in Lens Design Panel, Left to right, J. H. Hett, J. C. Holladay, J. B. Kruskal, C. A. Lehman, A. B. Meinel, J. Meiron, S. Rosin, R. R. Shannon, and standing, J. S. Courtney-Pratt.

An important new development in daylight processing

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.

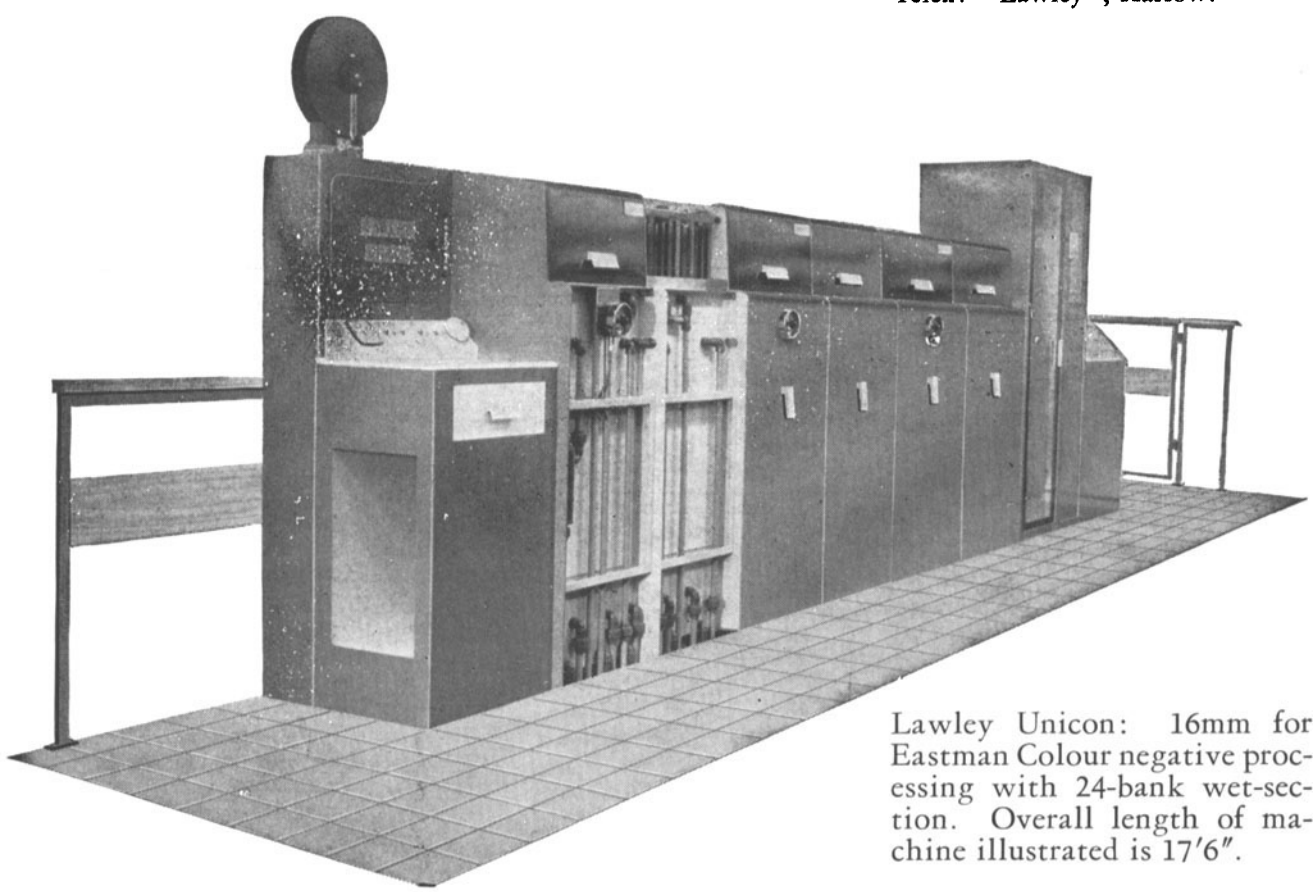
Performance.

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.

Newman & Guardia Ltd

Lawley Works, Edinburgh Way,
Harlow, Essex. England.
Tel: Harlow 24222/3
Telex: "Lawley", Harlow.



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

Participants in the 7th Congress presentation: Front row, left to right, Dr. S. J. Jacobs, Robert Shoberg, Earl Quinn, William Chace, Dr. J. S. Courtney-Pratt; back row, left to right, Dr. Francis Harrington, Dr. Paul Flynn, Max Beard, George Lunn and William G. Hyzer.

Preprints

Once again preprints of some 40 papers were available at the Conference. Business was booming at the preprint desk as approximately 1,400 preprints were sold during the 5-day Conference.

The preprint program, now in its second year, is conducted under the watchful eye of Editorial Vice-President Herbert E. Farmer, Dept. of Cinema, University of South California, who instituted the project. The program will be continued at future conferences.

Preprints from the 99th Conference are available from Society Headquarters. A list is available upon request.

Conference Vice-President Kenneth M. Mason and Exhibit Chairman Keith B. Lewis cut the ribbon opening the 99th Conference Equipment Exhibit.

Equipment Exhibit

The 99th Conference Equipment Exhibit opened Monday afternoon to a large crowd of visitors. But before the gates were opened, the traditional ribbon-cutting ceremony was held. Conference Vice-President Kenneth M. Mason, Eastman Kodak Co., New York, and Keith B. Lewis, Eastman Kodak Co., Washington, in a joint effort, snipped the ribbon officially opening the exhibit. Immediately following the ceremony, an exhibit open house was held.

More than 800 persons visited the exhibit in the four days it was open. There were 64 booths of equipment on display, and in addition, many exhibitors gave papers or demonstrations in a special session held Wednesday morning.

The Exhibit Award, for which a booth was selected by a special committee, was awarded to Beckman and Whitley, Inc. The display was cited as being outstanding for general interest, imagination and effectiveness. The winning company will soon be presented with a plaque.

Exhibitors at the conference, many of which had more than one booth, were:

Albion Optical Co.
Allen Products, Inc.
Amega Corp.
Arriflex Corp. of America
Atlantic Films Ltd.
Beckman & Whitley, Inc.
Behrend's Inc.
Bell & Howell Co.
Berkey Technical Corp.-ColorTran
Boston Insulated Wire & Cable Co.
Cameca Corp.
The Camera Mart, Inc.
Camera Service Center, Inc.
Cine 60 Motion Picture Equipment
Andre Debrie of New York
DuKane Corp.
Eastman Kodak Co.
Eclair Corp. of America
F & B/Ceco, Inc.
Fairchild Camera & Instrument Corp.
Field Emission Corp.
Frigidheat Industries
General Camera Corp.
Karl Heitz, Inc.
Hewlett Packard
3M Company
Macbeth Instrument Corp.
Magnasync Corp.
Metro/Kalvar, Inc.
Motion Picture Enterprises, Inc.
Neumade Products Corp.
Plastic Reel Corp. of America
Precision Laboratories
Prestoseal Mfg. Corp.
Quick-Set, Inc.
Red Lake Laboratories, Inc.
Richmark Camera Service, Inc.
S.O.S. Photo-Cine-Optics, Inc.
Zoomar, Inc.

Ladies Program

Washington, D.C., proved to be the perfect setting for activities for ladies attending the Conference with their husbands.

The ladies program chairman was Sam Gale, Capital Film Labs, who with the help of his committee arranged an extremely busy week of sightseeing, entertainment and relaxation for the ladies.

On Monday, the ladies took a mule-drawn barge trip on the C & O canal. Tuesday they toured the National Gallery of Art; had coffee and pastry, courtesy of the National Gallery, lunched, courtesy of Bell & Howell; then traveled to the Washington Islamic Center for a tour. They then toured the Iranian and Swiss Embassies before returning to the hotel. Earlier in the day, there was a tour of the White House, which was one of the highlights of the week.

Wednesday the ladies toured Mount Vernon and lunched at the Collingwood, Inn, courtesy of the Hollywood Film Co. On Thursday, they went to the State Dept. for a briefing on "The Formulation of Foreign Policy and the Role of the State Dept." Lunch was held at the Georgetown Inn, courtesy of Geo. W. Colburn Laboratory, Inc. That afternoon, the ladies shopped in Georgetown. Friday saw the ladies touring the city in a bus.

Refreshments in the ladies lounge, where the ladies were able to relax between activities, were provided through the courtesy of Capital Film Laboratories, Inc., Washington, D.C.

Cocktail Party, Banquet and Dance

Approximately 350 members and guests attended the traditional Wednesday evening cocktail party, banquet and dance. The cocktail party was held in the hotel's Cotillion Foyer; the Banquet and Dance in the Cotillion Room. The entertainment included Warren Covington and his orchestra, plus Phil Terry, described as a one-man riot, Ada Cavallo, a singer, and Nai Bonet, a dancer.

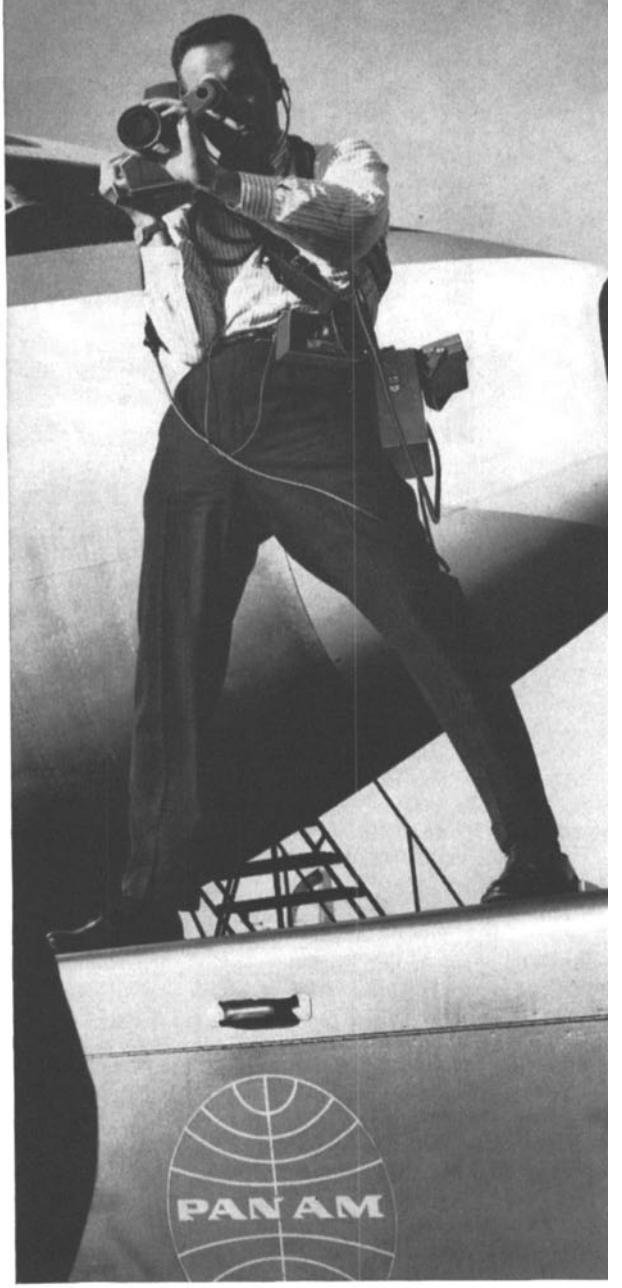
Dudley Spruill, Byron Motion Pictures, was in charge of Banquet arrangements. Orchid corsages were provided for the ladies through the courtesy of Brighton Farms. Wine was supplied to each banquet table, courtesy of Byron Motion Pictures.

Engineering Committees

Seven engineering committees met during Conference week; Instrumentation and High-Speed Photography; Laboratory Practice; Color; Film Projection Practice; Television; 16 and 8mm; and Film Dimensions.

Visit to Goddard Space Flight Center

On Friday afternoon, following the last technical session of the Conference, members journeyed to the Goddard Space Flight Center located 10 miles north of Washington. The Goddard Center is where NASA develops and operates the manned space and scientific satellite tracking networks. It also has the responsibilities of development, application and orbiting of scientific satellites.



assignment jet cargo:

covered best by CM16...the camera built to take action!

Beckman & Whitley's CM16 sound camera lets you move in, get the story and move on. And you carry just 15 pounds including zoom lens and 400 feet of film. Yet built into this slim, compact package is a combination of performance advantages available for the first time in a professional 16mm sound camera. Examples: ☐ both single and double system sound capability ☐ wide open reflex viewing and focusing ☐ pin registered continuous moving film for superb sound and picture quality ☐ close-up quiet ☐ versatile power pack which lets you use any 50 or 60 cycle 110 to 220V source without changing motors or gears.

Built to take action by the largest, most experienced manufacturer of ultra high speed cameras, CM16 is available now. Write or phone Cine Products, Beckman & Whitley, Inc., 441 Whisman Road, Mountain View, California 94040, phone (415) 968-6220. In Europe, Kettingweg 23, Baarn, Holland, phone 5004.

Beckman & Whitley

A SUBSIDIARY OF TECHNICAL OPERATIONS, INC.

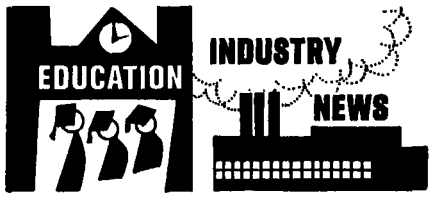
Registration Chairman Jack Jiruska and his wife Regis at the Registration Desk.

Responsible for arranging and conducting the Goddard Trip was James R. Burton, NASA.

Acknowledgments

The Society wishes to pay special thanks to the following: Eastman Kodak Co. for providing the sound and film raw stocks; Eastman Kodak Co., The Kalart Co., Inc., Victor Animatograph Corp., the Fairchild Industrial Products Div. of Fairchild Camera and Instrument Corp. and the Vacuumate Corp., which provided the SMPTE Test Film Booth equipment.

In addition, special thanks are due to William Youngs who arranged for the special pre-release film shown Sunday evening, and to the Philip A. Hunt Chemical Corp., which sponsored the Coffee Club.



Toward A Merged Society

The governing boards of both the SMPTE and the SPSE approved, at their meetings in May, the consolidation proposals so long under development. The presentation of these proposals to the memberships of the two Societies for consideration and decision is planned for completion prior to September 1.

During this same period, opinions of the Internal Revenue Service will be sought which are expected to give formal approval to the present opinion that these merger steps should not affect adversely the class of tax exemption of the two Societies.

This timing is in accord with the outline given in the letter of March 22 to the members of each Society.

The Eastman Kodak Gold Medal Award is a newly established SMPTE award to be administered by the Society on an annual basis. Purpose of the new award is to recognize outstanding contributions made by an individual in the field of engineering development which lead to the introduction of new and unique educational techniques or programs utilizing motion pictures, television, high-speed photography and instrumentation and/or photographic science. The emphasis in the selection of recipients of the award will be on the direct advancement of education rather than on developments and techniques in some other field than education which later were found useful for educational purposes. Announcement of the award was made by President Ethan M. Stifle. D. Max Beard is Chairman of the newly formed Eastman Kodak Gold Medal Award Committee. Committee members are: William G. Hyzer, Richard J. Goldberg, J. S. Courtney-Pratt and Richard S. O'Brien. It is possible that the first presentation of the new award can be made at the Society's 100th Technical Conference in Los Angeles (October 2–6), the announcement stated.

The 2d annual Theatre, Television and Film Lighting Symposium sponsored by the Illuminating Engineering Society, 345 E. 47 St., New York, N.Y. 10017, was held May 9–10 in Chicago. The first session, which was on State of the Art, included a panel discussion following presentation of papers by panel members. Panel members included Charles Clark, General Electric; David Frick, Canadian Broadcasting Co.; Gene Ibsen, Stagecraft Industries; Herbert More, Kliegl Bros.; Frederick Bentham, Strand Electric of England; Richard Glickman, ColorTran Industries; Rollo G. Williams, Century Lighting; Edward Bertero, National Broadcasting Co.; Kenneth Palius, American Broadcasting Companies; Imero Fiorentino, Fiorentino Associates; and the Moderator, Charles Neenan,