

# 100th Semiannual Technical Conference

## Los Angeles, October 2-7



**New SMPTE Officers.** From left to right, **Rodger Ross**, Editorial Vice-President; **Deane R. White**, Executive Vice President; **E. B. (Mike) McGreal**, Conference Vice President; **G. Carleton Hunt**, President.



**The SMPTE 50th Anniversary Medallion.**

Though the Conference got underway Sunday night with the Luau, and the sessions began early Monday morning, the Conference formally opened with the traditional SMPTE Monday-noon Get-Together Luncheon.

### **Get-Together Luncheon—Awards Presentation**

Presiding at his last luncheon as SMPTE President, Ethan M. Stifle welcomed members and guests to the Conference. More than 650 attended this event.

President Stifle's report of Society affairs and activities is excerpted and published below. After his report, President Stifle presented Society awards which are reported in later pages of this *Journal*.

After presentation of the SMPTE Awards, a special citation was given Frank Peter Clark for his work in writing the latest SMPTE book, *Special Effects in Motion Pictures*. Many of SMPTE's

AN AUTHENTIC HAWAIIAN LUAU, a special President's luncheon, many Hollywood stars and other notables, and a presentation on motion-picture milestones were some of the added attractions at the SMPTE 100th Technical Conference and Equipment Exhibit.

This was the 22nd time the Society has held its conference in Los Angeles.

Marking the Society's 50th Anniversary, the Conference was filled with many special events plus a few innovations. To commemorate this historic event, the Society provided souvenir bronze, silver-dollar size medallions to all weekly registrants. Among the other "extras" of the conference were an historic equipment display, and a daily informal discussion of motion-picture problems and trends. Special features in the papers program were the holding of several sessions away from the hotel—at the Los Angeles Music Center and at television station KABC; and the prevalence of special presentations and panel discussions. In all, though centering on the very serious subjects of motion-picture and television science and engineering, most attending the conference were in a festive mood caused by the dual celebration of the 50th Anniversary and 100th Conference. Many felt the 100th Conference was "special," and it was.

The Conference statistics were a surprise to no one. Registration and attendance were particularly high as was the participation in all Conference events. With the excitement generated by the many activities, all aspects of the Con-

ference went without a hitch, thanks to the efforts of Arrangements Chairman Jack P. Hall working with Arrangements Co-Chairman E. B. "Mike" McGreal.

The papers program contained more than 100 papers, and Program Chairman LeRoy M. Dearing was praised for his role in arranging such a well-balanced, integrated and comprehensive program. Dearing was particularly concerned with the historical aspects of this Conference and accordingly scheduled many historical papers as well as several historically important short film subjects.

The Equipment Exhibit was again one of the focal points of the Conference. Exhibit Chairman Warren Strang had a sold-out exhibit area with 85 booths of technical equipment on display. In addition to Conference registrants, more than 1,200 persons passed through the double exhibit area during the four days it was open.

### *Luau*

The first event of the 100th Conference was a luau held Sunday night at the Castaways Restaurant in Burbank. Several hundred people, including many Hollywood personalities, enjoyed cocktails, exotic food and entertainment at this beautiful resort in the Verdugo hills. The major contributions to this event were made by Harry Teitelbaum, Hollywood Film Co; Sid Solow, Consolidated Film Industries; and G. Carleton Hunt, DeLuxe-General Laboratories.



**The SMPTE Award Winners.** Top left, President Stifle presents the Samuel L. Warner Memorial Award to Fred Hynes. Top center, Progress Medal award winner Dr. Wesley T. Hanson, Jr.; top right, David Sarnoff Gold Medal Award winner Dr. Edward F. DeHaan (left) with Dutch Consul-General H. Menke. Bottom left, Herbert T. Kalmus Gold Medal Award winner Vernon J. Duke; bottom left center, Journal Award winner, Harold Wright; bottom right center, E. I. du Pont Gold Medal Award winner Berlyn Brixner; and bottom left, former SMPTE President Barton Kreuzer accepts the Honorary Member Award for Dr. Elmer W. Engstrom.

early members were recognized by presenting them with commemorative medallions. They were: (Joined SMPTE in 1921) George A. Mitchell; (1926) Carroll H. Dunning; (1927) Eric A. Berndt, L. A. Bonn, Charles W. Handley, Hugh V. Jameson, Keith La Bar, G. Don Malkames, Russell H. McCullough, Gerald F. Rackett, Edwin C. Fritts, Reid H. Ray and Harris B. Tuttle.

Completing the luncheon program was a speech by the guest speaker, Clarence L. A. Wynd, Vice-President of Eastman Kodak Co., and General Manager of Kodak Park, Rochester, N. Y. An abstract of Wynd's talk is presented following President Stifle's remarks.

### Remarks of President Stifle

We are here to join in the festivities that celebrate the conclusion of the first glorious fifty years of our beloved SMPTE. . . It is fitting that our 100th Semiannual Technical Conference should include special tribute to the many who have had a part in molding our Society through its early years, and others who have kept it strong all through these fifty years. These people will be recognized in addition to those we honor every fall for deeds in science and engineering.

Before proceeding to the Awards, please indulge me for a few remarks on my own. . .

You know that we went through an exercise that might have been called "Project Merger." There were those of us who wondered what might have resulted from joining the SMPTE and the SPSE. . .

I am 100% certain that the SMPTE was strengthened by the exercise, although, as you know, the voting memberships of both Societies turned thumbs down on the merger. Indeed, benefits have already accrued, and more will be forthcoming because the negotiations pointed up areas in which the SMPTE needed strengthening. In my opinion, there are three prime ones, namely: (1) we must create a greater appeal to young people; (2) we must create a greater appeal to scientific people engaged in research, and (3) we must strengthen our local section organizations. Work is underway on all three. Indeed, the broad change in our organization structure which brought about the establishment of five new vice presidencies for our prime interest areas — motion pictures, television, high-speed photography and instrumentation, photographic science, and education — was a direct result of our merger negotiations. So much for merger.

I ask you now to pay special attention to the following sentences, which I quote. "The motion picture industry is a purely technical industry, as technical as the electric industry. Curiously enough, it has not as an industry at present developed the science which it is applying. It has left that science to be developed by the manufacturers of its apparatus and materials. Those manufacturers have produced a great body of technical knowledge which is the foundation of the motion picture industry, and the Society of Motion Picture Engineers, of which I have the great honor to be a member, is the group of workers in that field who have developed the technical knowledge which the industry uses. The time has come when the motion picture industry must develop

its own methods . . . cooperate with the work of the manufacturers, but nevertheless see that they are applied and that no parts of the field are left unfilled. This evening, I believe, is the opening of a new era which will hasten the application of the knowledge available and stimulate the production of new knowledge as it becomes necessary."

Those remarks were taken from a speech by the late Dr. C. E. K. Mees, then Director of Research of the Eastman Kodak Company, at a banquet in 1928 of the Motion Picture Academy which, at that time, was less than a year old. The remark in his last sentence referred to the impending establishment of the Motion Picture Research Council which was established soon thereafter but was disbanded several years ago.

Are the words of Dr. Mees any less timely today? Speakers at the 97th Conference in Los Angeles a year and a half ago, alluded to the problem when they mentioned the gaps in research and development that result in the use of archaic equipment and methods in some parts of the industries we serve. The question of who is to fill the voids is left open with some hint that the SMPTE might do something about it. Indeed, I have asked our Vice-President for Photographic Science, Jeof Courtney-Pratt, to make a study and to present recommendations as to what the SMPTE should and could do about it, remembering that most of our members are employed by companies that rightly feel they have first call upon our inventive genius.

. . . So much for the past and for the immediate . . .

What will shape our lives and provide the problems and shape the destiny of the SMPTE during its second half-century. For



Tables at Get-Together Luncheon: Award Winners, Early Members, Past Presidents, Special Guests.

even now we live in an age in which the rate of change is accelerating at a phenomenal pace. This means more rapid progress for those prepared and more rapid decline and obsolescence for those things and people not prepared. . . .

What of the problems facing mankind in the next fifty years? I can state categorically that his greatest problem will be to correct the imbalance between technological progress and social progress that has left social progress way behind throughout the history of mankind. It has been the competition between groups of men, small and large, on the face of this globe, that is responsible for the lion's share of technological advancement, but this same competition has greatly retarded his social progress — his ability to live peacefully, not only with his fellow man, but with the many other evermore hostile environments he creates for himself — not only in the nuclear field or in other elements of power that give each of us the means to destroy ourselves and our neighbors with us — but the pollution of our air, water, and food supplies, which has been an accepted by-product of our technological sophistication. . . .

He has no choice, for the sake of his own survival, but to slow down or stop this maddening competition between peoples, nations, races, and build a climate where

the competition will be replaced by cooperation. This will give him a chance to build a social climate in which all can survive and move forward together sharing the benefits of technological progress. We all see the benefit of teamwork on a small scale in our daily tasks. This must be extended to work globally. It *must* be done if man himself is to exist through the next half-century. We in the SMPTE have our own part to play since the instruments we provide can be directed to work good or evil.

In the business field, the safest prediction any of us can make is that the largest business of the future will be the knowledge business — dispensing, acquisition, and dissemination of knowledge. Already accounting for a third of our Gross National Product, it is predicted that it will consume a half of it in 15 to 20 years. This, then, will be the greatest challenge to the SMPTE and, indeed, to all of us. We have already taken a few small steps to cope with it.

(1) We have promoted the establishment of courses leading to Bachelor's and advanced degrees in Photographic Science and Engineering. The first has been established at the Rochester Institute of Technology.

(2) We have established scholarships for study for these advanced degrees.

(3) We have established contact with *DAVI* of *NEA* to see what can be done to get engineers and educators to understand each other's language.

(4) We have established a new Gold Medal Award — the Eastman Kodak Gold Medal Award — to give recognition annually to individuals who have done outstanding work in developing systems which use the technologies we embrace to advance education.

(5) We have established short courses and provided instructors for technicians in our industry to aid them in their jobs.

These are only pygmy steps compared to those needed. In this day when it is predicted that the average person now starting his first job will need to be retrained seven times for new jobs before he retires, you can see the magnitude of the task. There is also the task, already too long neglected, of seeing that racial and other minority groups are given special training opportunities, to lift them up to the level of all other groups. Today any company or industry is not doing its duty in a moral sense, nor its duty to its stockholders, if it does not provide the training these groups need. . . .

There is the problem of who is to provide the education and continuing dissemination of knowledge. Too many of us look to someone else. I am asked almost daily to have

my company provide educational courses in color technology, photographic technology in general, and a whole host of specialized courses, for employees of companies purchasing our product. Is it the job of the supplier of materials and equipment to produce the technology as mentioned in my quote earlier of Dr. Mees, as well as formal courses of education in those technologies? Of course it is — in part. But it is also the job of all those reaping the benefit of these technologies.

Since this Conference is my last as President of your Society, I want to thank all for the wonderful and warm-hearted support you have given me. . . . The support I have had from *all* the Board, from my fellow officers, from the committees, local sections, from Headquarters, and all of you, has been beyond my fondest dreams.

Our guest at the opening luncheon of our historical Conference told a few tales from the more than "1001 Nightmares" of the voluminous history of chasing down the contaminants that spoil film. (The following is adapted and abridged from the informal speech.)



**Guest Speaker:**  
**Clarence L. A. Wynd**  
**on "1001 Nightmares"**

This is not going to be a technical talk. The yarns revolve about some of the problems in the manufacture of sensitized goods. Photographic film and photographic paper are products always in danger of contamination. I have given this talk the title "1001 Nightmares," because like Scheherazade's Tales they are many, always full of suspense and so far have led to a happy thereafter.

To prepare the scene a bit: photography, the exposing and developing of film and paper, is a multiplying process. We are all quite familiar with multiplying machines such as PA systems. Your radio at home probably multiplies the power that comes into it from the air about a thousand times. When the camera shutter flicks, the film doesn't receive much energy in the form of light. There is a picture left there in the camera but you can't see it. So, we have to multiply it by the process called development, and this multiplication is *one hundred million* times. You know what happens when you turn your radio up too high. — You get a lot of noise. If you are trying to multiply a very faint station and turn up the volume so you can hear it, you often get so much noise, you can't understand any-

thing. This is just our problem. At one hundred million times, you just *have* to keep the noise out of the system.

Now, where does noise come from in photography? There are many things which will affect a piece of photographic film in the same way that light does. Many chemicals will do it — pressure will do it — abrasion will do it, and if we are multiplying the effect of these contaminants one hundred million times, a mighty small amount will make trouble. Just to get the feel of this, note that one ounce multiplied one hundred million times is 3,125 tons? As I've said, this unwanted noise, which may reach the film to make it capable of being developed to black silver in the photographic developer, just where a black image should not be, can come from many sources.

#### *Free-Lance Light*

Of course, unwanted light, which may strike the film, is the first and probably the most simple of our nightmares. The customer can have a leak in his camera. We very seldom suffer from this nightmare in our manufacturing operation. If we do, it's because the wrong safelight is used and there are all kinds of checks to prevent that, but one day this happened. I'll call it "The Case of the Young Lady who Believed in Direct Action."

This girl was a film spooler and had had several weeks of training under an instructor. She had worked on the production of Verichrome film rolls. In those days, Verichrome was orthochromatic and the safelighting conditions in the workroom allowed a person to see quite well after the eyes became adapted. One day, they were short of help in the Panchromatic Roll Spooling department and this girl was asked if she would be willing to transfer. A Panchromatic room is a very dark place. The second day our heroine was at work in this real dark darkroom, the foreman was horrified to see a white light blinking on and off at her work place. She had decided that if the company wouldn't supply her enough light to see to work, she would bring her own. It was a cute little flashlight and it was a lot of help to her, but not any help at all to the film. We threw out quite a bit and explained things to her, and revised our training procedures. As I said, this nightmare was not at all typical. It is not stray light but contamination which bothers us most. We *know* about thousands of things which are bad actors, but *new* ones still appear regularly.

#### *Rx for Trouble*

Over the years, we've learned quite a lot about a great many things which people use and which can be brought into the plant on their person or on their clothing. What we've learned is listed in a book which, in 27 single-spaced pages, tells our people such interesting things as these—

Blue Jay Corn Plasters are all right to use but blue ointment is not.  
Krem! Hair Tonic is O.K., but Kremola Skin Bleach is going to make trouble.  
You can use Mum, but never, never, never, Mercurochrome.

Of course, all the medicinals containing mercury are very bad — and this brings me to my next yarn which I'll call, "The Case of the Conscientious Coater and his Timid Wife."

Mercury and all its compounds have been a frequent source of trouble. Criminals often have a characteristic way of working — at least the police in detective stories can recognize the handiwork of a familiar underworld character. In the same way, our detectives at Kodak Park, by working mostly with the microscope, can soon recognize the telltale spots produced by an unbelievably tiny bit of mercury. So one day, they sounded the alarm. The old enemy is on the prowl again. Someone has brought him into the film emulsion coating department. Warnings went up and several hundred people began to reexamine their ways of life. But after ruining a good bit of film, the old fox went into hiding and stayed there for a week. Then he struck again but in a different room and on a different shift. More detective work, but this time it was not the men with the microscopes — it was the personnel office checking assignments. It was narrowed down to a relatively few men whose work assignments fitted the picture. The mercury was found in the skin and on the garments of one of these men.

But the mystery still wasn't solved. How did it get there? The man was most careful and conscientious, one who never used an ointment, a medicinal, a hair tonic, a shoe polish, a soap or anything else which wasn't cleared by test. He asked for help to track the source down in his home. There was more sleuthing, but this story is getting too long.

The timid wife didn't like to be alone when her husband was working the midnight shift, so she asked a girl friend to stay with her. The girl friend did not work for Kodak, so her doctor didn't hesitate to prescribe a mercurial ointment for some skin trouble she was having. From her, the bed linen was contaminated, and when the husband used the same bed in the daytime, he picked it up and brought it into the plant. All quantities were so minute that no one suspected the source. But that nightmare was over and we've never had another just like it.

#### *Beauty Spots*

All of our trouble doesn't come from black spots. Some of it comes from white spots, or, as we call them — desensitized spots. The contaminant, instead of making the silver grains in the photographic emulsion *super* developable, makes them *undevelopable*, and you don't get anything. This is the way mercury works.

The next case I'll relate also involved white spots. The testing department reported that they were occurring near the end of the large rolls of film. Then we went through the usual hunt for the person who was bringing in the trouble. It was found to be a reeler, named Jim, but again we couldn't locate where he was picking it up. It took two weeks to track down the source.

Jim lived in an apartment over a hair-dressing parlor. Out in back of the building some steps led down to where the trash cans were located. Alongside the steps was a railing. The operators in the hairdressing parlor were using a chemical which desensitized our film. From their hands, it got on the railing, from the railing onto Jim's hands, and so that was the solution of "The Case of the Hairdressers' Parlor — or, why Jim Moved."

As photographic film has improved, as its speed — that is, its sensitivity to light —

has increased, as we have introduced color, all our troubles get worse. A faint discharge of static electricity, which gave no trouble for years, suddenly develops up on the test samples to look like chain lightning when a new and faster film goes into production.

One more story on contaminants. This is "The Case of the Key Jangler." It was one of those erratic things which are so difficult to run down, and it turned out that it was coming from a supervisor who moved about. This was really a tough case to crack. The contaminant was shown to be copper, and when we finally became suspicious of the supervisor, we found the metallic copper on his hands. Again, I won't go through all the laborious details. I might say, at this point, that the solution to these cases comes more from perspiration on the part of the detectives than it does from inspiration. They just won't give up. So it was found out that the contaminant came from brass keys which the supervisor carried on a steel ring and which he was in the habit of jingling as he walked along. The solution — a plastic key ring and plastic spacers between the keys.

#### *Over the Years*

This trouble with nightmares isn't anything new. George Eastman and Henry Strong were bothered right at the start. Back in January, 1881, Eastman and Strong began the manufacture of photographic dry plates in a rented loft. The business grew to about four thousand dollars' worth of plates a month. Suddenly, the plates had lost their sensitivity. Eastman hurried down to New York City and tested samples from the stock there. The wholesaler had used the last-in, first-out method of moving his stock, allowing a supply of old plates to accumulate and the plates just weren't keeping well. Here were thousands of dollars of worthless goods in the hands of the largest wholesaler in the country!

Eastman recalled the stock and promised to replace all plates which had not measured up to his standards. Calamities attract further calamities. Eastman was unable to produce a good emulsion for the replacement plates. Neither his formula nor any other would work. This tragic tale is recorded on the worn pages of a notebook, stained with chemicals, soiled by constant fingering, and now brown with age. Emulsion upon emulsion was tried until the number of efforts reached 472, and finally, his experiments yielded an emulsion "free from red fog." The next entry read, "Bottle broke and lost all." Throughout this time the little factory was closed and weeks passed. Finally, it was discovered that the trouble was due to the gelatine received direct from the manufacturers and not to the Eastman formula or to his machines. Experiments were resumed and after sixteen more attempts, the plates were again "clear and good."

From this nearly fatal experience, Eastman decided that he would thereafter test samples of every chemical or ingredient before he purchased a supply, and, secondly, he would always "control the alternative" — he would always have more than one way of doing everything he undertook.

Eastman then made good on all the merchandise which proved to be defective, as he had promised. The trade was so eager for his new supply that the debt, accumulated during the emulsion-making difficulties, was quickly liquidated. He almost went

broke and the new company closed this first fiscal year of 1882 with a profit of \$14,889.88.

#### *Nightmares Into the Atomic Age*

The nightmares have continued from that age of the horse car, through the age of the trolley car, and on into the atomic age. But fortunately, we had a little warning of what the atomic age had in store for us.

Early in World War II, before the United States was attacked at Pearl Harbor, our aircraft industry was working full tilt for the Western Allies. This meant a great increase in the manufacture of instrument dials on which the figures were painted with radium paint. Just as is done on the face of your watch so you can read the time in the dark.

Radium dials are painted by hand and the brushes are tipped on old newspapers which are used to cover the benches. Because of the danger to health of too much radium, these newspapers are changed twice a day and collected as waste paper. Boxboard for film packages came from several mills who used old newspapers as part of their furnish. As you know, a papermaker can use cellulose fibers from several sources to make paper, depending on whether it is fine paper or coarse paper, and waste paper is a very common raw material in the manufacture of coarse paper or paper board.

There wasn't a boxboard mill in the country which we could find which wasn't contaminated with radium paint. Customers started to complain about black spots on their film, and I remember that one hospital returned a package of 144 sheets of 14 × 17-in. x-ray film—that is used for chest x-ray. Upon development, the top sheet showed a very black spot about the size of a walnut. In fact, every one of the 144 sheets showed similar black spots; but at sheet number 144, the size had increased to near the size of your head. In the boxboard we were able to locate a microscopic bit of radium paint which had caused all the trouble.

So we went hunting for boxboard which contained no waste paper and a mill which wasn't contaminated.

The first prospect was strawboard. It was not strong and it couldn't be cut clean, but it was free of radium.

Then, they let loose the first test bomb out in New Mexico and the radioactive fallout landed all over the Middle West. The rain washed the fallout down into the rivers. We were getting strawboard from two mills — one at Tama, Iowa, and one at Vincennes, Ind. Strawboard mills use straw and lots of river water. I don't believe there is a better way to take radioactive fallout of water than to use the water to make strawboard. Just about all of it ends up in the strawboard.

But after the radium paint trouble, we were watching our packing materials very carefully. So, before the radioactive strawboard was used, we found it was bad and none got out to the trade. The spots it could produce were really something: not big black ones like radium paint, but literally hundreds of tiny spots on one 14 × 17-in. sheet of x-ray film.

Just in case all this talk about fallout is starting to worry you because of the possible danger to human beings, just let me remind you about the multiplying machine which film is. The levels of radioactivity, which

cause trouble for us, are far below the level which is dangerous to human beings.

Today, the mills which make our packing materials use specially treated water, well-filtered air, and no waste paper furnish. We are still, you see, relearning the importance of the early lesson learned by George Eastman — control your raw materials.

Some of our raw materials are so vital that we have decided that we would be safe only if we made them ourselves. So we bought a gelatine plant in Peabody, Mass. Also, largely for the same reason, some years ago we bought a wood distillation plant in Tennessee.

The gelatine plant still makes only gelatine, but the purchase of that wood distillation plant really started something. The Tennessee Eastman Co. manufactures not only raw materials for use at Kodak Park, but products for sale in the trade in the plastic field and in the yarn field; they make dyes, they make solvents, they make chemicals, and many other things. But, I wonder if it all would have happened if the little silver grain in the photographic emulsion wasn't so cantankerous, and if someone hadn't been made very unhappy by nightmares.

## **Society Awards**

The presentation of annual awards was formally made at the Get-Together Luncheon. These are the awards recommended by the respective committees and reviewed and approved by the Board of Governors. Besides the awards made possible from the roster of the Society's standing program, there was special recognition for many, including many who were honored as part of the Society's 50th Anniversary celebration. These awards are recorded below in the order in which they were given during the week. The names, biographies and citations of the annual awards winners were presented in a brochure distributed at the opening luncheon.

### **Progress Medal**

*Dr. Wesley T. Hanson, Jr.*, Assistant Director, Research Laboratories, Kodak Park, Eastman Kodak Co., Rochester, N.Y., was awarded the 1966 Progress Medal Award. The Progress Medal Award is the premier award of the SMPTE.

This award recognizes the outstanding technical contributions of the recipient to the progress of long-term engineering phases in motion pictures and/or television. Such contributions must result in significant advances in the development of these technologies.

Dr. Hanson's contributions have been in the fields of photographic materials and processing components and procedures. He has enabled significant advances to be made in the field, particularly in the aspect of the degree of perfection in monochrome photography.

The concept of so-called "colored couplers" to eliminate the unwanted dye absorptions in motion-picture color negatives made possible color motion-picture positives of significantly improved quality and with added "realism." Dr. Hanson's work in this field was an outstanding contribution to the progress of motion-picture color

photography whether viewed on a screen or a TV cathode-ray tube.

In addition, Dr. Hanson was responsible for much work on the improvement of couplers and other components used in the manufacture and processing of color films. Many of these advances have contributed in a very real sense to progress in the technology of the field over a period of more than twenty years.

Dr. Hanson is a native of Carrollton, Ga. He received his B.S. and M.S. degrees from the University of Georgia and in 1934 his Ph.D. in Chemistry from the University of California, joining the Eastman Kodak Co. that same year. Dr. Hanson has held several positions of responsible charge within Kodak and in 1961 was appointed to his present position. He was, in 1956, the first recipient of the Society's Herbert T. Kalmus Gold Medal Award.

Dr. Hanson is a Fellow of the SMPTE; also, a member of the American Chemical Society, Optical Society of America, Society of Photographic Scientists and Engineers; and the American Association for the Advancement of Science. He is a member of Phi Beta Kappa; Phi Kappa Phi; and Sigma Xi. Dr. Hanson was the recipient of the Honorary Master of Photography Degree, Professional Photographers of America, in 1958. Dr. Hanson has been granted several patents and is the author of numerous scientific and technical publications.

### Samuel L. Warner Memorial Award

*Fred Hynes*, Vice-President and General Manager of Todd-AO, Hollywood, was awarded the Samuel L. Warner Memorial Award. It is the purpose of this award to do honor to the individual by recognizing outstanding contributions in the design and development of new and improved methods and/or apparatus for sound-on-film motion pictures.

Hynes was recognized for his achievements and advancements in the art of stereophonic recording, for his contribution to improved theater presentation, and his continuing leadership in the dramatic use of sound-on-film.

Hynes was born in Nashville, Tenn., later residing in Denver and Toledo. He moved to California in 1923 where he attended Pasadena High School and Pasadena Junior College. Mr. Hynes attended UCLA in the late 20's and early 30's studying electrical and mechanical engineering and specializing in communications.

His professional career began at Pathe Studios in the Engineering Dept. Later he moved to RKO production, working on maintenance and construction of sound equipment. In 1937, he joined RCA, supervising production and re-recording equipment for the then proposed studios of David O. Selznick. During World War II, Hynes served as an officer in the U.S. Army as Photographic Supply Officer for the 8th Air Force. In 1945 he returned to the Selznick organization as Sound Director at Vanguard Productions, designing and installing completely new sound recording facilities for the studio. Hynes joined Todd-AO in 1953 to design their 6-channel sound facilities. In 1959 he was made Vice-President and General Manager, the position he holds today.

### David Sarnoff Gold Medal Award

*Dr. Edward Fokko de Haan*, Deputy Director, Research Laboratory, N. V. Philips Gloeilampenfabrieken, Eindhoven, The Netherlands, was awarded the 1966 David Sarnoff Gold Medal Award. The award recognizes the outstanding contributions of the recipient in the development of new techniques or equipment which have contributed to the improvement of the engineering phases of television. In the selection of this award preference is given to those developments or inventions which are likely to produce the widest and most beneficial effect on, or improvement in, television.

This award to Dr. de Haan was presented for his analyses of photoconductive TV camera tubes and for the development of the Plumbicon tube as well as for his many other contributions to the fundamental concepts and refinements that have gone into the development of photoconductive camera pick-up tubes.

Dr. de Haan was born in Drachten, The Netherlands, in 1921. In 1949 he received his Masters Degree in Physics from Vrije University, Amsterdam, and his Doctorate in Physics in 1953 from the same University. In 1954 he joined the Philips Research Laboratories, becoming group leader responsible for research on image tubes in 1956. In 1964 he became deputy director responsible for tube and vacuum physics research and in charge of the total electron tube research division. Early in his career with Philips, Dr. de Haan made significant investigations of display tubes, color display tubes in particular, especially those with post-focusing action as color tubes using indexing signals. In 1956 he became responsible for the work on pick-up devices such as image converters, pick-up tubes using bombardment-induced conduction, with special responsibility for the investigations concerning the Plumbicon.

Earlier this year Dr. de Haan together with Dr. H. Bruyning and Dr. L. Heyne, all of Philips, received the Geoffrey Paar Award for their outstanding contributions in this field of electronics. Attending the Conference with Dr. de Haan was Mr. H. Menke, the Consul General of the Netherlands.

### Herbert T. Kalmus Gold Medal Award

*Vernon J. Duke*, recently retired as Senior Project Engineer after 37 years with the National Broadcasting Co., was selected as the recipient of the Herbert T. Kalmus Gold Medal Award. This award honors the recipient by recognizing his outstanding contributions in the development of color films, processes, techniques or equipment useful in making color motion pictures for theater or television use.

Duke has participated in and has been responsible for the carrying through of many television projects, several of which involved the use of color film in various forms. He is credited as having played the first color film into the television network from equipment he constructed. Duke was involved in the development and subsequent operations of the lenticular recording and playback equipment used for network delay on the West Coast in 1956. On retirement he was working on another develop-

ment of color kinescoping. Duke has 15 patent grants.

Duke was born in Shenandoah, Iowa, in 1901, attending grade school there and high school in Denver, Colo. He attended both the University of Denver and the University of Colorado, receiving his degree in Electrical Engineering from the latter. Upon graduation, he entered the student engineering course of the General Electric Co., starting work with television in 1928. In 1929 he began his employment with NBC at their station KOA in Denver.

In 1931 he demonstrated to a convention of the American Radio Relay League the transmission of sound via a modulated light beam. An "Amos and Andy" program was used in this experiment. At that time he also delivered a talk concerning the fundamental problems of TV system operation.

In 1937 he was transferred to New York to work on the new electronic television system. During the war he was associated with several RCA radar and TV projects, both at the Navy Yard at Philadelphia and the Radiation Laboratory at MIT in Boston. After the war Mr. Duke returned to the NBC Laboratory in New York to work on many projects including the Ultrafax system, the lenticular color kinescope system and other TV projects, many involving color films.

In 1962 he developed from the earlier lenticular equipment a system for recording color TV shows on color film from a composite color TV signal. This system of color kinescope recording is now a regular service at NBC, producing original 35mm color negatives from which 35mm, 16mm and 8mm sound films are made.

Duke is a Fellow of the SMPTE and has played an active part in several Society Engineering Committee activities over the years.

### E. I. du Pont Gold Medal Award

*Berlyn Brixner*, University of California, Los Alamos Scientific Laboratory, received the 1966 E. I. du Pont Gold Medal Award. This award recognizes outstanding contributions in the development of new techniques or equipment which have contributed to the improvement of the engineering phases of instrumentation and/or high-speed photography.

Brixner has long been active in the design, construction and use of high-speed cameras and associated optical systems. He undertook or initiated the design of many of the most elegant rotating mirror streak cameras and rotating mirror framing cameras used at the Los Alamos Laboratory. From these designs has come commercial equipment now in wide use over the world in all kinds of research projects.

He has, when limitations were found in the optical components, set about by new methods of automatic lens design, and with the help of those who work with him, to improve many of the lenses required. He has thus contributed significantly in high-speed photography, in photoinstrumentation, and most recently in the field of automatic lens design.

Mr. Brixner was born in El Paso, Texas, receiving his elementary and high school education there. He also studied at El Paso College of Mines and Metallurgy and the University of Texas. His initial interest in

and exposure to photography came about during his physics courses at the University of Texas. He began his photographic career in 1933 as an x-ray photographer and technician in an El Paso pathological laboratory. From 1935 through 1942 he was a photographer and cartographic engineer for the Soil Conservation Service, U.S. Department of Agriculture. He joined the Los Alamos Scientific Laboratory in 1943. During World War II Brixner assisted Dr. J. E. Mack devising special instruments for scientific photography, particularly for the purpose of analyzing motion for time-space relationships. He helped photograph the first A bomb at Trinity and the first H bomb at Eniwetok.

For the past ten years, Brixner has headed up the Los Alamos optics group developing high-speed cameras for explosion studies. Brixner has authored several articles for the *Journal* of the SMPTE and is a member of the Board of Editors.

### Journal Award

*Harold Wright, CBC, Ottawa, Canada*, for his technical paper entitled "Exposure Meters and Measuring Techniques in Telefilm Exposure Control," published in the July 1965 *Journal*, received the Journal Award. This paper was selected as the outstanding paper originally published in the *Journal* during 1965.

Wright has been engaged in electronics and communications for more than 27 years, 23 of them in radio and television broadcasting with the Canadian Broadcasting Corp. During the last 14 years his work has been largely in TV operations investigation and research, forward planning and training. Currently, he is the TV Color Co-ordinator for CBC, responsible for planning the overall supervision of the CBC conversion to color. He is the author of numerous papers, many of them in the *Journal* and was responsible for the production of the CBC Television Studio Practices Manual, widely used internationally as a basic reference work. His papers on Telefilm Exposure techniques have been translated into several languages and the systems devised are in regular use in Japan and some European countries. His paper, "An Engineering Approach to Television Film," co-authored with L. J. Murch and R. J. Ross, of CBC, received the 1959 Honorable Mention Journal Award. His paper, "Factors Affecting Determination of Monochrome TV Film Exposure and Speed Indexing," received the 1964 Honorable Mention Journal Award.

Wright is a native Juniata, Saskatchewan, Canada and was educated in Saskatchewan and Ontario. Long active in SMPTE, he is a member of the Board of Editors. Coincidentally with being selected as recipient of the Journal Award, Mr. Wright was elevated to the grade of Fellow of the SMPTE in further recognition of his contributions to both the technology and the Society.

Three honorable mention awards were also presented for outstanding papers published in the 1965 SMPTE *Journal*. The recipients were:

*A. B. Palmer, British Broadcasting Corp., London, England*, for his paper "The Technical Problems of Television Film Recording," published in the December 1965 *Journal*.

*L. F. Hargrove and J. S. Courtney-Pratt, Bell Telephone Laboratories, Murray Hill, N.J.*, for their paper "Some Photographic Studies of the Light Output of an Intracavity Modulated Gas Maser," published in the December 1965 *Journal*.

*F. J. Bingley, Astro-Electronics Div., Radio Corp. of America, Princeton, N.J.*, for his paper "A Visual Instrumentation System for a Lunar Orbiter," published in the February 1965 *Journal*.

### Honorary Member Award

*Dr. Elmer W. Engstrom, Chairman of the Executive Committee of the Board and Chief Executive Officer of the Radio Corp. of America*, has been elected an Honorary Member of the SMPTE. This very distinguished grade of membership in the Society is awarded only to living pioneers whose basic contributions when examined through the perspective of time represent a substantial forward step in the recorded history of the arts and sciences with which the Society is most concerned. Only 37 other individuals have been granted this distinction during the past fifty years of the Society's existence.

Dr. Engstrom was born in 1901 in Minneapolis, Minn., and attended local schools and the University of Minnesota, from which he was graduated in 1923 with the degree of Bachelor of Science in Electrical Engineering. He then joined the General Electric Co. and was assigned to engineering development work on transmitting and receiving equipment in its Radio Engineering Dept. When G.E. initiated commercial activity in motion picture sound, Dr. Engstrom was placed in charge of the company's development and apparatus design.

In 1930 the radio and engineering activities of G.E. were transferred to the Radio Corp. of America, and Dr. Engstrom joined RCA as Division Engineer in charge of Phonophone, with responsibility for development and design of sound motion-picture apparatus. Soon afterward he assumed engineering responsibilities for RCA's broadcast receiver development and production, carrying on this activity until he was called upon to organize research in the fields of apparatus and systems.

Beginning in the early 1930's, Dr. Engstrom supervised RCA's program of television research and development. He brought to the project the concept of television as a complete system, instituting one of the early large-scale examples of the systems engineering concept that is now standard in major technical programs. In the postwar years, as head of RCA Laboratories, he applied the same concept in directing the development program for the all-electronic color TV system.

In 1945 Dr. Engstrom became Vice President in Charge of Research of the RCA Laboratories Div., and subsequently was named Vice President in Charge of RCA Laboratories and Executive Vice President, Research and Engineering. He assumed his present position on January 1, 1966, after serving four years as President of RCA and for six years prior to that as Senior Executive Vice President of the Corporation.

Dr. Engstrom has been awarded honorary degrees by fourteen colleges and universities. In 1955 he was awarded this

Society's Progress Medal. In 1958 he was the recipient of the Industrial Research Institute Medal for "distinguished leadership in industrial research" and in 1962 he received the Medal of Honor of the Electronic Industries Association in recognition of his basic contributions to the advancement of the electronics industry. In 1965 he was awarded the Charles Proteus Steinmetz Centennial Medal at the first annual meeting of the National Academy of Engineering, of which he is a founding member, and in 1966 he was the recipient of the Founders Award of the Institute of Electrical and Electronics Engineers "for his foresighted application of the systems engineering concept in bringing television to the public."

In addition to being a Fellow or a member of leading professional societies in the U.S., Dr. Engstrom is a member of the Royal Swedish Academy of Engineering Sciences. In 1965, the King of Sweden conferred upon him the rank of Commander of the Royal Order of *Vasa*.

### Fellows

Twenty-five members were elevated to the grade of Fellow of the Society in recognition of their outstanding contributions to the industries the Society serves, and to the Society itself. SMPTE Past-President Reid H. Ray is Chairman of the Fellow Awards Committee. Fellow Award certificates were presented at the formal awards presentation ceremonies at the Get-Together Luncheon. The new SMPTE Fellows are:

George Bartlett, National Association of Broadcasters, Washington, D.C.  
Edward Bertero, National Broadcasting Co., New York  
Burgi J. Contner, Blue Seal Sound Devices, New Canaan, Conn.  
Joseph A. Flaherty, Jr., CBS Television, New York  
Allan Haines, Pathe Laboratories, Los Angeles  
John Hayes, Canadian Broadcasting Corp., Ottawa, Ont.  
William Jordan, Manhattan Sound Corp., New York  
Peter Keane, Screen Gems, Inc., New York  
Maurice Levy, EM-FLL Producers Service, New York  
Frank McGeary, Motion Picture Labs, Inc., Memphis, Tenn.  
E. B. McGreal, Producers Service Co., Los Angeles  
Robert Pulman, The Rank Organisation, London, England  
Harold Scheib, Cinema Research Corp., Los Angeles  
Edgar Schuller, Cine Magnetics, Inc., Mamaroneck, N.Y.  
Kiyohiko Shimasaki, Motion Picture Engineering Society of Japan, Tokyo, Japan  
Howard Town, National Educational Television, Ann Arbor, Mich.  
William Wade, Universal Studios, Universal City, Calif.  
Willis Warren, USIA, Washington, D.C.  
Waldon Watson, Universal Studios, Universal City, Calif.  
Jack Whitehead, Fred A. Niles Communications, Chicago  
Ralph Whitmore, Sr., Artisan Industries, Inc., New York  
John Whittaker, CBS-TV, New York

Daniel Wiegand, University of Southern California, Los Angeles  
 Harold Wright, Canadian Broadcasting Corp., Ottawa, Ont.  
 Eric Yavitz, Eastman Kodak Co., Los Angeles

## Papers Program

Under the Chairmanship of Program Chairman LeRoy M. Dearing, I. M. Dearing Associates, the 100th Conference papers program boasted more than 100 papers spanning 18 sessions. There were many concurrent sessions during the five-day papers program.

Assisting Dearing as chairmen of individual topics were Dr. Raymond Fielding, Div. of TV, Radio and Film at the University of Iowa, Iowa City, Iowa, *Education*; John H. Waddell, Douglas Aircraft Co., Huntington Beach, Calif., *Instrumentation and High-Speed Photography*; Walter Eggers, MGM Labs, Culver City, Calif., *Laboratory Practices*; Alan Gundellinger, Technicolor Corp., Hollywood, *Photographic and Allied Sciences*; Rod Ryan, Eastman Kodak Co., Hollywood, *Photo-Sensitive Materials for Motion Pictures and Television*; John G. Frayne, I. M. Dearing Associates, Studio City, Calif., *Sound*; William Wade, Universal Studios, Universal City, Calif., *Studio Practices*; Joseph Roizen, Ampex Corp., Redwood City, Calif., *Television*; Donald V. Kloepfel, DeLuxe Laboratories, Hollywood, *Projection*; Sol Halprin, 20th Century Fox, Culver City, Calif., *Motion Picture Milestones*.

The papers program of this conference was highlighted by what Program Chairman Dearing described as "specials." These specials included a Tuesday night session on Aerospace Cinematography where two presentations filled the evening. The first, on Supersonic Track Testing for Weapons Programs, and the second, on the White Sands Missile Range, were buttressed by films in addition to oral presentations.

The sound special, Control of Sound in an Auditorium, was held Friday morning at the Los Angeles Music Center where four papers were presented.

That afternoon, the ABC television studios hosted a special session on Television Studio Practices. In addition to the two opening papers of the session, there were three timely and very lively panel discussions on color TV: The first was "Color Video-Tape Recording" with Charles Ginsburg, Ampex Corp., Moderator; and panelists Blair Benson, CBS, New York; A. C. Luther, RCA; and Robert Springer, ABC, Hollywood. The second was "Presentation and Playback of Color Film" with John Waner, Eastman Kodak Co., Hollywood, Moderator; and panelists Norman Morong, ABC, Hollywood; Ken Erhart, NBC, Hollywood; Rodger Ross, CBC, Canada; and Ray Swinson, Westinghouse, Hollywood. The third was "Live Color Television — Lighting and Camera," with Richard Anderson, KTTV, Los Angeles, Moderator; and panelists Ed Bertero, NBC, New York; Bill Dryer, ABC, Hollywood; and Walter Underhill, Marconi Co., Chelmsford, England. At all panel discussions, each panelist spoke from two to four minutes on current problems before the meeting was open to questions from the floor and other panel members.



**Instrumentation and High-Speed Photography Chairman John H. Waddell, Program Chairman LeRoy M. Dearing and Arrangements Chairman Jack P. Hall.**

In addition to there being some 30 papers on Instrumentation and High-Speed Photography, there was also a special "High-Speed" luncheon Wednesday noon at which C. S. Perry, Douglas Aircraft Co., told of the contributions photography had made to rocket and missile development. In his paper "Photography and Missiles," Perry said future needs were for higher speed sequential cameras that could record pictures at one nanosecond; smaller cameras capable of the higher rates; and the training of personnel in photography and optical images.

Papers added to the program during the week were: "Computer Generated Three-Dimensional Movies," by A. Michael Noll, Bell Telephone Laboratories, Murray Hill, N.J.; "Photographic Support at the Kennedy Space Center," by Robert Forster, Harold Bottom, Raymond Miller and Harry Van Riper, Technicolor Corp., Hollywood, Calif. and "Photooptical Instrumentation — A Recognized Branch of Applied Science," by D. B. Howard, Douglas Aircraft Co., Santa Monica, Calif.

## Preprints

An important part of the success of the



**Conference Arrangements Chairman Jack P. Hall and Conference Vice President Kenneth M. Mason.**

papers program was the availability of Preprints for some 40 papers in the program. The Preprint Program was initiated by Editorial Vice-President Herbert E. Farmer for the 97th Conference, and because it is considered such a valuable practice, it has been continued with increasing success.

## Local Arrangements

Local Arrangements for this anniversary Conference were under the jurisdiction of Arrangements Chairmen Jack P. Hall, DeLuxe Laboratories, Hollywood, and E. B. (Mike) McGrath, Producer's Service Co. Hall is also Chairman of the Hollywood Section of the Society. General supervision of Conference arrangements was by Conference Vice-President Kenneth M. Mason, Eastman Kodak Co., New York City. The hotel and registration arrangements were handled by Chairmen Hall and McGrath.

For this Conference in particular, because of its historic nature, many special events were planned, e.g., the luau, the Thursday evening ASC milestone presentation, and the President's Luncheon. Responsible for initiating these events was Special Plans Chairman Neal Keehn, DeLuxe-General Laboratories, Hollywood. Keehn's role as



**Frank P. Clark and Editorial Vice President Herbert E. Farmer. Clark was presented with a special award at the Get-Together Luncheon.**



**Banquet Chairman Harry Teitelbaum (left) and Sid Solow.**

Special Plans Chairman grew out of his work as Chairman of the SMPTE Public Relations Advisory Committee.

In the exceedingly important area of projection, Frank A. McBrien, Chief Projectionist, Projection Dept., MGM Studios, Culver City, headed up the committee in charge of providing the equipment and services for projection of films and slides during the papers sessions. Members of McBrien's Projection Committee were Robert Specter, Eddie Potter, Floyd Howland and Dick McCormick.



**Public Address and Recording Chairman C. Carroll Adams, III.**

C. Carroll Adams III, Pasadena, was in charge of the public address of the Conference in addition to the recording of discussions during the papers sessions. Assisting Adams were: Frank P. Clark, USC Dept. of Cinema, and the members of the University of Southern California Student Chapter of the Society.

The Equipment Exhibit was under Exhibit Chairman Warren Strang, Hollywood Film Co., whose work resulted in filling all the 85 booths available, setting an all-time record for the Los Angeles area.

An interesting adjunct to the Conference was the exhibit of historic motion picture equipment located at the entrance to the conference. This exhibit was arranged by Kemp Niver, Renovare Co., Hollywood.

The Get-Together Luncheon was arranged by Chairman Harold A. (Hal) Scheib, Cinema Research Corp., Hollywood. The Wednesday evening Cocktail Party, Banquet and Dance were the result of the work of Banquet Chairman Harry Teitelbaum, Hollywood Film Co. Teitelbaum was also one of the sponsors of the highly successful Sunday Evening Luau held at the Castaways in Burbank.

Arranging for free movie tickets and arranging the hospitality desk were two of the



**Membership and Information Chairman Marvin Jacobs.**

jobs well done by Ted Grenier, ABC, Hollywood, as Chairman of the Hospitality Committee. Grenier was ably assisted by Beverly Angel and members of the ABC and NBC page staff.

Handling the very important public relations and publicity for the conference was Thornton Sargent with the assistance of Publicity Chairman Jack Goetz, Consolidated Film Industries.

The highly successful ladies program was planned and directed by Chairman Mrs. Jack P. Hall and Co-Chairman Mrs. E. B. McGreal, wives of the Conference Arrangements Chairmen. Philip B. Singer, Agfa Gevaert, arranged the financial support for the extensive program. M. Q. (Mike) Crane, Pathe, handled the transportation for both the ladies and the mens programs. The auditor and financial supervisor was Arthur Johnson, Pathe Laboratories. Assisting at the Conference was Eric Yavitz, Eastman Kodak Co.

### Short Film Subjects

Eighteen outstanding short films, including several Academy Award winners and nominees, were presented at the Conference. A short opened each of the papers sessions.

H. L. Vanderford, Conference Short Films Chairman, of Hanna-Barbera Productions, Hollywood, said the shorts had been selected to highlight historic film milestones as the SMPTE celebrates its 50th Anniversary of service to motion pictures. The films and respective producers are:

- Timepiece*, Muppets
- Rigid Rotor Revolution*, Lockheed California Co.
- Beyond All Barriers*, Larry Madison, Bell System
- The Dot and the Line*, Academy Award Nominee, Chuck Jones and Les Goldman, MGM
- Clay or the Origin of the Species*, Academy Award Nominee, Eliot Noyes, Jr., Harvard University, Pathe Contemporary Films
- The Cadillac*, Academy Award Nominee, Robert Clouse
- Chuting Stars*, U.S. Naval Missile Center, Point Mugu
- The Pink & Phink*, Academy Award Winner, David DePatie and Friz Freleng, Mirisch-Geoffrey Prod.
- Breaking the Language Barrier*, The Thunderbirds, USAF



**Projection Chairman Frank A. McBrien (left) and Short Film Subjects Chairman LeRoy Vanderford.**

- Missile Launches and Failures*, Pacific Missile Range, Point Mugu
- Wings at Work*, Lockheed-Georgia Co.
- Love That Car*, Cap Palmer, Parthenon Pictures
- Historic Motion-Picture Sound Recordings*, Bell Telephone Labs
- Skaterdater*, Academy Award Nominee, Marshal Backlar, Byway Productions, United Artists
- Returns From Space*, Manned Space Center, NASA, Houston, Texas



**Conference Auditor Arthur Johnson.**

- Quiet Please*, Academy Award Winner, William Hanna and Joseph Barbera Producers, Frederick Quimby (Executive Producer) MGM
- Who's Who in Animal Land*, Academy Award Winner, Jerry Fairbanks, Paramount Pictures
- Sound Tapes Taken From Early Hollywood Recordings*, Collected by Gordon Sawyer

### Extra Films Added to Program

A recently made Technicolor print of *LaCucaracha*, the first 3-color live action film made in 1933, was shown by Dr. Frank Bracket Tuesday afternoon. This beautifully colored and sharp print was made from the original Nitrate negative with the same scene to scene timing as the original.

At the close of the Thursday Technical Session the 16mm color film *Our Living Heritage*, a recent film about our National Parks, was shown by William Turnbull of Rainbow Pictures of Denver, Colorado.

### Historic Equipment Display

An important adjunct of the SMPTE 100th Conference was the Historical Equip-



Historical Equipment Exhibit Chairman Kemp Niver (right) and Local Arrangements Chairman Jack P. Hall.

ment Exhibit located in the Registration area. Highlights of the display were three cameras from pre-projection days, the original Edison Kinetograph, the Jenkins-Armat Phantoscope, and the Kasser-Dickson Mutoscope.

C. Francis Jenkins, first SMPTE President, was represented by his projector that made possible the development of the motion-picture theater. Displays also included the first camera (Bell & Howell) to employ several lenses, and an Ercam compressed air camera.

The Ford Museum, Eastman House, the Academy of Motion Picture Arts and Sciences, and Columbia Records are among those that made the exhibit possible. Kemp Niver, Renovare, Los Angeles, was chairman of the exhibit and contributed greatly to its success.

## Equipment Exhibit

Exhibit Chairman Warren Strang, Hollywood Film Co., was responsible for making the Technical Equipment Exhibit the overwhelming success that it was. There were 85 booths available and all were taken. In fact, Strang said there was even a long waiting list for space even though many companies that ordinarily exhibit at the SMPTE Conference could not because of the conflict in dates with Photokina in

Germany. Under these adverse circumstances, the response to this exhibit was literally overwhelming.

Attendance at the exhibits was also outstanding, totaling nearly 3000 by closing time. The Equipment Exhibit was considered one of the highlights of the Conference by most in attendance.

The Exhibit opened at 5 p.m. Monday with Strang and Conference Vice-President Kenneth M. Mason cutting the ribbon in the traditional ceremony. A second ribbon was cut at the second Exhibit entrance by SMPTE President-Elect G. Carleton Hunt and Arrangements Chairman Jack P. Hall. The double ribbon-cutting ceremonies were followed by an Exhibit Open House during which the crowd had its first glimpse of the Exhibit.

The SMPTE Exhibit Award for excellence of display was made to W. A. Palmer Films, Inc., San Francisco, and Treise Engineering, San Fernando. Plaques, suitably inscribed, were presented to the award winners in appropriate ceremonies shortly after the conference.



The SMPTE Equipment Exhibit.

Companies that had booths at the Exhibit were:

A. C. A. Productions  
Albion Optical Co.  
Allen Products, Inc.  
Allied Impex Corp.  
Amega Corp.  
Andre Debric of New York



Opening of the SMPTE Equipment Exhibit, with Conference Vice President Kenneth M. Mason and Exhibit Chairman Warren Strang cutting the ribbon.

Arriflex Corp. of America  
Atlas Projector Corp.  
Audio Industries Corp.  
Bach Auricon, Inc.  
Bell & Howell Co.  
Birns & Sawyer Cine Equip. Co., Inc.  
Boston Insulated Wire & Cable Co.  
Christie Electric Corp.  
Cinema Beaulieu  
ColorTran Industries, Inc. (A Berkey Photo Company)  
Comprehensive Service Corp.  
DuKane Corp.  
Eclair Corp. of America  
Filberbilt Div. of Ikelheimer-Ernst, Inc.  
Frigidheat Industries  
General Electric Co., Visual Communications  
Gordon Enterprises, Inc.  
Gryphon Corp.  
Harwald Co.  
Frank Herrfeld Engineering Co.  
Hollywood Film Co.  
Hughes Electronics Co.  
J & R Film Co.  
L-W Photo, Inc.  
3M Co., Photographic Equipment & Optics Div.  
Macbeth Sales Corp.  
Magnasync Corp.  
Magnasync/Moviola Mfg. Co.  
Mastereel Industries, Inc.  
D. B. Milliken Co.  
Mitchell Camera Corp.  
Mole-Richardson Co.  
Motion Picture Printing Equipment Co.



J. Carl Treise, President of Treise Engineering, Inc., and Conference Vice President Kenneth M. Mason at the Treise exhibit, one of the Exhibit Award Winners.



Conference Vice President Kenneth M. Mason stands between W. A. Palmer (left) and H. V. Agar of W. A. Palmer Films, Inc., at the W. A. Palmer exhibit. This exhibit was one of the Winners of the Conference Exhibit Award.



Left to right, Alton A. "Steve" Brody, President Stifle, Special Plans Chairman Neal Keehn, President-Elect G. Carleton Hunt, and Producer Sol Lesser.



President and Mrs. Stifle and four stars of yesterday, from left, Jack Oakie, Reginald Owen, Edward Everett Horton and Joe E. Brown.

National Theatre Supply Co.  
O'Connor Engineering Labs  
Paillard, Inc.  
Pako Corp.  
W. A. Palmer Films, Inc.  
Plastic Reel Corp. of America  
Producers Service Corp.  
RCA Broadcast & Communications  
Red Lake Laboratories, Inc.  
Research Products, Inc.  
Ryder Magnetic Sales Corp. & Ryder Sound Services, Inc.  
S.O.S. Photo-Cine-Optics, Inc.  
Shure Brothers Inc.  
Sony Corp. of America  
Stancil-Hoffman Corp.  
Traid Corp.  
Treise Engineering, Inc.  
Vidifilm, Inc.  
Westrex Co., Div. of Litton Industries

### Ladies Program

The ladies attending the SMPTE Conference had much to keep them busy thanks to the Ladies Committee co-chairmen Flora Hall and Jane McGreal, along with the members of the Ladies Committee.

On Monday, Conference week, the ladies attended the SMPTE Get-Together Luncheon, then journeyed to the William S. Hart Motion Picture Ranch. Tuesday the ladies toured the 20th Century Fox studios, lunched at the Sea Lion Restaurant and were then guests of Mr. and Mrs. G.



Sol Halprin, President of the American Society of Cinematographers and Director of the Cinematography Department of 20th Century Fox Studios.

Carleton Hunt at their home in Malibu Beach. Wednesday, the ladies visited the Anheuser-Busch gardens and in the evening attended the Society's Cocktail Party, Banquet and Dance. Thursday the ladies spent a full day at Disneyland. On Friday, the ladies toured the Los Angeles Music Center where they had lunch at the El Dorado Room.

Members of the Ladies Committee were Mrs. John Aitkens, Mrs. Jack M. Goetz, Mrs. Wilton R. Holm, Mrs. Robert Huford, Mrs. G. Carleton Hunt, Mrs. James Kaylor, Mrs. Neal Keehn, Mrs. Donald Kloepfel, Mrs. A. Russ Landers, Mrs. Stacy O'Brien, Mrs. Harold A. Scheib, Mrs. Philip B. Singer, Mrs. Harry Teitelbaum and Mrs. James Wassell.

Philip B. Singer, Agfa-Gevaert, arranged the financial support for the extensive program. Mike Crane, Pathe, handled the transportation for both the ladies program and the men's activities.

Those companies contributing to the ladies program are:

Acme Film Laboratories, Inc.  
Agfa-Gevaert, Inc.  
American Color Laboratories, Inc.  
Cinematic  
Disneyland  
Fairmount Films  
Film Salvage Co.  
Filmservice Laboratories, Inc.  
Glen Glenn Sound Co.  
Hollywood Film Enterprises  
Hollywood Valley Film Laboratories  
M-G-M Laboratories, Inc.  
Modern Film Laboratories, Inc.  
Pacific Film Industries, Inc.  
Pacific Title & Art Studio  
Pathe Laboratories, Inc.  
Reese Supply Co., Inc.  
Technicolor Corp.  
Wholesale Supply Co.

### Cocktail Party, Banquet and Dance

Harry Teitelbaum, Hollywood Film Co., as Banquet Chairman of the 100th Conference was praised by everyone who attended for his work in arranging such a successful event. The evening was marked by an overflow crowd at the cocktail party held at the Ambassador Pool; and at the Banquet in the Cocoanut Grove. Larry Storch was the special master of ceremonies. Entertaining was the cast of the regular Cocoanut Grove show, Grace Markey and Jimmy Lloyd.

### Special Events

Because the 100th Conference was the Conference commemorating the Society's 50th Anniversary of service to the motion-picture field, extra effort was expended in an attempt to make the 100th Conference an historic event in itself. The achievement of that goal was the responsibility of Special Plans Chairman Neal Keehn, who, as everyone attending the conference agreed, succeeded. The three special events were the luau, the Presidents luncheon and the special presentation on motion-picture milestones.

### President's Luncheon

Hollywood's top film technicians, and SMPTE Charter members, were honored at a special luncheon Tuesday afternoon conference week at the Century Plaza Hotel in Beverly Hills. The luncheon was presided over by President Stifle who introduced former presidents of the Society, Donald E. Hyndman (1945-46); John G. Frayne (1955-56); Barton Kreuzer (1957-58); Norwood Simmons (1959-60); John W. Servis (1961-62); and Reid H. Ray (1963-64). Each film discipline had someone to introduce, representatives of the various areas of the motion-picture industry. Participating in the program



Joseph Ruttenberg, ASC, with Director George Seaton presenting Milestone Award.

# Ten reasons why Altec shouldn't sell its new condenser microphone systems for \$198<sup>00</sup>...



## And one reason why it can.

How Altec can offer you these superb systems at only \$198 per—Part of the reason is that they're entirely American-made at our Anaheim plant. No import duties or importer profits to pay. Another part is that we know how to build studio mikes. We should—we've been doing it for nearly 30 years! (For example, remember the 21B and M-11?)

**1. Your choice: AC or DC, Cardioid or Omnidirectional**—Order the system you need now and expand by adding the appropriate extra mike or supply at any later time. Get any combination by simply switching microphones and/or power supplies. Model designations: M49—AC/cardioid; M50—DC/cardioid; M51—AC/omnidirectional; M52—DC/omnidirectional.

**2. Frequency response from 20 to 20,000 Hz**—This is with an essentially flat curve. Output level is—53 dBm re 10 dynes/cm<sup>2</sup>, with balanced system output.

**3. Extremely small diaphragm**—Under 0.5" in diameter. HF dropoff for sound waves arriving at random, non-perpendicular angles of incidence will occur only at frequencies above 20,000 Hz. All Altec condenser microphones contain diaphragms small enough to insure that HF dropoff does not occur within the usable frequency range.

**4. 100% solid-state circuitry**—The 195A base utilizes an FET as an emitter follower and also contains a 3-pin XLR-12 connector. No RF or balanced-bridge critical adjustments are used. The FET drops the extremely high impedance of the microphone to an impedance suitable for connection to a shielded 2-conductor standard cable. Power is simplex over this same cable. The separate power supply provides balanced outputs for standard 150/250-ohm microphone pre-amp inputs.

**5. Small, light power supply**—About the size of two back-to-back packs of cigarettes, both the DC and the AC supplies provide ruggedness for long-term heavy duty combined with small size and light weight for new ease in handling. Finish is hard chrome.

**6. Long-life DC battery operation**—Two mercury batteries provide 2500 operational hours, up to a year in normal use. A convenient meter on the supply shows battery condition. Battery drain is prevented when system is not in use by unplugging the 195A base or by operating a recessed switch on the supply housing.

**7. Many accessories are standard**—With each system a wind/pop screen; microphone holder; and a 25-foot, 2-wire, shielded cable are provided at no additional cost. Connectors and mounting hardware are attached.

**8. High-temperature ambient permissible**—The systems will operate in an ambient up to 55° maximum (131°F).

**9. Exclusive Altec exchange policy**—After expiration of the normal full year guarantee, Altec will accept an inoperative microphone in exchange for a comparable new unit at a fraction of original cost. This policy is unique in the industry.

**10. Microphone is unusually small and light**—This feature—microphone and base are 3½" L x ¾" Diam.; weight 2.2 oz.—designed as a means of eliminating the cumbersome size, bulky shape, and heavy weight of older style microphones.

**\* Extra High Sensitivity Models:** Extremely high sensitivity (45 dBm re 10 dynes/cm<sup>2</sup>) with unusually high signal-to-noise ratio. Designed specifically for use where microphone must be placed at some distance from performers (such as suspended over stage, orchestra pit, or audience, or in footlights). Identical to M51 and M52 systems in other respects, the M251 is for AC operation; M252 for DC. Both are omnidirectional. Price per system: \$216.

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Don Hyndman, Eastman Kodak executive, accepts Milestone Award on behalf of Eastman Kodak Co., from Director Henry King.



George Mitchell, Mitchell Camera, accepts Milestone Award from Director Henry King.



King Vidor presents a Milestone Award for the late Lee de Forest, to his widow, Mrs. Lee de Forest.



Director George Seaton presents Milestone Award to Leon Shamroy, ASC.

were: George Mitchell, Sol Halprin, Leon Shamroy and Joe Ruttenberg, *Camera*; Fred Berger, *Editing*; Charles R. Daily, Eric Berndt, Herb Pangborn and Harlan Baumbach, *Cine-Technical*; Gordon Sawyer, John Frayne, John Aalberg and James Corcoran, *Sound*; Linwood Dunn and Cecil Love, *Special Effects*; Ferd Eich, Henry Goldfarb, Carroll Dunning, Jack Hall, Ted Fogelman, Stacy O'Brien, Sid Solow, Wadsworth Pohl and Dr. F. P. Brackett, *Laboratory*; Alan Gundelfinger, Wilton Holm, Leo Chase and Charley Bonn, *Film*; Alton A. Brody, Sam Brown, George Gibson, Vaughn Shaner, Bill Farley and producer Sol Lesser. Groups represented at the Luncheon were the Motion Picture and Television Academies, the ACE, ASC, the Independent Producers Association and various other organizations.

### Motion Picture Milestones

Milestone Awards for distinguished contributions to the art of motion pictures in the fields of photography, sound and technology were made by the American Society of Cinematography to several Hollywood pioneers.

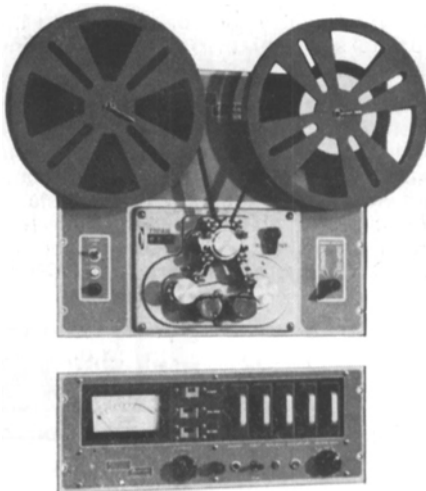
Recipients were: Arthur Miller, Leon Shamroy and Joseph Ruttenberg, *Cinematography*; George Mitchell, creator of the Mitchell sound camera, Earl Sponable and the late Colonel Nathan Levinson, *Sound*; the late Peter Mole, the late Lee de Forest, inventor of the vacuum tube; and Eastman Kodak, *Technology*.

Sol Halprin, president of the ASC, presided at the session and in presenting a specially assembled series of film clips beginning with *The Great Train Robbery*

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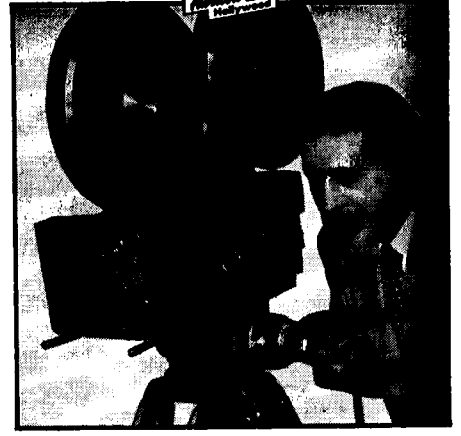


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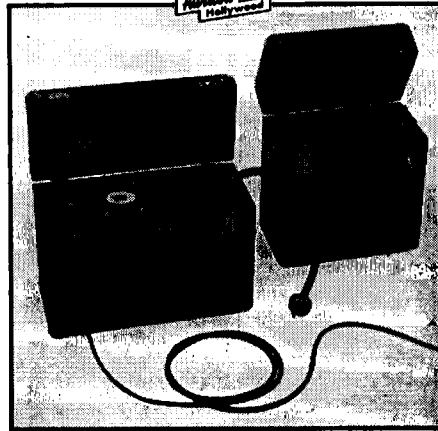
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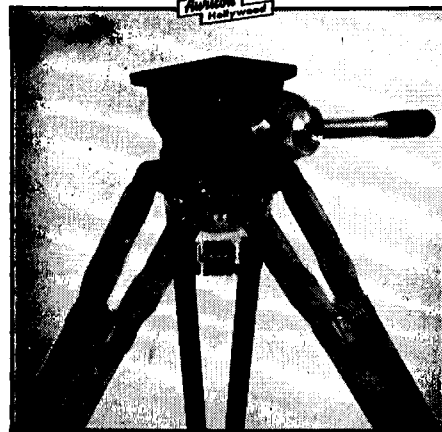
"PRO-600 SPECIAL" 16mm Light-Weight Camera.  
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and continuing to 1966 70mm hits said, "Outstanding milestones in motion-picture techniques will be illustrated through actual film as they occurred since the inception of sound. They will show the combined achievements of the cinematographic, research, engineering and production segments of the industry for each major step forward that brought motion pictures to their present high degree of technical perfection."

Milestone presentations were made by Hollywood directors Henry King, George Seaton and King Vidor. The posthumous awards were accepted by Larry Mole Parker for his grandfather, Peter Mole; by Mrs. Lee de Forest; and by Robert Webb for his father, Colonel Levinson.

The Eastman-Kodak award was accepted by Don Hyndman.

### Committee Meetings

During conference week, there were meetings of eight engineering committees: Sound, Film Projection Practice, Film Dimensions, Color, Laboratory Practice, Television, Instrumentation and High-Speed Photography, and 16 and 8mm. Also, there were daily meetings on motion-picture problems and trends, sponsored by the Motion-Picture Affairs Committee headed by Richard Goldberg, Vice-President for Motion-Picture Affairs.

In addition, there was a full slate of editorial meetings, including meetings of

the Publications Advisory Committee, Board of Editors, Papers Committee and an editorial luncheon.



King Vidor presents a Milestone Award for Earl Sponable to Carleton Hunt, SMPTE President-Elect, who accepts in behalf of Sponable.



King Vidor, with Robert Webb, who accepts Milestone Award for his father, the late Colonel Henry Levinson.

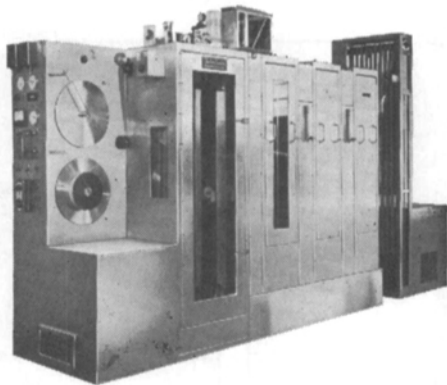


Larry Mole Parker, grandson of the late Peter Mole, accepts Milestone Award presented posthumously to his grandfather, from Director Henry King.



Director George Seaton presenting Milestone Award to Arthur Miller, ASC.

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R-60S	Rev. & Neg/Pos.	B&W	16mm	60-100FPM
316DS	Neg/Pos.	B&W	16mm	60-100FPM
*ND100	Neg/Pos.	B&W (TV News)	16mm	60-85FPM
NP36	Neg/Pos.	B&W	16mm	90FPM
S-90	Neg/Pos.	B&W Spray	16/35	90FPM
S-120	Neg/Pos.	B&W Spray	16mm	135FPM
S-150	Neg/Pos.	B&W Spray	16/35	160FPM
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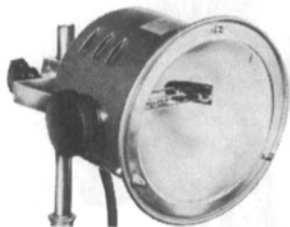


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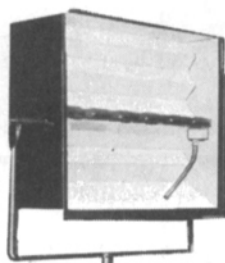
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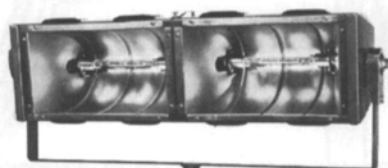
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SMPTE Test Film Booth and Staff Test Film Engineer Joe Stiftel.

### Acknowledgments

The Society is grateful to the following companies and organizations for providing necessary services and equipment:

Sound & Recording Equipment: Altec Lansing

Technical Supervision of Sound & Recording Equipment Installations: Altec Service Corp.

Recording Tape: Eastman Kodak Co.

Equipment for TV Color Test Film Demonstrations: General Electric Co., Visual Communications Products, Consumer Electronics Div.

Photocopy Equipment and Supplies: 3M Company

The Society also wishes to express its sincere appreciation for the valuable assistance rendered on behalf of the 100th Technical Conference by the ladies of WOMPI (Women of the Motion-Picture Industry).

Those attending the Conference were grateful to the following theatres for complimentary passes good for one performance during the Conference for each weekly registrant:

Graumans Chinese Theater, 6927 Hollywood Blvd;

Pantages Theater, 6233 Hollywood Blvd.;

Wiltern Theater, 3790 Wilshire Blvd.;

Beverly Hills Theater, 9404 Wilshire Blvd.

### SMPTE Test Films

A catalog containing details and prices of all SMPTE test films can be obtained from Society headquarters.

The new SMPTE subjective color television test film and slides are now available. Details were published in the March, 1966 *Journal*, pp. 218-220.

Most SMPTE test films are prepared in accordance with ASA/SMPTE Standards. The films are used for testing picture steadiness, traveling ghosts, framing, alignment, and focusing. Sound test films are used to check sound system frequency response, magnetic head or optical train alignment, and sound optics focusing.