

The Association of Cinema and Video Laboratories

A Report on the Fall 1977 Meeting in Los Angeles

By LYNN BIGBEE

The ACVL held its annual meeting at the Century Plaza Hotel in Los Angeles on 15 October 1977 with William H. Smith, President of Allied Film Laboratory, Inc. and also ACVL President, presiding over the laboratory membership meeting.

Mr. Smith announced the reelection of the following officers for the Association for 1978: William H. Smith, ACVL President; Irwin W. Young, Chairman of the Board, Du Art Film Laboratories, Inc., as Vice President; Robert T. Kreiman, President DeLuxe General, Inc., as Treasurer; and John Newell, President, Western Cine Service, as Secretary.

Mr. Smith reported that the *ACVL Handbook* was being revised under the supervision of Sherwin H. Becker, Director of Engineering, Allied Film Laboratory, Inc. "Si has asked us to give him an entire year to complete this project and has told us that he will need help from many of you before the project is finished," Mr. Smith stated. "I feel sure that you will give of your help freely."

Mr. Smith reported that the ACVL is still active in its work with the GSA (Government Services Administration) to "get the government out of the production and processing business. This project has been assiduously pursued by Preston Bergin, our Executive Secretary, and by Frank McGeary, Chairman of our Government Relations Committee. We want to thank these gentlemen for the work they have done on our behalf."

Mr. Smith welcomed these new members to ACVL: Cine Audio Ltd., Edmonton, Alberta, Canada; Jernigan's Motion Picture Service, Gainesville, Fla.; Specirum Laboratory, Carol Stream, Ill.; Astro Color Laboratories, Inc., Chicago, Ill.; and two associate members — Sun Laboratory Systems, Van Nuys, Calif. and Suburban Chemical Co., Patterson, N.J.

Mr. Smith informed the members that Preston Bergin, ACVL Executive Secretary for 16 years, had announced his plans to retire at the end of 1977. "We want to extend to Pres our appreciation for his many years of devoted service to ACVL," Mr. Smith said, "We are certainly going to miss him."

In his remarks to the membership, Mr. Bergin urged them "to put more individual effort into the working of your association, to introduce new people into its operation and to work together to improve the laboratory industry. If you will work together," he continued, "the net result will be better than you could possibly achieve by yourselves."

A contribution submitted on 28 October by Lynn Bigbee, Assistant to the President and Publications Editor, Motion Picture Laboratories, Inc., 781 S. Main St., Box 1758, Memphis, TN 38101.

Lab Equipment and Techniques Forum

Following the laboratory membership meeting, J. Lampert Levy, President of Newsfilm Laboratory, Inc. and ACVL Program Chairman, presided over the meeting of laboratory members, associate members and guests. He introduced William H. Smith, who extended a warm welcome to the 250 members and visitors from around the world. He thanked Mr. Levy and his committee for "a magnificent job of putting together a program that will be of interest to all of us."

Brief descriptions of papers presented at the meeting are given below:

How Ektachrome Print Stocks Compare

Frank M. McGeary, President, Motion Picture Laboratories, Inc., Memphis, Tenn.

Mr. McGeary first gave a rundown of the camera films in use during the past 19 years:

(1) Ektachrome Commercial, 7255, commonly known as ECO, and introduced by Kodak in 1958. "The main problem we had with ECO," Mr. McGeary recalled, "was that the shadow areas would go green if the film was slightly underexposed or the process was off a bit. But it was an improvement over Kodachrome Commercial which had been in use prior to 1958."

(2) 1959 — Ektachrome ER 7257 and 7258. These films were used extensively and were characterized by high contrast and excessive grain when printed.

(3) 1963 — Ektachrome MS 7256, followed in 1966 by Ektachrome EF 7241 and 7242. The EF films had higher exposure ratings than earlier films, could be pushed and flashed successfully and had shorter processing times.

(4) 1970 — Ektachrome Commercial 7252, the new "ECO." Compared to 7255, it had better color, the apparent sharpness was better, the shadow areas were not as green and its lower contrast made it a better print stock. Depending on the producer's criterion, it could also be pushed one stop with success.

(5) 1976 and 1977 — the VNF stocks came along. Their process is shorter than for the EF films, they have generally lower contrast and, with the advent of VN 7250 (E.I. 400), Eastman had produced a film that the television people could use in a number of poor lighting conditions.

Next came the printing stocks:

(1) Prior to 1940, 16mm laboratories had been printing Kodachrome to Kodachrome but, in 1940 Eastman introduced 5265 which had a dye track and was a fairly good stock for its time.

(2) 1958 was the year for Eastman Color

Reversal 5269, with better contrast than 5265 and improvement in sound due to the silver track.

(3) 1959 — Ektachrome 7386 which could be processed in labs without Kodachrome facilities.

(4) 1963 — the year for 7387. "You could get a good track from 7387," Mr. McGeary recalled, "and the contrast was better than 5269. Labs and film producers complained especially about 'beefy looking' skin tones."

(5) In 1966, Eastman brought in 7388 to replace 7386. This stock had good sulfide tracks and the contrast was lower than that of 7386.

(6) In 1970, it was Eastman Ektachrome 7389, a one-to-one Ektachrome printing stock with sulfide tracks. "As I recall," Mr. McGeary said, "labs had stain problems with 7389, with the track bleeding into the picture area."

(7) 1971 brought Ektachrome 7390. "With 7390, the prints are more along the line of what you get with Eastman Color Positive 7381 and you don't get the 'beefy' faces you did with 7387," Mr. McGeary stated. "The interesting thing about this stock is that the customer often tells the lab that he can get good tracks from 'other' labs when he uses 7390 but that he can't get good tracks from you."

(8) 1977 was the year for Ektachrome 7399. According to Mr. McGeary, this stock has a lower stain level, the whites are cleaner and "we have high hopes for better soundtracks than we get with 7390."

Mr. McGeary used side-by-side and single-screen presentations to illustrate the development and comparisons of the print stocks discussed.

Rationalization of the Color Print Process

Walter Seys, Senior International Product Manager, Agfa-Gevaert, Inc., Mortsel, Belgium.

In 1960, in a paper published by the Society of Civil Engineers at the University of Louvain, Belgium, Mr. Seys and his co-authors, established the following guidelines for future development of color positive processes: (1) the need to increase the speed of processors; (2) the influence of the processing temperature as an important factor in this problem; (3) the need for manufacturers to develop compatible processes; and (4) any and all developments would be affected by economic conditions prevailing at the time.

How do we stand today?

(1) The economic situation has changed beyond imagination, with consumer and labor costs increasing far beyond previous forecasts. (2) High-speed printing has be-

come a reality. We have panel printers that run up to 720 ft/min and Technicolor is using a 35mm printer they developed that will run at 1000 ft/min. High-speed processing is also a reality. Machines have been built that run 400 ft/min. (3) Processing is always conditioned by economics and ecology and, at the present time, color print processing needs a great variety of chemicals. Wastage in processing can be decreased by (a) limiting carry-overs (Remember that the faster the machine, the more carry-over you get and squeegees are very important in reducing carry-over; (b) collecting the overflow; and (c) recycling after rejuvenation. (4) Manufacturers must keep up with laboratory needs for faster printing and processing. Mr. Seys predicted that manufacturers will begin to turn out more film per batch and that 4000-ft stock rolls will become common in the industry. He pointed out, however, that 4000-ft rolls of 35 mm would weigh about 25 lb and could cause handling, torque and motor problems.

He thinks that a more widespread use of polyester films may be the answer to some of these problems. Polyester rolls, comparable to the same lengths in triacetate, would be smaller and weigh less as well as being stronger and more resistant to damage. This is especially important with high-temperature processes since the mechanical resistance of triacetate film decreases as the processing temperature increases, reducing the life of the processed release prints.

The main problem with polyester films, according to Mr. Seys, comes with splicing since no film cement can be used. Splices are usually made by heat fusion or with pressure-sensitive tape. "I have faith in our industry and I believe that the designers of splicers will come up with a good, inexpensive method to splice polyester," he stated. Mr. Seys also discussed the BLIX processing system as compared with Eastman ECP-1 and ECP-2. In closing, he called on all film equipment manufacturers for a spirit of cooperation to develop compatible equipment and processes for the future benefit of the entire industry.

Small Format Filmstrip Trends

C. J. Uding, Vice President,
Maritz Laboratories, Inc.,
St. Louis, Mo.

Although a number of people believed that super 8 would kill the filmstrip, it is still very much alive and growing every year. "Filmstrip mastering is a very precise and demanding operation," Mr. Uding stated. "This leads me to greatly respect the people in our laboratory who handle this operation. They are out there 'cutting diamonds' every day."

Many of the problems encountered by the laboratory that handles filmstrips comes from improperly prepared slides and transparencies. Although most professionals know the problems of aperture

differences between the camera, the slide and filmstrip projectors, many of the people who send work to the laboratory are amateurs. These people are not aware of problems that can occur when a slide is overloaded with copy or has important visual information on the edges that will be cut off when it reaches the screen.

Mr. Uding advises his customers to use a system similar to TV cutoff and the "safe title area" but it is difficult to guide them since he has been unable to find instructional materials to help them. He urged the ACVL members to consider the need for better guides for people who prepare slides and artwork for filmstrips. "They must be educated to this medium," he said, "and we, as an industry, need something similar to the TV cutoff guides but prepared especially for these audiovisual people, including many amateurs, who work as quasi-professionals in preparing slides and transparencies for filmstrip duplication."

The Elusive Nature of the Trade Practice — The Posttape Case

Jonathan W. Romeyn, Legal Department,
Eastman Kodak Co., Rochester, N. Y.

At the beginning of his talk, Mr. Romeyn told the group that the views expressed in this paper were his own and not necessarily those of Eastman Kodak. He expressed his thanks to the ACVL and to Robert M. Smith, Executive Vice President of Du Art Film Laboratories, for valuable assistance in the Posttape case. (The ACVL had filed a brief as a friend of the court and Mr. Smith had testified as an expert witness for the defense.)

The plaintiff in the case was Posttape Productions of Philadelphia, which had filed a suit against Eastman Kodak because the film that they bought and used in 1970 had manufacturing defects which Posttape felt had made the film they shot unusable. Kodak had based its defense on the fact that it has been a well known industry custom that the manufacturer is liable only for the cost of the raw stock and that this limit of liability was plainly printed on every container of film they sold. In the first trial, in Philadelphia in March 1975, the court had decided for the plaintiff and had awarded Posttape \$143,000 in damages.

In 1976, Kodak filed an appeal, and it was at this time that the ACVL filed a brief as friend of the court noting also that it has been common industry practice for the laboratory to be liable for the cost of the raw stock only.

In their July 1977 appeals trial, the Kodak legal counsel made it clear at the beginning that the issue was dual: was there a custom in usage in the industry regarding the manufacturer's liability when the plaintiff purchased the film in 1970 and was the plaintiff aware of this custom? "It [the issue] has nothing to do with what may or may not have occurred."

In support of their statement that the

limit of liability was well known in the industry, Eastman showed the jury that their own, Fuji and Gevachrome containers all listed the manufacturer's liability as being limited to the cost of the film. The Eastman lawyers also pointed out that without this limitation of liability, manufacturers and laboratories would have to buy expensive insurance to handle liabilities above the cost of the raw stock. This, in turn, would cause costs of film and laboratory services to rise appreciably. "After all," Mr. Romeyn stated, "the manufacturer has no control over the film after it leaves his place of business and the cost of the raw stock is the cheapest item in the production budget. Neither a manufacturer nor a laboratory can turn out a perfect product every time. This is why each producer insures himself with producer's negative insurance." (Posttapes, the plaintiff, had claimed lack of knowledge of the limit of liability but had taken out producer's negative insurance. Kodak had not been permitted to mention insurance in the earlier trial.)

After calling six witnesses, all of whom testified to the fact that it was a well known custom in the industry that the manufacturer's limit of liability was the cost of the raw stock, Kodak's legal counsel proposed this question to the jury: "Do you find from the evidence in this case that at the time of the sale of the film in question, that there was an agreement to limit plaintiff's remedy and damages for negligent manufacture of the film and for breach of warrant in the sale of the film, to replacement film and that this agreement expressly provided that replacement of the film would be the plaintiff's exclusive remedy?"

After several hours of deliberation, the jury came back and said "yes," deciding for Kodak and against the plaintiff. The plaintiff's lawyer has filed a motion asking the judge to overturn the jury's decision. The results of this motion should be announced later this year.

In conclusion, Mr. Romeyn congratulated the ACVL for carrying statements of industry policy in its *Handbook* and urged all members to pursue this system in their own operations. He also urged them to encourage other trade associations to which they belonged to get their practices down in writing to protect them from misunderstandings with clients and "to help keep you away from lawyers." It is much easier to work out a situation with a disturbed client when you are operating under well known industry customs which are down in print.

A Cost-Effective Approach to Water Conservation

John F. Motch,
Quality Control Supervisor,
Palo Alto Processing Laboratory, Eastman
Kodak Company, Palo Alto, Calif.

Mr. Motch, who is well known in the industry for his water-saving work at Palo Alto, presented a slide film which was

originally prepared for Eastman employees and amended somewhat for presentation to the ACVL.

When Mr. Motch, in conjunction with other Kodak personnel, began their campaign to save water back in 1968, 130 million gallons of water passed through the Palo Alto facility each year. In his work, Mr. Motch found that "the answer to solving this problem was a willingness to look for it and to find ways to eliminate it." One of the most important ways to save water is to motivate people to save it; the educational program at Palo Alto was highly successful in getting people from top to bottom to cooperate.

Beginning in 1968, Mr. Motch and his co-workers at the Palo Alto lab began a rigorous campaign to cut back on water use and had reduced the amount used considerably by 1977. Then they were advised by local agencies that all industries in the Palo Alto area were being asked to reduce their 1977 water use by 28% or face serious rate increases as the penalty for non-reduction. Here are some of the water-saving systems adopted by Kodak at Palo Alto in the 8½ year campaign to save water: housekeeping steps; process water reduction; and reuse. The main section focused on was housekeeping.

"For example," Mr. Motch explained, "the chemical processes were heated with domestic hot water which went through a heat exchange and then right into the sewers. We installed a steam-heated, recirculated process hot-water loop. Our air compressors which provided water-pumped, clean air for processing were sealed and cooled by running city water which then ran into the sewer. We changed to a recirculated loop with a cooling heat exchanger . . ."

"Machine washes, which also use a lot of water, got a great deal of attention too. We now mix hot and cold water in a tank and pump it to the machines through a sand filter for washes . . . We added a water tree network with solenoids and flow meters for each machine. These can be controlled by the machine operator . . . By 1971, consumption was down 60%, despite substantial growth in business volume. Costs were also down despite increases in rates."

"By 1976, our water consumption was down to 39.5 million, down 70% from 1968 despite the fact that 1976 was also the biggest volume year in the laboratory's history. Then, in 1977, we were allotted 29.6 million gallons. At this point, we talked to all our people and told them that our jobs all depended on our saving water in 1977 . . ."

"We went back to the processing machines and measured actual process wash rates. Some did not meet recommendations so we brought down the ones that were over specifications. Then we looked at the specifications themselves and found we were able to reduce them in many areas."

Many of the water-saving methods introduced by Mr. Motch saved only small amounts of water in themselves but, added together, they saved over 45,000 gallons a week. So far this year, water consumption is down from 1976 and, although a rate increase has gone into effect, costs are down in 1977 over 1976.

In conclusion, Mr. Motch stated: "We worked out an efficiency formula to make sure that the savings were not based on less volume of business. In 1977, the formula shows that we have an efficiency improvement of over 70%."

Comparison of Intermediate Print Stocks (7243 vs 7249)

Irwin W. Young, President,
Du Art Film Labs, Inc., New York, NY and
Arlan E. Evensen, Partner, Teknifilm, Inc.,
Portland, Ore.

Many of the problems that 16mm film producers have had with 7247, Eastman Color Negative, according to Mr. Young, have arisen because most 16mm producers had never before worked with an original negative, being accustomed to reversal. Until 7247 came along, they simply cut their titles into their original reversal A&B rolls and never worried about super impositions or A&B winds. To help producers understand how an original negative works with CRI (Color Reversal Internegative) 7249 and with 7243, the new intermediate stock, Du Art has presented a number of seminars, especially in the New York area, to teach filmmakers about CRI and 7243.

Mr. Young recommends that 16mm master positives on 7243 be made optically for two major reasons: (1) Optical masters can be produced in the B wind position, making it easier to produce B wind release prints which, in some people's opinion, yield better quality on the screen. (2) When optical masters are made from the original negative, the laboratory can use the wet-gate system to minimize any defects or scratches that may be on the original. In split-screen comparisons using 16mm color film, Mr. Young gave the audience a chance to see how the same original material looked printed first via CRI and then printed via the 7243 system.

Mr. Arlan Evensen was next and spoke, as he said, from the viewpoint of a smaller laboratory with no optical printers and with customers who usually do not have the budgets necessary for intermediate optical printing.

When a customer elects to use the 7243 printing system, Mr. Evensen recommended that he order a contact master positive of the entire A&B roll original, including dissolves but not fades. (It is easier to add fades at the positive-to-dupe-negative stage since fades in 16mm original negative are made using clear leader and they usually do not look as well on the screen as fades from positive.) The

titles are then prepared using a reverse Kodalith so that the title footage will be in the A wind position. The laboratory then makes a dupe negative from the master positive with the titles added as a B roll. The fades are added at this stage and the customer may ask for either colored or white titles.

Mr. Evensen's conclusion, well illustrated by his motion-picture demonstrations, was: It is feasible to use a contact printer to make the master positive on 7243 as well as the dupe negative when the 16mm original is color negative, with results acceptable to the laboratory and its customer alike.

Areas of Growth in Video

Milton T. Raynor,
Executive Vice President,
Vidtronics, Inc., Los Angeles, Calif.

Mr. Raynor introduced himself as a "nontechnical person" and invited the members to attend an open house at Vidtronics on Thursday, 20 October where "you can ask the technicians as many questions as you like."

Film and tape, according to Mr. Raynor, are not on a collision course. Instead, each will have its place in the future of our industry. The three major areas of interest in videotape are: (1) broadcasting; (2) non-broadcast, including industrial, closed circuit, etc.; and (3) home viewing.

In the area of broadcasting, Mr. Raynor cited figures to prove that videotape is used for a growing percentage of prime-time television programs each year. (He did not differentiate between programs produced on film and transferred to tape for broadcast and programs produced and broadcast on tape.)

He acknowledged that many producers and advertising agencies still prefer the "film look" but he feels that the electronic medium is fast catching up to film and will overtake it, particularly in the production of television commercials. "Working in film," according to Mr. Raynor, "requires a luxury of time that many people do not have. It has been this shortage of time that has made people take a better look at videotape."

In the nonbroadcast field, there has been a healthy increase in the use of videotape in industry, government and education plus a potentially good market in the religious field.

The third area, home viewing, is the area where Mr. Raynor expects the greatest growth. Although the videodisc is not yet on the market, "I can assure you," Mr. Raynor stated, "that there is one videodisc already developed that can play on both sides of the disc, using a laser beam type of needle."

Mr. Raynor believes strongly in the future of videodisc and that the companies who prepare themselves to produce it will be the ones to experience the most growth in the years to come.

Some Considerations in the Production of Quality Optical Sound

Charles Nairn, President,
Communications Technology, Inc.
Huntsville, Ala.

Mr. Nairn began with a word to laboratory people about the importance of good sound in the motion-picture business and that a person's attitude can often influence the kind of sound work he turns out. "The laboratory *is* in the sound business, not just the picture business, and I believe that it is a mistake for a laboratory to offer free sound services as an enticement to customers. In my opinion, this belittles the importance of sound." Optical sound when done well is next to records for good quality, mass-produced sound.

What is good sound? "My criterion for a good soundtrack," Mr. Nairn stated, "is to run the magnetic sound and the print in interlock and switch back and forth from one to the other to see how they match. You will have to run a little film noise behind the magnetic track but it is legitimate to do this. If it is hard for you and/or your customer to tell which is which, the optical track is good or it is at least representative of the magnetic sound you received. This is also a good way to show your customer what his original magnetic track really sounds like."

Following are some of the many points on sound that Mr. Nairn discussed:

(1) Twenty percent of the problems the sound studios encounter occur on location. The Nagra is a good recorder but it is often misused. For example, studios often get sound recorded on a Nagra in the field where they used high-output microphones. This is not good. Also, no matter where he is recording, the sound man needs a good monitoring system so he can tell what is really going on the tape.

(2) Many producers have their own dubbing and mixing studios and many of them do it carelessly. Then they expect the sound studio to "fix" the sound.

(3) People often forget that magnetic heads do wear out and they continue to use them long after their useful life is over.

(4) Every good sound studio should have a good degausser but there are not many good ones on the market. Before buying one, the sound man should do some research, talking to manufacturers and to other sound studios to get their opinions and experiences.

(5) Magnetic tracks should be completely monitored before the optical transfer is made.

(6) The use of old or improper speakers leads to many sound problems. When he is transferring from magnetic to optical sound Mr. Nairn prefers to use headphones.

(7) There is a limited bandwidth in motion pictures and the sound person must learn to work within it. "Some consoles will help you control both ends of the frequency magnificently," Mr. Nairn stated, "but the area you have to work with in motion-picture sound makes many consoles inefficient."

(8) The basic instrument for quality control is your ear. You do not hear like a meter so the important thing is: Does it sound good?

In closing, Mr. Nairn talked about the future of sound. "I think we will see better-quality sound negatives, we will see better-quality electronics and, if we choose to do it, we can set up tighter controls and make better-quality sound."

Federal Controls — Impacts and Outlooks

Panel Discussion. Moderator: *John Newell*, Western Cine Service, Denver, Colo.; Panelists: *Michael T. D'Ambra*, Byron Motion Pictures, Inc., Washington, D.C.; *Leo Diner*, Leo Diner Film Labs, Inc., San Francisco, Calif.; *B. F. Moye*, Cine-Craft, Inc., Hollywood, Calif.; *Frank Reinking*, PSI Film Laboratory, Dallas, Tex.; *Fred J. Scobey*, DeLuxe General, Inc., Hollywood, Calif.

John Newell introduced the panel and announced that they would cover municipal and state as well as federal regulatory problems. The magic word, according to Mr. Newell, is "... compliance. All of us must maintain a posture of defense with an outlook of cooperation." He also suggested that people should keep in mind the fact that if a person encounters problems with the federal government, help with the problem may often come from local governmental agencies. These people are often willing to share information in their areas of expertise and often resent federal controls that bypass or intrude into their own areas. "Divide and conquer" often works to the laboratory's advantage. Mr. Newell cited experiences with OSHA (Occupational Safety and Health Act) where the federal agency seemed to retreat somewhat on its position when he talked to the state agencies and obtained for OSHA the state's case and file numbers.

Leo Diner related several experiences with OSHA that causes unpleasantness

and resulted in fines which Mr. Diner felt were unjustified. One problem that caused a fine was the placement of the OSHA posters. The law says that the posters must be placed near the time clock and Mr. Diner's lab had adhered to this instruction until the clock was moved and they were preparing to paint. The OSHA representative would not listen to Mr. Diner's explanation that the posters would be replaced as soon as the area was painted so the lab was fined. He was also told that regulations required him to have a light in his light-lock areas. In conclusion, Mr. Diner said that he wanted to safeguard the people who worked for him but that he felt that "the people inspecting our laboratories are unqualified to do so since they know little or nothing about our business and we can't seem to get any help with this problem from OSHA."

John Newell then raised the question: Should the ACVL prepare some guidelines for OSHA to make their inspections more fair? According to Mr. Newell, many of the guidelines presently used by OSHA were developed for laboratories processing x-rays.

Frank Reinking had high praise for the municipal people in charge of sewerage disposal in Dallas. He had visited the plant expecting to see an understaffed, poorly informed organization but found instead an experienced, well informed manager with a trained staff. The man was interested in the problems of industry in Dallas and was willing to work with Mr. Reinking in any way that he could.

Michael D'Ambra was greatly concerned with energy costs facing laboratories and raised the question of film manufacturers looking into the development of lower-temperature processes to reduce energy costs. "It seems to me," he said, "that if we can develop sophisticated stocks like 7247 and 7243, certainly we have the technology necessary to come up with low-temperature processes that will still give us the productivity we need."

Bill Moye was concerned with local variations within large metropolitan areas like Chicago and Los Angeles where each city has its own zoning, parking, water conservation and waste-disposal ordinances. "Discrepancies often exist between the city and the county you're in," he stated, "and a one block difference in your location can make a big difference in what your requirements are. I think there should be more uniform codes so that a business man in an area like Los Angeles would at least know what to expect from the city and the county."