

TELEVISION FILM POST PRODUCTION METHODS

Technological changes now taking place in the television industry will almost certainly have far-reaching effects on television program production on film. The availability of lightweight, portable electronic cameras and videotape recorders has made possible a rapid change-over from film to electronic news gathering (ENG). With the prospect of all-electronic television station operation in sight, broadcasters are now transferring film programs to videotape prior to on-air release. The immediate advantage is to eliminate manning of both videotape and telecine facilities. Taking the next obvious step, broadcasters are beginning to ask: "Why not produce all television programs on videotape so as to get rid of film and telecine altogether?"

But there is another quite interesting alternative for filmmakers in the midst of these developments. Until recently, broadcasters held an almost exclusive monopoly of film reproduction in the television system. Filmmakers and program producers had to give the broadcasters fully-timed and color-corrected prints, and the broadcasters then put the films through their telecine machines to generate video and audio signals for transmission to the public.

This divided responsibility for the quality of the television pictures from film has been the cause of much dissatisfaction on both sides. But now that broadcasters are insisting that all television programs should be on video-

tape, opportunities are opening up for filmmakers to take over the operation of telecine equipment and assume the responsibility for making the transfers to video tape. This offers the double benefit of giving broadcasters videotapes of film programs, and at the same time, enables filmmakers to gain direct access to the equipment used to reproduce their films in the television system.

The invention of videotape recording, hailed by broadcasters as a long-awaited release from the tensions and frustrations of direct on-air programming from television studios, had an unexpected outcome. Independent production companies acquired videotape recorders to turn out commercials, and often complete television programs as well. Then motion picture laboratories began to acquire electronic facilities, at first mainly to produce what might be termed commercial quality helican scan videotapes for non-broadcast applications.

The possibilities for using film cameras to make the original recordings, instead of the much more complex, costly and inconvenient electronic picture-making equipment quickly became apparent, and some film laboratories have already installed telecine machines to transfer films to videotape. With these facilities it is no longer necessary to make fully timed and color corrected prints for television — a first trial print can be corrected electronically by appropriate adjustments of telecine camera controls. Going a step further, original camera films can be transferred to tape, avoiding altogether the costly and time-consuming printing stage, and effects such as fades, dissolves and supers can be put in electronically with still further savings in production costs. A recent issue of the *Journal of the British Kinematograph, Sound and Television Society (BKSTS)* had a news item about the expansion of facilities at Colour Film Services

Ltd. in London; flying spot telecines have been installed to enable color negatives to be transferred to videotape.

Many different methods can be employed in producing programs on videotape, with film as the source. At one end of the scale, existing projection prints can be transferred to tape in a single uninterrupted run. The film is laced into a telecine projector and stopped on a convenient leader number — say 10, giving a run-up time of ten seconds to the start of the picture. A recording of the television color bars is then made at the head end of the videotape, and the recorder is backed up to minus ten seconds. Then, on a cue signal, both machines are started, and the recorder is switched to the "record" mode at the end of the 10-sec. interval. As the film is running, a video operator at the telecine camera control console can make any necessary adjustments of video levels and color balance, while the output is viewed on a nearby color picture monitor.

At the other end of the scale, all of the original camera footage for a production can be transferred to tape, simply by splicing the material into one or more large rolls. Then a finished program can be assembled on videotape by electronic editing. While the transfer is being made, a procedure similar to conventional film timing has to be followed to compensate for scene-to-scene density and color variations in the originals.

These variations are likely to be quite extensive, giving the telecine video operator a difficult task in making the necessary adjustments of camera controls. Stopping and starting of the telecine projector when camera originals are being reproduced should be avoided as far as possible so as not to damage the valuable originals. At the start of each scene the video operator needs a few seconds to alter the camera

Long time Supervisor of Technical Film Operations at the programming centre of the CBC, Mr. Ross is the author of two books, Television Film Engineering and Color Film for Color Television, has won the Agfa-Gevaert Gold Medal, awarded by the Society of Motion Picture and Television Engineers, and is presently chairman of the SMPTE Board of Editors.

controls, and the effects of these adjustments will be seen in the television pictures. But this becomes a problem only when an entire scene, right out to the first frame, must be included in the program.

This procedure gives the videotape editor one or more reels of scenes, similar to that obtained when recordings are made with a live television camera. To be able to identify and quickly locate a particular scene in the recording, the SMPTE time code must be recorded on the tape while the transfers are being made, or later on, in a second recording session before editing commences. A list of scene descriptions with the corresponding numbers derived from the time code give the producer and videotapes editor the information they need to put the program together.

Between these two extremes a great many different methods of program assembly on videotape have been devised and are being utilized already in the industry. A particularly attractive post-production method is to assemble the film materials into A&B rolls in a manner similar to A&B roll film printing. The film rolls can be transferred to tape either one at a time, or simultaneously in two interlocked telecine projectors.

When a simultaneous transfer is being made, two separate video outputs from the A&B rolls are needed at a television switcher-mixer, where fades, mixes and supers can be added. Sequential A&B roll transfers must be recorded on two separate videotapes, and then played back through a switcher-mixer to integrate the scenes into a finished program, complete with effects, on another tape.

These somewhat more complex assembly operations, while putting added demands on the equipment and operating personnel, can give the very finest results, comparable in every way with programs produced entirely on film, or entirely with electronic cameras and recorders. Some degree of equipment automation is essential to aid the operators and give a smoother performance. Already, some post-production companies have facilities for making scene-to-scene corrections automatically. First, the films to be transferred are viewed on telecine, and a punched

paper tape is prepared, similar to a printer control tape. In a second run, while the transfers are being made, the punched paper tape puts in the corrections automatically.

By putting as much as possible of the post-production work into the A&B roll film stage, the amounts of time needed for electronic editing on costly videotape machines can be reduced to a minimum. Besides, it is much easier to locate sections of film containing wanted scenes for the preparation of A&B rolls, than it is to identify and locate scenes in large rolls of videotape recordings.

EQUIPMENT NEWS

Note to Canadian distributors:

We would like to include the names and addresses of Canadian distributors of equipment and services mentioned in this section. Please ask your suppliers to give Canadian sources in their publicity releases. Ed.

Unique Application of Cinestrobe.

The Cinestrobe, used in the new film "Looking for Mr. Goodbar", is a powerful strobe light synchronized with the shutter of the motion picture camera, producing an effect heretofore not seen in theatrical motion pictures. Cinestrobe, available as an exclusive rental item from Alan Gordon Enterprises Inc. in Hollywood, achieves a dramatic lighting effect, impossible to obtain with any other type of equipment.

Director's Viewfinder.

After several years of research and development, AGE Inc., optical and mechanical engineers, have designed an instrument to meet the needs of film and TV directors and cameramen working in the 35mm. and 16mm. formats. The Mark IV 10:1 Zoom Director's Viewfinder has an effective range from 12mm. to 120mm. in the 16mm. format, and from 25mm. to



Model IV Director's 10:1 Viewfinder.

250mm. in the 35mm. format. Other features include a direct reading scale in lens focal length, optical quality coated glass, focusing eyepiece, smooth zoom movement, and weighs only 13 ounces. For more information write AGE Inc., 1430 Cahuenga Blvd., Hollywood, CA 90028

Super 8 Notes From Adams & Associates

Vic Adams continues to put out his most interesting and useful bulletins. A recent issue has a lengthy article, complete with illustrations, on the use of polarizing filters. Another valuable service is a list of Canadian laboratories showing the various types of Super 8 work they can handle, arranged in a convenient form for easy reference. The address of Adams and Associates is 1645 Bank St., Suite 202, Ottawa, Ont. K1V 7Z1.

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