

TECH NEWS

by Rodger J. Ross

TRENDS IN FILM USE BY TELEVISION

For a long time 16mm film has retained a fairly secure place in television news. Now film is being seriously challenged by electronic news gathering, or what is more popularly known as electronic journalism. The opening move in the campaign to displace film was made by Joseph A. Flaherty, general manager of engineering and development, CBS Television Network, in a paper on "Television News Gathering" presented at the technical conference of the Society of Motion Picture and Television Engineers in New York, on October 19, 1973. The National Academy of Television Arts and Sciences has recognized the achievements of Mr. Flaherty "in spearheading the development and realization of electronic news gathering" by awarding him an Emmy on May 19 this year.

CBS started electronic news gathering in Washington, DC., in 1971, and a year later a system was installed at a CBS-owned station, WCAU, in Philadelphia. Since that time all CBS-owned stations and domestic news bureaus have been equipped for electronic news gathering. In September 1974 KMOX-TV in St. Louis became the first station to abandon altogether the use of film cameras, all news being gathered, edited and assembled electronically, integrated with the station's newsroom.

At the SMPTE winter television conference in San Francisco in January this year, the opening session, devoted to broadcast journalism, included three papers on electronic news gathering. Then in April the National Association of Broadcasters, meeting in Las Vegas, had a special session on ENG/EJ, which was packed

to capacity, many unable even to find standing room, according to reports.

Many film people, especially those who have been closely associated with television news operations, must be mystified by all this excitement, wondering why, all of a sudden, television people have become so dissatisfied with film that they are preparing to invest large amounts of money in facilities for electronic news gathering. Peter Ward, chief engineer of the Independent Television Network (ITN) in the UK gives some of the answers in an article he has written for the June 1975 issue of the *Journal of the British Kinematograph, Sound and Television Society* on "ENG&EJ - Electronic Journalism".

In spite of all that has been said by the promoters, electronic news gathering or electronic journalism is not new - in fact, it is as old as television itself. There has always been a demand for live coverage of major news events, and every television viewer must have seen innumerable examples. In the earlier days these demands could be met only with large, costly mobile television vans and a small army of technicians, intended mainly for sports events. What is new now is the availability of portable television facilities giving fairly good quality pictures and fairly reliable service at much more moderate cost, with a minimum of technical personnel.

The invention of videotape recording made possible the breaking of the electronic signal path between the pick-up camera and the television transmitter. With this equipment signals from the camera could be recorded and played back later on without any apparent degradation. Moreover, recordings could be edited electronically and assembled into programme form prior to on-air release. At first videotape recorders were very heavy and costly machines designed for permanent station installation.

The concerted drive by electronic equipment designers to develop smaller, lighter, simpler and less expensive cameras and videotape re-

orders has brought to the market a veritable flood of new facilities. Portable colour cameras are now available, comparable in size and weight to a 16mm film camera. Recordings can be made on location with low cost portable helical scan VTR's, or the signals can be transmitted by microwave relay links to the home station. There the news stories can be released directly to the public or recordings can be made and edited, ready for the next news broadcast. Among the many advantages claimed for electronic news gathering is the opportunity for active participation by the news room team in each story being received by microwave from the camera location. No doubt even more important is the edge a station gains over its competitors by being the first on the air with the news.

Ralph Huckaby, director of engineering of WLAC-TV in Nashville, Tennessee, gave some figures on his station's news operations at the SMPTE winter television conference in January. During 1973 they exposed and processed over a million feet of 16mm color film, most of it for news. The cost of the film was about \$90,000, and the cost of operating their film processing lab about \$37,000. The original supply of videotape in 20-min. cassettes, costing \$3,150 and included in the purchase of electronic news gathering facilities, was still in use three months later. The station made an initial ENG investment of approximately \$350,000, which included two small vans, with an Ikegama colour camera, 1000 feet of cable to connect the camera with the van, a microwave unit and one Sony 3/4-in. U-Matic videotape recorder weighing 30 lbs. in each van. At the station there are five Sony Model 2850 machines for recording incoming stories from the vans, assembling the stories by electronic editing, and playback of the stories on-air. Several inexpensive helical scan recorders are also available for viewing and making editing decisions.

The vans with their crews leave the station at 6 am each day and do not normally return until 11 pm. Each

Past editorial vice-president of the Society of Motion Picture and Television Engineers (1967-70), Rodger Ross spent 18 years as Supervisor of Technical Film Operations with the English language programming centre of the CBC. He is the author of two books - Television Film Engineering, and Color Film for Color Television - and is presently a consultant television film specialist for Eastman Kodak and the CBC. His hobbies include colour photography, Super8 movie making and amateur electronics.

crew consists of a camera operator, driver and news reporter. It is expected that savings in film and processing costs, vehicle operation and personnel will pay for the ENG installation in about six years.

In the July 1975 issue of *SMPTE Journal* Ed DiGiulio, president of Cinema Products Corp., Los Angeles, a major motion picture equipment manufacturer, has taken a full-page advertisement urging television station managers to think twice before plunging into the purchase of electronic news gathering facilities. He insists that there is nothing in the experiments by the network stations that have gone "all-electronic" to indicate that ENG can be an adequate replacement for a well-balanced film and video news gathering operation. There is no way, he admits, that ENG coverage transmitted live can be beaten, especially in late-breaking news developments. But there are not enough dramatic events to justify the expense of an all-electronic operation. A comparison of portable equipment shows that the cost of lower-quality portable television cameras is in the same range as 16mm newsfilm cameras, but the price of the electronic camera is only the tip of the financial iceberg in relation to the true overall cost of ENG.

Mr. DiGiulio says we never seem to get a complete breakdown of the costs of ancillary systems, nor are we told of the complexities of setting up remote microwave pickups, nor the problems of maintaining all this complicated equipment. ENG is supposed to pay for itself through cost savings for videotape that is erased and re-used. But what news director, he asks, would be foolhardy enough to predict how much of the taped coverage of news stories should be erased rather than stored for possible future use? In the five to seven years needed to recoup an original ENG investment, far more sophisticated, better quality and more reliable equipment will be developed, making a station's facilities obsolete.

"If you must be the first kid on the block with total ENG, be my guest," he concludes, "but if you want a rational news operation, I urge you to consider 16mm. newsfilm as the mainstay of your news gathering operation."

We will have to wait for some time, no doubt, before definitive answers to the questions raised by electronic news gathering develop-

ments emerge. In the meantime, film people working in television news see their jobs hanging in the balance and uncertainty clouds prospects for future income from television news operations by film suppliers and laboratories.

Economic considerations may not in the long run determine the outcome. The advantages of convenience and immediacy could well make all-electronic systems so attractive as to justify the heavy capital costs that must be incurred. On the other hand, television news people may find that

working with all-electronic systems is not nearly so easy as the publicity promises.

The most likely outcome appears at this stage to be somewhat greater use of electronic facilities for news, but by no means total displacement of film. As these developments proceed, a point will be reached where the advantages and disadvantages of each system more or less balance. This point will shift in one direction or the other as the electronic system or film offers news people a more attractive working medium. □

EQUIPMENT NEWS

Super8 Sound Catalogue Available

The new Super8 Sound catalogue is now ready for mailing. The new 60-page edition is one of the world's most comprehensive listings of Super8 sync sound production and post-production equipment. The catalogue is supplemented with a loose-leaf binder compilation of full-colour manufacturer's product sheets. This 500-page compilation is known as Reference Book Super8 and costs \$15. The cost of the Super8 Sound catalogue is \$1.00. For \$2.00 a copy of the Super8 Sound Recorder User's Manual can be obtained. Available from Super8 Sound Inc., 95 Harvey Street, Cambridge, Mass. 02140

MPL Table Talk No. 8.

Table Talk No. 8, just released by Motion Picture Laboratories, Inc., Memphis, Tennessee, describes the work of the sound engineer and how he makes optical tracks from magnetic recordings. MPL Table Talk is published by MPL as a service to the motion picture industry. For complementary copies write MPL Inc., Box 1758, Memphis, Tenn. 38101.

Mascelli's Cine Workbook.

Claimed to be the greatest cine accessory since the zoom lens, the Cine Workbook by Joseph Mascelli, ASC., is now available. The "text" explains colour film, colour balance, exposure, lenses and lab - how colour film is timed and colour corrected. The "tool" portion contains cine exposure calculator, multiple factor calculator, incident light calculator,

effective exposure calculator, neutral gray test card, gray scale and colour patches, diopter lens ruler, extreme close-up ruler, field of view nomograms, colour contrast viewing filter, lens focusing charts. Cost of the Workbook is \$15. Available from Cine Grafic Publications, P.O. Box 430, Hollywood, Calif. 90028.

Compact Cinevid-16 Video-Assist Camera

Cinema Products Corporation announces the availability of the new, compact and lightweight Cinevid-16 video camera, which may be easily attached to the CP-16R reflex camera for video-assisted filming.

Advances in micro circuitry now make video-assisted filming a simple option for the filmmaker rather than the complex and cumbersome operation it used to be.

Utilizing a unique approach to video-assisted filming, the Cinevid-16 picks up the image directly from the CP-16R reflex "ground glass" and transmits it to any number of commercially available remote monitors. The image may also be recorded on a video tape recorder to provide "instant dailies."

Measuring 2-1/4" x 3-3/4" x 5", and weighing only 1 lb. 13 oz., the Cinevid-16 is so compact and lightweight that the hand-held capabilities of the CP-16R are not the least bit affected.

A compact and lightweight power supply unit (supplied with the video-assist camera) permits DC operation with a 12 Volt battery, or 120-240 Volt operation from AC mains.

The Cinevid-16 video-assist camera, for use with CP-16R reflex camera,

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