

28th Meeting of the EBU Technical Committee Oslo, 5-9 April 1976

By JOSEPH ROIZEN

The 28th European Broadcasting Union Technical Committee meeting in Oslo this year dealt with a number of questions that are highly relevant to present television activities in Europe. The meeting was very well attended by 103 delegates from 30 countries covering the European, North African and Middle Eastern areas, as well as representatives from Canada and the U.S. The facilities provided by Norwegian Broadcasting at the Scandinavia Hotel were excellent and the social functions sponsored by NRK (Norsk Rikskringkasting) and various government agencies were both pleasant and interesting. The major sessions were ably directed by the retiring chairman, C. Mercier, of French Television.

Opening Day

The opening day of the conference was dedicated to discussion of EBU administrative and financial questions and the problems facing the organization with regard to managing the costs of future meetings. One suggestion that was made was to hold the meetings at the Technical Center in Brussels, and thereby reduce the cost of supporting the attendance of members at the meetings, which are now held in a different country each year.

New technical monographs have been published to add to the large list of EBU materials available including two significant booklets, one on transverse (quadruplex) videotape recorders and the other on satellite broadcasting. The Eurovision Network is continuing to experience an increase in the exchange of programs among member countries and thanks were extended to the Austrian Broadcasting organization (ÖRF — Österreichischer Rundfunk) for their handling of the Winter Olympic Games in Innsbruck. Mention was also made of excellent operational seminars conducted by ZDF (Zweites Deutsches Fernsehen). The recent deaths of T. Navelsaker of NRK and Pieter de Vlaam of NOS (Nederlandse Omroepstichting) were noted with regret, and a one-minute silent tribute was observed.

A short discussion ensued regarding the problems anticipated at the Montreal Olympics and what EBU plans for satellite transmissions and distribution of the programs to EBU members. Comments were made about a plan to set up a "News Bank" for possible pooling of European news programs and the increased use of satellite transmissions for news, similar to the present techniques of sending European news to Israel, Iran and Jordan. A future European satellite could provide identical news service to Algeria, Morocco, Libya, and Egypt through suitable earth receiving stations installed in those countries.

Audio- and Videotape Recording, ENG, and Time Codes

A major report relating to program recording was presented on Tuesday by Paolo Zaccarian, the chairman of Working Party G (Recording), who reviewed various aspects of recording operations by EBU members.

In the audio field, Sub-group G-1 (Sound Recording) reviewed the question of standardizing on the Dolby companding system for broadcasting now that it is generally accepted in non-professional audio recorders. It was contended that since audiotapes have been improved enough to allow higher recording levels, new standards could be set that would make it possible to take advantage of electronic signal processing to further optimize multi-generation performance. There is now considerable use of 1-in, 8-track audiotape, and it would be desirable to have a time and address code for both cassettes and field recordings. The Sub-group is also investigating the application of digital techniques to the recording of audio signals.

Sub-group G-2 (Television Tape Recording) has been negotiating with a supplier for video test tapes and expects positive

results in this regard. It has also been investigating the application of helical-scan recorders to broadcasting, and with several high quality helical-scan systems now available, there is little question that some systems will be applied to broadcast operations.

Zaccarian reported that a study of electronic newsgathering (ENG) was conducted by a subcommittee chaired by Boris Townsend of IBA (Britain's Independent Broadcasting Authority). The International Broadcasting Convention, meeting in London in September 1976, plans to have a special showing of ENG equipment, associated with the conference but held at a nearby location.

The use of videocassette recorders utilizing either the 1/2-in VCR or the 3/4-in U-type format in newsgathering applications is under investigation by the EBU members at the present time. It was proposed that Zaccarian continue to collect ENG information through the subcommittees and that this be studied at the next G-2 meeting in the fall.

Joseph Flaherty of CBS was asked to make a short statement regarding ENG at his network. Flaherty noted the goal of equaling 16mm image quality with ENG tape equipment and claimed that in most cases this target is met even with second-generation tape copies that are used for broadcast purposes. He noted that although the use of U-type format cassettes for production purposes is still prohibited at CBS, sports tapes have been made in this format and then dubbed up to quadruplex for further editing and distribution. Flaherty reported that ENG usage in the U.S. has increased substantially from six stations in 1972 to over 400 at the end of the National Association of Broadcaster Convention in 1976. Flaherty also distributed some copies of *Television Newsgathering*, the soft-cover collection of papers presented at the 10th Annual SMPTE Winter Television Conference held in Detroit in January 1976.

There was a general consensus at the end of this session that most European networks will also begin experimenting with portable cassette VTRs for news programming by the end of 1976.

Of special note was the new EBU publication No. 3219E issued in March of 1976 in both French and English entitled "Operational Adjustments and Measurements on Transverse Track Television Tape Machines." This is a very thorough document and should prove extremely useful in optimizing 625-line, 50-field quadruplex VTRs in studio applications.

As a final first-day topic, a report was given by Zaccarian on the work of Sub-group G-3 (Film for Television), including the application of time codes to film in television broadcasting. The Sub-group has published a description of two time-code systems for evaluation by the members.



Fig. 1. Sessions of the EBU meeting, presided over by C. Mercier of French Television, were held in the Scandinavia Hotel. Simultaneous language translation was available to each delegate.

A contribution submitted on 27 May 1976 by Joseph Roizen, Telegen, 800 Welch Rd., Suite 354, Palo Alto, CA 94304. (Mr. Roizen, Chairman of the SC 60B Standards Group on Videotape Recording of the International Electrotechnical Commission, attended the EBU meeting as an observer on behalf of the IEC.)



Fig. 2. U.S. representation at the meeting was by Joe Flaherty and Frank Davidoff of CBS (fourth and fifth from the left) and Jacques Lesgards who is ABC's European manager (third from left). The U.S. Information Agency representative is S. Giannico, and the representative from Japan — which like the U.S. is an associate member of the EBU — is Y. Tadokoro.

Satellite Broadcasting

On Wednesday, the meeting was devoted to satellite broadcasting, and lectures were given by various experts on this subject. The frequency bands assigned in 1971 to ITV Region 1 for this service are 11.7 to 12.2 GHz. One problem now under study is that the low power of present satellite transmitters requires large-diameter ground station antennas and very sensitive receivers in order to overcome noise. It is anticipated that transmitters with more efficient and larger power sources combined with improved antenna systems will provide adequate signal levels for ground receivers employing dish antennas as small as 1 m in diameter. Furthermore, the directivity of the satellite transmitting antennas will be enhanced so that individual countries will have high-quality reception with little spillover into adjacent areas.

According to a recent study made by one of the speakers, the cost of providing a single program channel via synchronous (geostationary) satellite directly to home receivers would be approximately half that of distributing the channel by a contemporary terrestrial broadcasting system. This cost difference could be important vis à vis educational program distribution.

G. J. Phillips of the BBC gave a very thorough presentation of the experiments and the computations that have been done by his organization to establish the validity of U.K. television coverage by synchronous satellites.

The publication recently issued by the EBU regarding satellite transmission is a comprehensive volume on the subject and contains many of the papers given during the Oslo meeting.

Sound Broadcasting and Digital Television

The fourth morning's sessions were devoted largely to sound broadcasting problems, with particular attention being given to

stereophonic transmissions. E. Castelli of RAI (Radiotelevisione Italiana) reported on the need for more permanent stereophonic sound circuits and noted the problems that can arise when stereophonic transmissions are made to a number of recipient countries.

The concluding sessions of the 28th meeting were devoted to digital television. Peter Rainger of the BBC said that the BBC supports standardization of the digital coding of television signals and hopes that a single interface can be agreed on to make the use of digital systems more convenient. The BBC has proposed a 1978 target date for achieving such a single standard for digital coding. On the other hand, Howard Steele of the IBA suggested that 1978 would be too late because the present variety of digital devices already using different sampling rates will proliferate if no efforts are made to obtain earlier agreement. Steele noted that in the IBA's experimental work with digital devices (standards conversion, time-base correctors, digital VTRs and other systems), they can now achieve data rates of 100 megabits/s.

Herbert Fix of the IRT (Institut für Rundfunktechnik) supported the longer range plan that Rainger had proposed on the principle that agreement within Germany relating to digital video standards would be hard to obtain more quickly. It was generally agreed that an attempt should be made to obtain responses to a new questionnaire on digital techniques during the three months preceding the International Broadcasting Conference in London (to meet in late September) and to try to arrange a meeting of the Digital Television Sub-committee during the conference.

Flaherty of CBS subscribed to Steele's viewpoint, observing that digital techniques are now coming out of the laboratory into studio operations at an unprecedented rate. He contended that standardization action must be rapid, and pointed out that at the recent NAB show in Chicago, digital equipment on display included 12 different time/base correctors, five digital synchronizers, two special effects systems, a video switcher system, and a still picture store that records the pictures digitally on magnetic disc packs. Finally, there was on display the DICE digital standards converter which is now being used in intercontinental broadcasting. Flaherty reported that the SMPTE has a Digital Study Group chaired by Charles P. Ginsburg of Ampex. Functions of his group include examining the possibility and problems of standardizing the interfaces between various digital "black boxes," considering the choice of serial or parallel operation, and reviewing the relationship between bit reduction and picture quality.

Summary

The meetings in Oslo considered an excellent cross section of the contemporary problems of broadcasters and some of the proposed solutions for EBU member broadcasters. The EBU Technical Center has done an exemplary job in creating the various publications which provide members with detailed information regarding both operational and technical developments that concern them.

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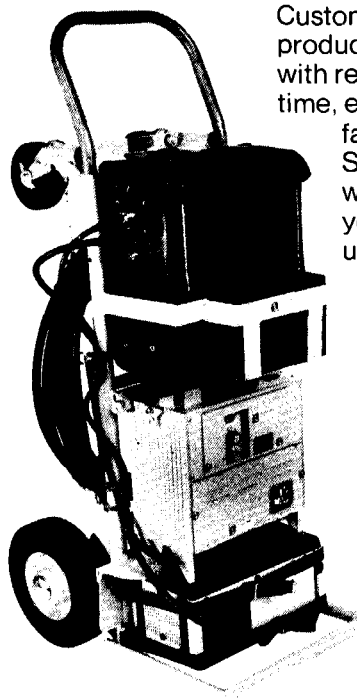
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