

last six months or one year has shown very little change. There have been developed and placed on the market a number of constant current regulators for use with incandescent projector type lamps, and controlled regulators have also been perfected so as to give closer regulation and more accurate adjustment of the current. No changes have been reported on the usual type of projection room equipment, such as motor-generator sets, regulators, etc.


Optical Systems

The optical systems have remained unchanged where arc lamps are used.

The increasing length of throw in the larger theatres results in a demand for larger objectives. The mountings of lenses are standardized and the manufacturers of lenses are preparing to meet the demand for larger objectives.

For incandescent lamp projection there are two systems of condensers which are commonly used at this time. These two systems are the plano convex condenser and the prismatic condenser system. Both systems seem to be well established and doubtless will continue to be used. In the smaller portable machines there has been a tendency to use prismatic condensers of small type and short focal length.

Studio Lighting

In methods of studio lighting there has been reported no change in the period since our last meeting. The systems used are the arc lamp, mercury vapor lamp, and in some cases the incandescent lamp. Improvements in the arc method of illumination of studios are in the carbons and in the use of large currents to get more powerful units. Mercury vapor lamps have been improved so as to be moved and directed more easily. Incandescent lamps and lighting systems for studios have not been appreciably modified and are commonly used in conjunction with other systems of illumination to secure special effects. 

SMPTE Tutorial Seminar on Digital Recording Westin Hotel, Detroit, Mich., January 31, 1991

An all-day tutorial seminar on digital recording that preceded the 25th Annual SMPTE Television Conference on Thursday, January 31, at the Westin Hotel, attracted an audience of 177 people. The tutorial was designed to be understandable to technologists, helpful to engineers, and valuable to producers who have experience in analog television recording and who required a familiarity with digital recording.

The seminar was designed by the recording sector of CBC Engineering in consultation with the SMPTE Engineering and Organizing Committee for the 25th Annual SMPTE Television Conference. The CBC organizing committee consisted of Tom Cavanagh, SMPTE Director of TV Engineering Kenneth P. Davies, Keith Field, Francois Michaud-Herbst, and Michel Poulin.

"The attendance and continuing level of interest during and following the sessions indicate that digital recording is certainly a matter of concern to many in production and broadcasting," said Davies. "The team of speakers, all of them hands-on pioneers in digital recording, did a remarkable job of presenting this new and complex subject in an easily un-

derstandable and interesting fashion."

The day was divided into several sessions. Session I, Part 1, consisted of the distribution of documents and a welcome and introduction by Davies. During Part 2, John Watkinson, author of *The Art of Digital Video*, discussed the fundamentals of digital recording, focusing on tapes, heads, tracks, head/tape interface, and writing/reading. John Watney, Ampex Corp., provided the audience with information on data coding and error management during Part 3.

Session 2, Part 1, was devoted to video recording. Both Watkinson and Watney teamed up to discuss scrambling, shuffling, error coding, segments and sectors, error performance, and stunt modes. Part 2 focused on audio recording, and Watkinson and Watney gave an overview of preprocessing, error coding, segments and sectors, time codes, auxiliary data, and reference track. Koichi Sadashige, Consultant, discussed specialized recorders in relation to magnetic disc, optical, and RAM during Part 3.

Recorder Characteristics was the subject of Session 3. During Part 1, Josef Sochor, BTS, spoke on the D-1 - 4:2:2 component, and Poulin read a paper by Hugo Gaggioni, Sony, on the

HDTV recorder. During Part 2, Eric F. Morrison, Ampex Corp., talked about the D-2/NTSC composite and Yoshinobu Oba, NHK, gave a presentation on the DX/NTSC composite.

Session 4 focused on video and audio applications in production. Interfaces, video, audio, data, and control were discussed by Michaud-Herbst during Part 1, Marcos Obadia, Lime Lite Video, spoke on D-1 applications during Part 2, and Cavanagh gave a presentation on D-2 applications during Part 3. Sadashige closed the session with a discussion on the future of digital recording.

Off-tape demonstrations of production segments in the D-1 and D-2 formats were made at the close of the session to illustrate practical uses of digital recording. The participants also had the opportunity to see practical machines in the D-1, D-2, and new DX formats.

In response to strong member support for these instructional programs, the SMPTE is scheduling two days of workshops and a one-day tutorial at the 133rd Technical Conference and Equipment Exhibit, to be held in Los Angeles, October 26 to 29, 1991.