

# The SMPTE Task Force on Component Digital Coding

Digital video, a technology that affects television program production and broadcasting throughout the world, is still regarded as a "new" technology. Although the initial emphasis was on composite coding of a video signal, interest in component coding has grown rapidly.

Following a recommendation prepared by the European Broadcast Union (EBU) Group on Digital Coding for a "12:4:4" component digital code, the SMPTE, recognizing that a too-early decision on a component digital code might preclude a worldwide compatible specification, set up a Task Force on Component Digital Coding. Frank Davidoff was appointed Chairman.

The SMPTE Task Force examined the objectives and constraints involved in a worldwide component digital code with the primary objective of developing an SMPTE position.

Five main areas were then examined: (1) quality objectives, (2) worldwide compatibility, (3) influence of the digital videotape recorder and other studio equipment, (4) luminance-chrominance sampling ratios, and (5) interface with common carrier (PTT) digital hierarchies.

The next step was to establish liaison with other organizations involved with digital coding.

The Task Force prepared two documents on Quality Objectives and Worldwide Compatibility for Digital Television. These documents were approved for publication in the *SMPTE Journal*.

In April 1980 the EBU Group prepared a series of demonstrations of the "12:4:4" digital code in London. The Task Force was invited to observe these demonstrations and to submit impressions and comments to the EBU Group. At that time, members of the SMPTE Task Force agreed that it is unlikely that the "12:4:4" digital system will be adopted in North America.

The SMPTE then invited the Bureau of the EBU Technical Committee to hold a meeting at the 15th Annual Television Conference in San Francisco which took place last February. The Task Force had sponsored and organized a series of demonstrations at the Television Conference with the aim of helping the EBU and the SMPTE to adopt digital specifications that would result in the development of a worldwide compatible digital code. The demonstrations were carried out by the SMPTE Working Group on Digital Video Standards under the Chairmanship of Ken Davies.

The SMPTE Task Force will prepare and submit to the SMPTE Committee on New Technology a final report containing the recommendations of the Task Force for further action by the SMPTE and for publication of a paper setting forth the SMPTE position on a worldwide component digital code.

It is hoped by all concerned that close cooperation between the SMPTE Task Force and EBU will result in a worldwide compatible digital code.

## Standards & Recommended Practices

### Proposed American National Standards

Two Proposed American National Standards are published here for a trial period and public review: V98.8, Specifications for an Audio Operating Level and Multifrequency Test Tape for Quadruplex Video Magnetic Tape Recorders Operating at 15 in/s; and V98.11, Specifications for an Audio Operating Level and Multifrequency Test Tape for Quadruplex Video Magnetic Tape Recorders Operating at 7.5 in/s. Extensive revisions of approved standards C98.8 and C98.11, both proposals provide multifrequency test tones on Audio Record 2 (cue track).

### Proposed Withdrawal of SMPTE Recommended Practices

On the recommendation of the parent technology committee, the Standards Committee has approved withdrawal of two SMPTE Recommended Practices: RP 29-1968, Video Test Tape for Quadruplex Video Frequency Magnetic Tape Recorders Operating at 15 in/s and Practice LBM of SMPTE Recommended Practice RP 6;

and RP 52-1974, Evaluation of Screen Luminance and Color in Review Rooms Used for Color Television Films.

Withdrawal of RP 29 is based on the fact that very few test tapes are being made to the specifications, and the practice documenting the video test signal (RP 10) has been withdrawn. Among the reasons advanced for withdrawal of RP 52 is the requirement that subjective judgment be made concerning luminance and color, although objective measurements of color temperature can be made with reasonably priced equipment such as three-color meters.

Comments should be addressed to Alex E. Alden, Manager of Engineering Services, at Society Headquarters prior to May 1, 1981. Proposed American National Standards V98.8 and V98.11 have been submitted to ANSI Standards Committee V98. All comments from *Journal* publication will be reviewed before conclusion of committee action. If no adverse criticism is received on the proposed withdrawal of the recommended practices, the Society's Board of Governors will be requested to approve the recommendation.—Alex E. Alden, Manager of Engineering Services