Engineering Committees Activities

16mm and 8mm Motion Pictures Committee Report

The Ad Hoc Subcommittee received progress reports on the items listed below; these will be submitted to the full Committee for ballot prior to the next meeting. They are as follows:

Revision of PH22.159.3, 8mm Type S Camera-Cartridge Pressure-Pad Flatness, is being prepared to conform with recently completed ISO documents. The major change concerns making provision for film of various thicknesses.

Proposed standards for two designs of 8mm projector cassettes and two designs of 8mm projector cartridges have been received in good technical form. They require only minor editorial revision of the Titles and Scopes to avoid confusion among the items.

Work on the proposed Recommended Practice for 8mm Safe Action and Safe Title Areas is complete.

The proposed Recommended Practice for Super-8 Projector Spindles, generally conforming with ISO documents, is being balloted.

The domestic version of a proposed standard for Super-8 Camera Cartridges, Model II, is being prepared to conform to the recently completed ISO documents.

The Subcommittee for 8mm Screen Luminance submitted a report concerning a draft Recommended Practice.

The revision of PH22.159.5, Camera Run Length, etc., for 8mm Type S Camera Cartridges Model II, is being made compatible with ISO documents and will incorporate provisions for an end-of-run signal notch, as well as the perforation cut-out.

The revision of PH22.11, 16mm Projector Reels, is being prepared. This had been delayed awaiting further data from manufacturers and further attempts at reconciliation with ISO documents. Because of extensive existing practice, the domestic standard will not conform to the ISO proposal.

The question of footage numbers on 16mm release prints, previously considered and dropped by this Committee, has been re-activated and is being handled by the Laboratory Practice Committee.

It was the consensus of the Subcommittee on Super-8 Footage Numbers that the industry was not yet ready for Standards or Recommended Practices. However, they are preparing a tutorial report which should provide guidance for the industry.

No reports were received concerning the work on Super-8 Sprockets, Image Steadiness, or the Use of Motion Pictures in Teaching and Training.

After discussion concerning the industry needs for 16, 8mm Type R and 8mm Type S test films, it was the consensus that existing films and Recommended Practices were satisfactory and this matter was dropped from the Committee agenda.

There was considerable discussion concerning standards for projection lamps and the probability that this would be handled by an ANSI committee other than PH22. However, it was decided to proceed with a proposed standard which is already in the final stages of work in the 16 and 8mm Motion Pictures Committee.

Dr. Wyman of PH7 reviewed the activities of that committee and discussed how it related to the activities of the SMPTE.

There was a brief discussion concerning methods for testing splice strength, and this item has been taken under advisement by the Film Projection Practice Committee. After a brief discussion, concerning standards for "Super 16," this was deferred until specific proposals are submitted. There was a general discussion concerning the need for and availability of the super 8mm version of a test film equivalent to the 16mm "Jiffy" film.

GEORGE H. GORDON
Chairman

Color Committee Report

The Engineering Committee on Color met October 24, 1972, at the 112th Conference in Los Angeles.

The proposed revision of the Recommended Practice for Evaluation of Films Intended for Television (RP41-1970) was reported as accepted by the voting members of the Committee, and will be submitted to the Standards Committee.

The companion proposal for a Recommended Practice for Evaluation of Review Room Screens was also accepted but must now be revised in language, though not in intent, to comply with the provisions of the above document. This proposal specifies a portable comparator illuminant of the correct color and luminance.

A report was made by Messrs. Waner and Reichard on the status of the evaluation being made on the Society's Color Television Subjective Reference Test Films. The evaluation is completed and current manufacture of the test films is in compliance with the recommendations of the Subcommittee, which is now dissolved.

Mr. Zwick, as Committee representative on the Ad Hoc Committee for Color Television Study, reported on his activities in investigating quality of a large sampling of television commercial films. It is hoped that, when complete, the work of the Ad Hoc Committee will be heeded, because the investigation shows several areas of disparity between the current crop of films and acceptable television practices. Named as problems were photographic practices, density (too light) and color ratio variance from neutrality. Other activities of the Ad Hoc Committee were discussed in papers presented to the Conference.

Mr. Bruno reported, through Mr. Waner, that the Subcommittee to select chart material to be included in color negative leaders has not come to agreement as yet.

Dr. Bartleson requested and the Committee voted to request through the Engineering Vice-President that the PH 2 committee consider revision of the standard on color densitometry PH2.1-1952.

FRED H. DETMERS
Chairman

Film Projection Practice Committee Report

The Committee agreed that PH22.59-1966, 35mm Motion-Picture Camera Aperture Images, be revised to conform with the ISO document. This revision simplifies the existing ANSI document and provides a change in the Style "B" camera aperture height from 0.735 in to 0.732 in, an acceptable reduction, since the maximum projectable image height required is 0.700 in.

The Subcommittee studying the matter of projection reel spindles reported that the 1/2-in spindle is becoming the present practice. Examination of current reels shows that a a 1-in spindle would require redesign of the hub area to give clearance. The Chairman of the Subcommittee stated that they would have a recommended design for committee consideration. Reel manufacturers stated that they have almost no orders for large reels with the 5/16-in spindle although some customers insist on the small spindle so they do not have to change rewinds, etc. It was agreed that a Recommended Practice or draft standard be prepared, calling for a 1/2-in spindle.

Input from committee members regarding the problem of film reel identification indicated that film edge identification, applied at the laboratory, would probably be the most practical

method of alleviating current film identification problems, encountered during the makeup and breakdown of extra large reels or film rolls, used in semi- and fully-automated projection systems. The Committee Chairman proposed to bring the subject to the attention of the Laboratory Practice Committee meeting the next day.

For some time, certain exhibitors have alleged that the standard intermittent (narrow tooth) sprocket causes excessive damage to release prints containing the standard KS perforation. As a result, there has been some pressure brought to bear on the Committee to consider establishing only one perforation standard for release prints, along with a matching standard for the intermittent sprocket, containing teeth that match the perforations. Several Committee members stated that comprehensive wear tests have shown that the standard (narrow tooth) sprocket has no adverse effect on the wear life of prints having the standard KS perforations on equipment which is properly aligned and maintained. It was further stated that the large perforations can tolerate more misalignment before damage occurs and, therefore, may wear less than the small perforation. The Chairman proposed to organize a Subcommittee to study and prepare a technical report on the present status of film perforation life.

Inquiries requested from committee members regarding common problems in semi- and fully-automated projection systems revealed a potentially serious problem with cuing. Of the three common methods which have been observed, only the removable foil tape remains essentially trouble free. In those installations where film edge notching or graphite paint are used, the non-removability of these cues makes subsequent use by other installations most difficult, if not impossible. The cues can be removed only by cutting the film, a practice which should be considered intolerable. A Subcommittee was to be appointed to study the various cuing systems and determine if a draft of a Recommended Practice could be initiated.

Other items discussed included the advisability of drafting a Recommended Practice describing the proper methods for release print lubrication, and the need for a Recommended Practice on the proper splicing of 35mm film. The Chairman proposed to update previous work on splicing, initiated by a Committee member, and to draft a technical document for circulation.

Under "New Business," the Chairman of the Subcommittee for publicizing the activities of the FPP Committee proposed that several topics, such as Screen Brightness, Image Area, Projector Alignment and Picture & Sound, be presented in trade journals which have agreed to publish such material upon submission. The first such article, "Get Your Nickel's Worth," was published in the 16 October 1972 issue of *Boxoffice*.

PAUL H. PREO
Chairman

Videotape Recording Committee Report

The Videotape Recording Committee held a meeting in New York on December 6, 1972.

A first draft of a proposed standard for dimensions of a 2-in quadruplex-video magnetic-tape spool for use in a cassette or cartridge was discussed and there was general agreement that, with editorial changes, it would be satisfactory.

The Helical Subcommittee Chairman reported that both Sony Corp. and Philips Corp. have submitted proposals for helical-scan format to the Subcommittee, with the request that they be considered for adoption as American Standards. Both proposals are being reviewed, to assure that all legal requirements for patent licensing have been met.

The Transport Geometry Subcommittee reports that it will probably recommend a change to Recommended Practice-11, Tape Vacuum Guide Radius and Position for 2-in quadruplex video magnetic tape recording. The guide radius tolerance will probably be tightened.

There has been no progress with efforts to standardizet he cue tones on tapes used in quadruplex cassettes/cartridges.

The Committee is considering changes to Recommended Practice-16, Specifications of Tracking Control Record for 2-in Quadruplex Video Magnetic Tape Recordings, so as to define more clearly and accurately the frame pulse.

CHARLES A. ANDERSON
Chairman

Television Committee Report

Under the chairmanship of Joseph A. Flaherty, the Television Committee convened on October 23, 1972, at the Century Plaza Hotel in Los Angeles. Reports from the subcommittees and liaison representatives were received, the highlights discussed and further goals established.

The Subcommittee on Colorimetry, chaired by LeRoy DeMarsh, reported on the preparation of a document for submission to the CCIR (International Radio Consultative Committee of the International Telecommunications Union; Switzerland), outlining the reasons for the decision to stay with the NTSC primaries. This is intended for use at the interim meeting of the CCIR in 1973 to explain the USA's position, which is in opposition to the EBU proposal to adopt primaries to complement the present-day phosphors.

Relative to the decision on phosphors, Blair Benson called attention to a test conducted by RCA at Camden for the AHCCTS (Ad Hoc Committee on Color Television Studies). In addition to the committee members, substantial representation from the EIA receiver committees was also present. It was the unanimous opinion that the results of the test clearly supported the USA position.

The Subcommittee is working on the resolution of the question of the proper transfer characteristic and an appropriate draft document.

In connection with AHCCT activities, Daan Zwick submitted a report on television film commercials. The sample studied can be considered quite representative inasmuch as it included 2,000 commercials selected at random.

Grayson Jones, chairing the Subcommittee to recommend a proper practice for the adjustment of chromaticity and luminance of color monitors, reported that an updated draft, incorporating the suggestions received in the interim, will be circulated to the Committee for letter ballot.

An Ad Hoc Committee chaired by Alvin Siegler is studying film leaders with the object of recommending modifications in the present SMPTE leader to make it more useful for television while retaining, and possibly improving, its utility for theatrical projection. Some initial conclusions were reported on, and a final draft is in preparation.

The Subcommittee on Test Patterns, chaired by Paul Wittlig, is preparing specifications for the illumination of test pattern transparencies. On the question of simulating outdoor pickup illumination, it was decided to confine the present specifications to color temperatures suitable for studio use.

Chairman Charles Evans reported initial progress by his Subcommittee in developing recommended practices on super-8 systems for television.

Attention was called to the EIA Recommended Practice covering usage of the VIR (Vertical Interval Reference) signal, distributed to this committee for comment and appropriate action. The EIA/BTS (Broadcast Television Systems) Committee's development was prompted by the AHCCTS Committee's requirement of a signal which could be inserted at the quality-establishing point of a program signal and used to maintain uniform color throughout its distribution and reproduction. Unlike the VIT, which is primarily a diagnostic signal to evaluate the performance of specific items or

facilities, the VIR provides reference for luminance amplitude, black level and chrominance amplitude and phase, which, if kept with the program or commercial, can be used to maintain or reestablish these parameters for final display.

The EIA Recommended Practice has been distributed to other organizations such as NAB and IEEE. Speaking on behalf of the VTR Committee, Charles Anderson, who chairs the committee, felt that the writing of an SMPTE document should be the responsibility of the Television Committee.

JOSEPH A. FLAHERTY
Chairman

standards and recommended practices

Approved American National Standards

On 9 March 1973, the American National Standards Institute approved three standards that specify printed areas on motion-picture stock used in the production of super 8 prints: *PH22.179–1973*, Location of Super 8 Printed Area in Optical Reduction Printing on 35mm Motion-Picture Film, Perforated 2R–1664 (1-0); *PH22.180–1973*, Location of Super 8 Printed Area in Optical Reduction or Contact Printing on 35mm Motion-Picture Film, Perforated 5R–1667 (1-3-5-7-0); and *PH22.181–1973*, Location of Super 8 Printed Area on 16mm Motion-Picture Film, Perforated Super 8 (1-3).

Inasmuch as compliance with American National Standards is purely voluntary, these standards will become truly effective when broad publicity is given to their existence. ANSI and SMPTE would appreciate any personal influence to promote the use of this standard where such action is appropriate. Copies of these standards may be obtained for a nominal fee from the American National Standards Institute, 1430 Broadway, New York, NY 10018.

Reaffirmed American National Standards

On 9 March 1973, the American National Standards Institute, taking the recommendations of the SMPTE Engineering Committees and American National Standards Committee PH22, reaffirmed without change the following nine American National Standards:

PH22.3-1961, 35mm Photographic Sound Motion-Picture Film, Usage in Projector (published in the July 1961 Journal)

PH22.31-1967, Specifications for Motion-Picture Safety Film (published in the February 1968 *Journal*)

PH22.117-1968, Spectral Diffuse Density of Photographic Sound Record on Three-Component Subtractive Color Films (published in the March 1969 *Journal*)

PH22.155-1967, Specifications for Projector Usage of Super 8 Motion-Picture Film (published in the December 1967 *Journal*)

PH22.156-1968, Specifications for Camera Usage of Super 8 Motion-Picture Film Perforated One Edge (published in the September 1968 *Journal*)

PH22.159.1-1968, Specifications for Super 8 Motion-Picture Film Camera Cartridge and Cartridge-Camera Fit (published in the May 1968 *Journal*)

PH22.159.2-1968, Specifications for Cartridge Aperture and Pressure Pad and Position of Film in the Super 8 Motion-Picture Film Camera Cartridge (published in the May 1968 *Journal*)

PH22.159.4-1968, Dimensions and Characteristics of the Take-Up Core Drive for Super 8 Motion-Picture Film Camera Cartridges (published in the May 1968 *Journal*)

PH22.161-1968, Dimensions of Magnetic Striping of Super 8 Motion-Picture Film Perforated 1R-1667 (published in the September 1968 *Journal*)

Copies of these standards may be obtained for a nominal fee from the American National Standards Institute, 1430 Broadway, New York, NY 10018.—Alex E. Alden, *Staff Engineer*