

Reports of the Engineering and Standardization Committees Activities

The brief reports published herein summarize the activities of the SMPTE Technology Committees, which were held concurrently with the 120th SMPTE Technical Conference at the Americana Hotel in October 1978. They reflect the growing volume of work carried on through the committees and the SMPTE Engineering Department.

For more detailed information on the activities or the individual projects, one should contact Alex E. Alden, Manager of Engineering Services of the SMPTE, at headquarters. The Society welcomes participation by specialists from industry in the work of its Engineering Committees, and all those who may be interested in exploring the possibility of active membership on any of the committees should contact A. E. Alden or Roland J. Zavada, Engineering Vice-President of the Society. While the Society is in a position to provide the mechanics for the development of National Standards, it relies heavily on the input made available from industry through its engineering committee members.

Standards Committee

Mr. Hall, the Chairman, and Mr. Zavada, the Engineering Vice-President, extensively briefed the committee on the current activity in the field of "National/International" standardization and its relation to the SMPTE program.

Mr. Hall noted that the committee will review the informational requirements of standards, and all committee chairmen were asked to examine existing standards under their committees to consider whether a "foreword" providing the background to the standard would be helpful. Issues considered during the development of a standard could be documented and serve to improve the usefulness of the documents. Samples of other national standards generated by different committees will be studied to provide a comparative analysis.

The need to examine and categorize SMPTE-developed standards and Recommended Practices such as product, performance, nomenclature or interchangeability types was discussed.

The committee urged that a revised document need not be published in the *SMPTE Journal* for the usual period if it contains only editorial changes. However, the availability of the revised document from headquarters will be announced in the *Journal*.

The committee was informed that the next meeting of ISO/TC 36 — Cinematography will be held in Belgium during the latter part of September 1979. The need for the U.S.A. to be well represented was reiterated, and all the chairmen were urged to make an effort to attend or assist in locating the appropriate specialists to attend this meeting.

J. P. HALL
Chairman

Committee on Educational, Industrial and Consumer Film Technology

A report by Dr. Ray Wyman, outlining the need for an international comprehensive safety standard for a variety of audio visual equipment accessories, was a highlight of a meeting attended by 23 people. He indicated that a study will be undertaken by ACOS

(Advisory Committee on Safety for the International Electrotechnical Commission) concerning the safety aspects of motion-picture projectors.

The Engineering Vice-President, Mr. R. J. Zavada, demonstrated an answer print of the "Jiffy Color Test Film." An in-depth examination under controlled theater facilities will be made to ensure that there are no problems before the film is made available through the Society by the end of the year. The content was approved by the committee.

A new draft proposal, submitted by Mr. D. W. McConnell, on the 200-ft capacity motion-picture camera cartridge 8mm Type S will be circulated to the committee for consideration as a draft for an American National Standard.

At the request of the Committee on Laboratory Services Technology, 16mm Emulsion Position (PH22.10) will be reviewed again to determine current practice and the need for specifying a common emulsion position for 16mm prints.

2 November 1978

A. C. SCHIEMAN
Chairman

SMPTE/PMPEA Ad Hoc Committee for Studio Lighting Hardware Standardization (SLHS)

An organizational meeting of the newly formed Ad Hoc Committee for Studio Lighting Hardware Standardization was held on Thursday, 2 November 1978.

Jointly formed by the SMPTE and the PMPEA (Professional Motion Picture Equipment Association), the committee was successful in generating active interest on the part of manufacturers, dealers and users of motion-picture and television studio equipment.

Procedures were established for the purpose of defining the need for standardization of diameters and nomenclature of the mounting pins used for motion-picture and television lighting fixtures.

Those interested in participating should contact Mr. A. E. Alden, Manager of Engineering Services, at SMPTE Headquarters in Scarsdale, New York.

2 November 1978

ED PHILLIPS
Chairman

Committee on New Technology

This two year old committee, chaired by Mr. F. M. Remley, was heavily attended and included representatives from two countries outside the U.S.A.

The Chairman noted that the responsibilities under the committee are divided among four Study Groups and one Working Group with the following assignments:

(1) Study Group on Digital Television — (Chaired by C. Ginsburg) — this group has held nine meetings, each producing a preliminary report. The group's concerns encompass all aspects of digital television systems. One of the many current projects includes experiments to determine by visual assessment the degree of degradations to digital television signals caused by series-connection of up to ten analog-to-digital and digital-to-analog converters.

(2) Study Group on Video Disc Systems — (Chaired by C. R. Paulson) — having met on two occasions, the group through widespread circulation of a questionnaire on video discs, attracted attention from both organizations and individuals. Further meet-

ings will be held before the group can make recommendations to the New Technology Committee for a course of action concerning potential standards.

(3) Study Group on High-Definition Television — (Chaired by D. Fink) — work on this group has progressed to the point where a draft is being outlined for a definitive report on the subject to be published in the *SMPTE Journal*.

(4) Study Group on Time and Control Code for Motion Picture — Membership changes have delayed the group in finalizing its efforts. The group is being reconstituted and hopes to reactivate the program.

(5) Working Group on Digital Video Standards — (Chaired by R. Hopkins) — continued progress is being made for the ultimate specification for the interfacing of digital production equipment in the television studio, switchers, synchronizers, etc.

The Chairman pointed out that close observation is being kept on developments concerning digital audio recording techniques. Standardization efforts for this rapidly evolving technology are being considered by several groups within the affected industries, as well as the role of the SMPTE in future standardization efforts dealing with motion-picture and television production and presentation systems.

30 October 1978

F. M. REMLEY
Chairman

Committee on Theatrical Projection Technology

A well-attended meeting of this committee was held on 30 November 1978.

Of prime concern to the committee and discussed at length was the subject of 35mm projector sprockets. A new type of sprocket recently introduced and commonly referred to as "VKF Tooth" (Very Kind to Film) is reported to minimize the alignment problem and minimize the potential of cutting the corner of the perforation. The chairman, Mr. J. G. Baer, pointed out that this modification is one of many being suggested which might help to reduce film damage, as being experienced in theaters. It was the general consensus of those present that the proposed modification be added to the standard for committee consideration.

Recommendations presented to Mr. G. M. Berggren covered items such as (1) specification of color temperature shift by projector lenses, (2) recommended film tension on motion-picture projectors, and (3) recommendations for maximum jump and weave of motion-picture prints. These will be drafted and circulated to the committee for letter ballot as Recommended Practices.

In conclusion, Mr. Baer noted that NATO (National Association of Theatre Owners) indicated that they and the SMPTE, in conjunction with theater equipment organizations and the MPAA (Motion Picture Association of America), are writing tutorial documents and identifying mutual problems directed to theater owners, pinpointing their in-house problems such as sound, reproduction, projection booth operations and other areas related to the presentation of the motion-picture product.

30 November 1978

J. G. BAER
Chairman

Committee on Film Technology

The committee convened on 1 November 1978, under the chairmanship of Mr. E. V. Knutsen.

The chairman encouraged additional participation to follow up on the excellent report presented by Messrs. Hester and Thomas on "Perforation Pitch" at the meeting of the committee last year.

The Manager of Engineering Services, Mr. A. E. Alden, noted that the topic of perforating dimensional specifications on 16-mm film, in respect to image steadiness, will be discussed at the ISO/TC 36 — Cinematography meeting in Belgium during September 1979. He emphasized the need for a well represented delegation from the U.S.A. and an established American position.

Documents to be reviewed by this committee during 1979 will include standards on: 16-mm Projector Usage; 35-mm Camera Image; 35-mm Film, Perforated 32-mm, 2R; 35-mm Film, Perforated BH; 35-mm Film, CS-1870; 16-mm Film, Perforated 1R and 2R; 35-mm Film, Perforated KS; 35-mm Film, Perforated S8, 2R (1-0); and 35-mm Film, Perforated 16-mm, 3R.

Anyone interested in participating in these studies should contact A. E. Alden at SMPTE Headquarters. The standards involving 16-mm multi-row raw stock are to be reviewed in relation to specifying better dimensional characteristics after processing and splitting.

1 November 1978

ERIC V. KNUITSEN
Chairman

Committee on Television Video Technology

The meeting of the committee, which was held on 31 October 1978, was well attended.

One area of work included the Working Group on Camera Lens Mounts for Television, chaired by Mr. R. Putman, who reported that camera manufacturers will be contacted to determine if a standard should be written for studio and portable television cameras.

Mr. R. W. McAll, the Chairman of the Subgroup on Control Television Broadcast Studio Equipment, reported that a detailed report on this group's activities will be made available in six months.

Subsequent to a discussion on the new color reference test film for television being supplied by the Society, the committee agreed that work will continue and ultimately an updated test film should be produced.

A well-received tutorial paper presented by Mr. L. DeMarsh on the "Color Rendering Index" was requested by the Chairman to be submitted soon for possible publication in the *SMPTE Journal*.

The Chairman indicated that the Working Group on Broadcast Picture Monitors is reportedly evaluating television network monitors, and a report from the group will be forthcoming.

31 October 1978

A. H. CHISHMARK
Chairman

Committee on Laboratory Services Technology

The committee, which met on 1 November 1978, is chaired by J. Ehrenberg, and concerns itself with all phases of the operation of laboratory services in the preparation and duplication of motion-picture films and video products.

One of the current tasks under committee consideration is the review of the standard on 35mm splices (PH22.178), which was discussed at length. Mr. Reichard assumed the responsibility of redrafting the document in accordance with the recommendations made by the committee.

Based on the status report furnished by the Manager of Engineering Services on the review of RP 22, Sensitometric Graph Paper, the committee decided to modify the document to specify graph paper more commonly used by the laboratories.

A draft report on film storage is being prepared by Mr. W. Discher's Working Group, and will be submitted to the committee in January 1979.

Mr. Ehrenberg reported that a discussion in committee on the objection of withdrawing the Recommended Practice on Edge Identification for Raw Stock Cans during the trial publication period was resolved, and the document will be submitted to the SMPTE Board for approval.

Mr. H. LaZarc will undertake the writing of a draft Recommended Practice on screen-change notching and cueing for 16mm and 35mm negative printing for committee consideration.

A small working group consisting of Messrs. F. Scobey and C. Leone will draft a revision to the standard for the universal leader to include a sound leader section.

In view of the need to identify clearly the current practice for specifying the emulsion position on 16mm prints, Mr. Reichard will investigate and recommend for committee consideration a revision of the standard PH22.10, Specifications for Projector Usage of 16mm Motion-Picture Film.

1 November 1978

J. J. EHRENBERG
Chairman

Committee on Audio Recording and Reproduction Technology

The extensive agenda prepared by Mr. I. R. Allen, the chairman of the committee, which held its meeting on 31 October 1978, included reports and discussions on the following subjects:

Mr. R. G. Hufford summarized the work of the Study Group on Audio Production and Post-Production for Motion Picture and Television Entertainment Programming, comprised solely of the directors of sound departments of Hollywood-based studios.

(1) Since its inception in March 1975, this group is attempting to gather appropriate production material from the major studios to make up a theater test film having examples of well-recorded scenes from current motion picture releases.

(2) The group agreed at the last meeting that an American National Standard on the recording characteristic of magnetic sound records for 35mm motion-picture film should be developed in accordance with the international standard, ISO 1189-1978, which specifies a $35\mu\text{s}$ characteristic.

(3) A paper entitled, "Improvement in Theatre Sound: A Guide for Exhibitors" prepared by the Inter-Society Technical Group consisting of representatives from MPAA (Motion Picture Association of America, Inc.), NATO (National Association of Theatre Owners), SMPTE and TEA (Theatre Equipment Association) has been reviewed.

Mr. Allen reported that work on the following subjects is continuing —

(1) Testing of polyester and tri-acetate bases, with the test material to be supplied by the SMPTE.

(2) Preparation of a draft Recommended Practice for photographic and magnetic three- and four-track 35mm multi-frequency test films being supplied by the SMPTE.

The Chairman also reported that although the proposed standard, "Measurement and Characteristics of Electro-Acoustic Response of Motion-Picture Control Rooms and Indoor Theatres (PH22.202) was approved by the Standards Committee, a small working group under the Chairmanship of Mr. Hecker will review the technological progress and the practical aspects of implementing the proposed standard.

At the request of Mr. J. Mosely, a new study group will be formed to evaluate potential difficulties caused by projector weave and lateral jump in sound reproduction. A second group will be asked to define terms used frequently by the SMPTE such as channel, track, sound, audio etc. It was noted that these terms are often intermixed even in the same documents.

Mr. Sohma of Japan gave a technical description and provided documentation of multi-channel sound as it was introduced in Japan during September 1978, showing its potential for dual language and stereo reproduction.

31 October 1978

IOAN ALLEN
Chairman

Standards & Recommended Practices

Draft American National Standards

Two Draft American National Standards are published here for a trial period and public review: PH22.201, Dimensions of Type W Camera Aperture Image on 16-mm Motion-Picture Film for Enlargement; and PH22.202, Measurement and Characteristics of Electro-Acoustic Response of Motion-Picture Control Rooms and Indoor Theatres.

Both proposals are new documents and agree with international standardization. Type W is the international term for super 16.

Comments should be addressed to Alex E. Alden, Manager of Engineering Services, at Society Headquarters before 1 March 1979. The proposals have been submitted to American National Standards Committee PH22. Consequently, all comments received through *Journal* publication will be reviewed prior to conclusion of action by that committee — Alex E. Alden, Manager of Engineering Services.

Working Group Prepares for Initial Field Tests of Digital Interface Hardware

The SMPTE Working Group for Standardization of Digital Control of Television Equipment has held several meetings, with good progress towards development of digital interface standards for television broadcast equipment.

Industry-wide participation in the initial field testing of manufacturers' hardware is planned for the summer of 1979.

Anyone interested in participating in this program may contact the working group chairman:

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