

In the field with which you are most concerned — motion pictures — 89 standards were approved as American Standard as of April 1. This was a direct result of the efforts of the PH22 Committee and its sponsor, the SMPTE.

The first standards in the motion-picture field approved by the ASA go back to the year 1930, when a small pamphlet of standards was approved as American Standard. In 1935 additional standards in the 16mm field were approved. In 1941, a wholesale revision of motion-picture standards was carried out and each of the standards approved

until that time was given its own individual designation number. You are all familiar with the Z22 Series (now the PH22 Series). Starting with the year 1941 as a base, 36 motion-picture standards have been revised *twice* and 18 have been revised *three* times. This certainly represents active work and continued attention to the problem of keeping standards up to date. The SMPTE is to be complimented, as well as all of the organizations represented on the PH22 Committee, for its endeavors along these lines. Time does not permit mentioning all of the organizations concerned, but it is only

fair that the Motion Picture Research Council receive its share of the credit.

References

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4. Dickson Reek, *National Standards in a Modern Economy*, Harper & Brothers, New York, 1956.

The International Standards Organization and Cinematography

By DEANE R. WHITE

Plans of the International Standardization Organization with reference to the selection of items suitable for standardization are presented. Also discussed are how ISO actions will affect American equipment manufacturers and film products, and what safeguards exist.

THE VALUES of standards as an aid, rather than a hindrance, to progress are discussed in the previous paper. A review of the history of standardization activities shows that the need for standards in many fields on an international rather than a national basis has been recognized for over fifty years. The International Standards Organization was created after the conclusion of the hostilities of World War II. It is the outgrowth of activities of the United Nations Standards Coordinating Committee, and plans for its creation received approval from enough national bodies so that its official life started on February 23, 1947.

Participation in the work of this organization has continued to spread since that initial date and today it has a broad base both in scope of technical subjects covered and in national bodies represented. It should be noted, however, that the scope of the ISO is not universal. For example, standardization in the electrical field is specifically the concern of the International Electrotechnical Commission which has a longer history of activity in its own field and in its own right.

The International Standards Organi-

zation is made up of national member bodies chosen to represent participating nations. In some countries these national bodies are part of the government of the country, whereas in other countries they are nongovernmental standardizing units which have grown to national stature. The latter situation is the case here where the national body is the American Standards Association, which officially represents the United States in the standardizing activities of ISO. The financial support for ISO comes from the national bodies of which it is composed and, accordingly, the American Standards Association pays a portion of the cost of the International Standards Organization. As I see it, this contributes much in reaching the international field with some of the theory and doctrines of voluntary cooperation with which we are so familiar in our national standardizing activities.

The technical work of standardization is in the hands of Technical Committees created by the ISO from the member bodies which express active interest and desire to participate in a given field. The scope of work for the committee is set up to indicate the activities appropriate to it and to differentiate them from, and coordinate them with, activities of other committees working in related fields. Nations with particular business interest in a subject typically form the active center of the technical committee

by becoming "Participating" members of that technical committee. Some national bodies feel that they have more than casual interest in a field, but that they are not in a position to carry on active work. In such cases an "Observer" membership may be chosen. These members are kept informed of progress more fully than national bodies which express no active interest in the field.

The organizational rules set up the duties and the responsibilities associated with the different degrees of interest and, of course, are so organized that the participating members of a technical committee are the key group, responsible for originating and controlling activities in their field. It should be noted, however, that the ultimate step open to the ISO, the adoption of an international standard, can be achieved only under the rules of the organization by the unanimous approval of all member bodies, regardless of their participation in the activities of a given technical committee. Thus, the interests of each nation are protected from the final adoption of an international standard with which that nation disagrees.

Experience has shown that there is much of value which can be gained in the process of exchange of ideas between nations and the development of thinking concerning technical problems of common interest. In some cases divergent views continue to diverge, but there are many cases where a common ground of understanding can be found covering material of considerable importance, even though the final scope may be more limited than originally anticipated.

The history of international standardizing activities in the photographic field

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includes some work started under the auspices of the International Federation of the National Standardizing Associations, often referred to as ISA, which existed and carried out its work in the period from 1926 to 1942. Later, photographic standardization was included in the scope of the International Standards Organization and the international activities directed toward standardization in photography have been under ISO auspices since its creation.

The technical committee of greatest interest to the SMPTE is Technical Committee No. 36 whose field is cinematography. Our own American Standards Association, which is the official representative body for the United States, is the Secretariat of this Technical Committee. The eleven participating members are:

Belgium	Sweden
Czechoslovakia	Switzerland
France	Union of Soviet Socialist Republics
Germany	United Kingdom
Italy	USA (Secretariat)
Netherlands	

The above are the active working group. The remaining members of the committee are observer members, of which there are sixteen:

Australia	Japan
Austria	Mexico
Canada	Pakistan
Chile	Poland
Denmark	Portugal
Greece	Roumania
Hungary	Spain
India	Yugoslavia

In its capacity as Secretariat for Technical Committee 36, the American Standards Association must act as leader of the group. It must organize the diverse interests that led the different nations to join the Committee into effective progressive action. The Secretariat occupies a position of prime importance in framing, from the wide range of suggestion and comment which must be pieced together, an acceptable proposal or recommendation.

The national body holding the Secretariat of a technical committee has a dual role. When acting in its capacity as Secretariat, it should be completely impartial and see that all nations have the same opportunity to express their views and to have those views incorporated into proposals and recommendations. This must be done at the same time that it acts as a national body in its own right, expressing and protecting its own business interests.

The ASA has taken pains to meet the requirements of this dual character and, I believe, has been successful in maintaining the impartiality of the work of the Secretariat while at the same time clearly expressing our national views.

Committee PH22 of the American Standards Association, which has been

active for years in standardization activities in the United States, has been assigned also the responsibility of determining the actions to be taken for the national interest in the field of international standardization. This Committee has behind it the series of national standards which show the areas where business importance and technical agreement have already led to national action. This Committee has received full cooperation from the Engineering Committees of the SMPTE and can thus keep abreast of current developments in the establishment of new standards or revision of old ones.

The program of work of a technical committee of the ISO is normally self-determined, so long as it stays within its assigned and agreed scope. The ASA, as Secretariat, has a major responsibility in organizing the work and has met this by canvassing the national member bodies for the subjects which they consider important. Here in the United States, our own standards have been reviewed from time to time and decisions reached concerning their suitability and importance for international consideration. In many cases the same reasoning which had led to the adoption of these as national standards showed valid reason for suggesting them in the international field. Since at times they were not universally applicable, not all of our national standards have been suggested for consideration. Other national bodies have suggested areas where international standards appear important to them. From these different sources evolves the program of work accepted by the International Committee.

The work of Technical Committee 36 has resulted in the adoption of seven ISO Recommendations dealing with emulsion and sound-record positions in cameras and projectors. Ten units are currently in circulation to all ISO member bodies as Second Draft ISO Recommendations and, if approved on this time around, will join the other seven as ISO Recommendations. After the previous circulation of these ten, need for further change and revision was apparent and it is the corrected version of each of these which is now in circulation.

Five Draft ISO Proposals are still in the hands of the Secretariat and the Technical Committee, and work is continuing to try to reconcile divergent views. When that is accomplished to the satisfaction of the Committee, they can be moved to the next step toward adoption as ISO Recommendations.

The last meeting of TC 36, at Stockholm in 1955, formed seven working groups, listed below, to continue activity in areas where there was international interest but where further work appeared necessary. Because of the breadth of our national interest in the field, we requested representation in each working group and made appointments for the

U.S. as shown with the group memberships:

Film dimensions

United Kingdom (Chair)
Belgium
France
Germany
Sweden
USSR
USA — W. G. Hill

Luminance of screens

France (Chair)
Germany
United Kingdom
USSR
USA — F. J. Kolb

Reproduction characteristics of magnetic sound on perforated film

USA (Chair) — M. G. Townsley
France
Germany
Netherlands
Sweden
United Kingdom
USSR

Image areas for 16mm projector and camera apertures

Belgium (Chair)
France
Sweden
United Kingdom
USSR
USA — A. C. Robertson

Definition and marking of safety motion-picture film

Belgium (Chair)
France
Germany
Italy
United Kingdom
USSR
USA — J. M. Calhoun

Perforated films with magnetic striping

Germany (Chair)
France
Sweden
United Kingdom
USSR
USA — E. W. D'Arcy

Wide-screen pictures

Sweden (Chair)
France
Germany
Italy
United Kingdom
USSR
USA — W. F. Kelley

Progress has proven very slow and in no case has the United States representative found himself burdened by a deluge of mail coming to him. The groups have differed in their activity, but as an evaluative overall statement it is fair to note that no group has yet brought forth a proposal to the Secretariat, though typically such proposals were authorized at the Stockholm meeting. Though slower than anticipated, this interim work will show its value as preparation for the next meeting of TC 36 planned for 1958 in England.

I would like to draw particular attention to the importance of timing in these activities of international standardiza-

tion. Our own extensive efforts in the standardization field in cinematography place our views and decisions on record in a way that very strongly influences the plans and thinking of others. Such sound technical work gives the best approach to securing good international standards. The discussion of differences in technical views is best conducted in working groups between meetings or in working committees at meetings. In such early stages, reconciliation of diverse views is simpler than at any later stage. Corrections can be made later when necessary, but it is worth a great deal of effort to do the job well early in the game. Changes become slower and more difficult as the proposals are processed through the various steps of the international procedure.

The value of this work lies in the exchange of ideas in areas of business importance to us. In some cases we learn the problems facing other groups, and may be able to better adapt our products and procedures to their needs and wishes. This is one form of good salesmanship. In other cases the selection and designation of a preferred way of meeting a problem from several possible methods contributes to interchangeability, helpful to business.

A point of some importance in considering the future value of this work lies in the fact that, in a sense, the ISO is the standardizer's standardizer. That is, the ISO is an organization of national standardizing bodies, and as technological progress spreads to other nations and areas, it is anticipated that the results of today's international work will be adopted as a nucleus of proven standards by new national groups. This can be important in smoothing the growth of international business.

I hope that you see in this ISO work

(1) the development of a way of meeting an old need in international business, (2) an opportunity for the ASA to serve our country well by the international aspects of its activities, and (3) the specific part that PH22 and the engineering committees of the Society have in furthering business by their activities in international standardization in cinematography.

Discussion

Glenn Dimmick (Session Chairman): It's quite apparent here that to get a real international standard is rather hopeless since it requires complete agreement with all parties. It wasn't quite clear to me how you arrive at a recommended practice.

Dr. White: The International Standards Organization has rules governing this but does not have the rule of unanimity that we use so effectively in our own national work and, to that extent, it is possible that an ISO recommendation can exist with which any given country is individually in disagreement. The major conclusion that I draw is this: the timing of this work is quite important to us because, where we have had good standardization work done ahead of time, there has been little hazard of the final standard not fitting well with our needs. If we do our homework well, we don't have to be afraid of the result.

The ISO recommendations are available to individuals or manufacturers only through national standardizing bodies. In other words, if you wish to know what an international ISO recommendation is, you should not write ISO at Geneva but you should write the American Standards Association in New York. They can give you the international recommendation and explain any reason for difference that exists between that and the national standard. In a sense, therefore, the international recommendation represents a distillation or meeting of minds which may be less than a complete unanimity but normally should be interpreted properly because of accessibility through the local standardizing groups.

Dr. Dimmick: When and how were the ground rules set up for ISO?

Dr. White: I can't answer that completely. The United Nations Committee set up an

organization plan which was to become operative when 15 nations had agreed to participate. The 15th nation agreed to participate on that date in February 1946 which I mentioned, and since then many more have come into the fold — I do not have the count; but the ground rules and procedures came through that path.

Boyce Nemeo (Management Consultant, New York): Many of us in the Society look to the *Journal* quite regularly to tell us the status of engineering standards projects that are in work on motion pictures in the U.S. Dr. White just mentioned that if we want to know the status of ISO projects we should write to the ASA. I wonder if we might also look to the *Journal* to tell us perhaps once a year just what the status of these projects is?

Dr. White: I believe that is a legitimate expectation.

J. W. McNair (American Standards Association): I might add to Dr. White's remarks by saying that there are now 38 nations that are members of the ISO. This number includes all of the nations in Western Europe, the United States and Canada and, I think, two of the South American nations. It includes substantially all of the Iron Curtain countries, except China; and it's interesting that in 1955, at the meetings to which Dr. White alluded, we had for the first time some active technical participation by the USSR.

Now if I might say just a word about this business of international standards. When the ISO was started, and it did get started in 1946 as Dr. White pointed out, there was a certain group that was actively advocating the formulation of international standards and another stronger group that felt the ISO should be a coordinating body to coordinate national standards and not to issue international standards, so the rules were written in such a way that you could have international standards if you could get 100% unanimity. However, as of now, there are 37 approved ISO recommendations and nobody has ever tried to get an international standard. From what we can tell now, I don't think anybody will, because this procedure of having the recommendations issued and then having the nations that can do so coordinate their own standards is working very well. Of course I should point out that all of this is a voluntary business. There is no compulsion placed on us to adopt an international recommendation although the hope certainly is that each of the 38 nations will give due consideration to adopting the international recommendations.