COLOR CO-ORDINATION IN VARIETY MERCHANDISE. Helen D. Taylor, Philadelphia, Pennsylvania

The color plan for W. T. Grant Company will be described and its application by the sources of supply, by the buying staff, and by the retail stores will be presented.

International Commission on Illumination, Colorimetry, and Artificial Daylight

For those members of the Society of Motion Picture Engineers who have a fundamental interest in the science of colorimetry as well as in the current programs for developing international agreement on colorimetry standards, specifications, and terminology, the following introduction and condensed questionnaire are presented here.

The Society is a member body of the Inter-Society Color Council and has the following delegates to represent the motion picture industry's interests in this important field:

R. M. EVANS, *Chairman*

J. A. BALL	L. E. CLARKE
F. T. BOWDITCH	A. M. GUNDELFINGER
M. R. BOYER	H. C. HARSH

The Inter-Society Council, as its name implies, serves to correlate the views, attitudes, and recommendations of all interested groups as individuals in this country for the use of the United States National Committee of the International Commission on Illumination.

THE EDITOR

The International Commission on Illumination (I.C.I.) is planning to resume its activities interrupted by the war. The last meeting was at Scheveningen, Holland, in 1939. The next one is scheduled for Paris in July, 1948.

The I.C.I. operates through national committees of the respective member countries comprising the Commission, and through numerous technical committees covering a wide variety of subjects in photometry and lighting. Each national committee sets up a technical committee for each subject in which it is sufficiently interested. For each of these subjects the I.C.I. assigns the Secretariat to some one country. Each national committee selects the personnel of its technical committees.

For Technical Committee No. 7, Colorimetry and Artificial Daylight, the Secretariat was assigned to the United States and the U. S. National Committee appointed the following committee:

K. S. GIBSON, *Chairman*

D. B. JUDD	D. L. MACADAM
M. LUCKIESH	P. MOON

One of the duties of the secretariat committee is to obtain information on the assigned subject from the various countries and to prepare recommendations or summaries for the next meeting of the I.C.I. Dr. Gibson, chairman of the committee, would appreciate receiving any available information on the subjects as soon as possible.

The committee desires to summarize American opinion on colorimetry and artificial daylight as well as foreign opinion. The subject of color is of increasing interest to motion picture engineers, and the secretariat committee will be very glad to receive comments on the questionnaire.

Copies of the complete questionnaire are available for distribution to anyone who wishes to assist the American Technical Committee to formulate American opinion by sending in commments. Address requests to Dr. K. S. Gibson, Chairman, U. S. Technical Committee No. 7 of the I.C.I., National Bureau of Standards, Washington 25, D. C.

1. Proposed Standard Illuminant E

At the tenth session of the I.C.I. at Scheveningen in 1939 it was recommended that the national committees study the advantages which the use of standard illuminant E would present as a substitute for standards illuminants B and C, to represent a generally satisfactory artificial daylight, and to serve as a common basis whenever it is necessary to characterize the color of an object for the purpose of international comparisons.

A. The proposed new illuminant E ($x = y = z = 0.3333$) is realized by combining I.C.I. illuminant A (2848 degrees Kelvin) with a specified Davis-Gibson filter, in a manner similar to the realization of illuminants B and C. Many in the United States are opposed to the substitution of the proposed illuminant E for standard illuminant C in the colorimetry of nonself-luminous objects.

Do you favor or disfavor the adoption of a new standard illuminant E for the colorimetry of nonself-luminous objects?

B. In the colorimetry of light sources there appears to be some advantage in the use of the point ($x_w = y_w = z_w = 0.3333$) representing the equi-energy source as the achromatic point for the determination of dominant wavelength and purity.

Do you favor the adoption of illuminant E for the achromatic point in the colorimetry of light sources, or would you prefer that the hypothetical equi-energy source be used for this purpose?

2. Colorimetric Purity

(A second recommendation of the 1939 session of the I.C.I. relates to a definition of colorimetric purity. The present questionnaire asks for comments on a suggested revision of this definition. The suggested revision uses the spectrum locus and the purple boundary of the mixture diagram for unit colorimetric purity. It uses two achromatic points. For self-luminous bodies the point representing the proposed standard illuminants E ($x = y = z = 1/3$) is suggested; and for light reflected from objects the point representing the illuminant is suggested. Since the chromatic and achromatic components are to be evaluated in terms of luminance this definition agrees with that given in the OSA colorimetry report, *J. Opt. Soc. Amer.*, vol. 34, p. 669; 1944.)

3. Standard Observer

Do you have any scientific evidence or practical experiences that indicate that the standard observer fails to represent normal observers satisfactorily?

4. Standard Illuminants

A. In view of the possible influence of ultraviolet irradiation on the colors of fluorescent samples, do you believe that the definition of standard illuminants *A*, *B*, and *C* should be made more precise in regard to the ultraviolet?

B. In view of the growing use of fluorescent materials and of light sources that are rich in ultraviolet energy, do you believe that an additional standard illuminant different from illuminants *A*, *B*, and *C*, by having relatively more ultraviolet energy, should be established?

5. Illuminant for Color Matching

For commercial color matching, is it your practice to use chiefly (*a*) one or other of the standard illuminants *A*, *B*, or *C*, (*b*) some other combination of filter with an incandescent lamp, (*c*) some fluorescent lamp, (*d*) some phase of natural daylight, or (*e*) some other light source?

6. Specification of Color-Rendering Properties

Has any recognized method been developed to indicate the degree to which artificial daylight produces a rendering of object colors in conformity to that produced by one of the standard illuminants?

7. Color Discrimination

The various National Committees are requested to supply such data on discriminability of various colors and on ways of distorting the *XYZ* lattice to yield approximately uniform color scales as have been obtained since 1939. These data will be summarized by the U. S. Committee for consideration at the 1948 meeting.

8. Color Terminology

It is recognized by the U. S. Committee that discussion of color terms at the 1948 meetings of the I.C.I. might have the very desirable result that divergent usage in the various nations would be reduced, or even eliminated for some color concepts. To keep the discussion within reasonable bounds, however, it is proposed to limit discussion to the nine psychophysical and five psychological concepts defined below: (There follow definitions of the psychophysical terms: color, luminance, directional luminous reflectance, dominant wavelength, complementary wavelength, purity, chromaticity, tristimulus values, and chromaticity co-ordinates; and of the psychological terms: brightness, lightness, hue, saturation, and chromaticness. Comments on the definitions and on the terms used for the concepts are requested.)