Status to CIE Division 2
Reporter R2-23 ISO/CIE Standards for the measurement of reflectance and transmittance

There have been no new standards on the measurement of reflectance and transmittance. Nor has there been significant advances in any Division 2 Technical Committees that may require the promotion of a Technical Report to the development of a standard.

ISO 13655 on the measurement of the reflectance and color of printing is under revision. One problem with which they are struggling involves the measurement of the reflectance of non-optically thick materials, where the measurement radiance may propagate horizontally away from the measurement aperture or through the specimen and be reflected from the backing into the measurement aperture. Currently, ISO 13655 addresses this by specifying a highly absorbing, matte backing. But this backing will distort the reflectance curves of certain commercial materials, such as translucent or transparent ink on clear or translucent plastic substrates. These materials are used in flexible packaging where the colors convey commercial or contractual information and must meet tight specifications in contracts that cross inter-national boundaries. This is a very difficult measurement problem, not clearly addressed in Publication CIE 130.

ISO 5 is being revised with new, clearer specifications of the requirements for density using spectral reflectance or transmittance measurements and then numerical conversion to ISO Status Density (transmission density or reflection density). The standard on transmission density has is being revised by E. Early of NIST who has recently completed a revised calibration service and artifacts for the measurement of this property.

There is a need to continue to monitor the advances of the ISO and CIE looking for the opportunity to set up a TC to develop a standard on the measurement of spectral reflectance (either regular or diffuse) and transmittance (either regular or diffuse).

Respectfully submitted,

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