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Barvno upravljanje upodobitvenih tehnologij - Vrednotenje natančnosti barvne pretvorbe v ICC-profilih

Image technology colour management - Evaluating colour transform accuracy in ICC profiles

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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 130, *Graphic technology*.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

International Color Consortium (ICC) input and output profiles contain transforms between device data encodings and the ICC Profile Connection Space (PCS). These transforms should provide either an accurate colour match or a pleasing rendering, depending on the chosen rendering intent.

The following guidelines are provided to assist in the evaluation of the colorimetric rendering intent transforms in ICC v4 profiles. Any tolerances provided in this document are for guidance only and may not be suitable for all applications.

Image technology colour management — Evaluating colour transform accuracy in ICC profiles

1 Scope

This document describes procedures for evaluating the accuracy of colorimetric rendering intents in ICC profiles.

It applies to v4 ICC profiles made according to ISO 15076-1.

It does not apply to subjective tests of ICC profiles, such as for perceptual or saturation rendering intents, and it does not apply to high dynamic range colour media or spaces.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 15076-1, *Image technology colour management — Architecture, profile format and data structure — Part 1: Based on ICC.1:2010*

3 Terms, definitions and abbreviated terms

3.1 Terms and definitions

For the purpose of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

3.1.1
AToB1Tag
structure in an ICC profile that encodes the forward model in media-relative colorimetry

3.1.2
BToA1Tag
structure in an ICC profile that encodes the inverse model in media-relative colorimetry

3.1.3
chromaticAdaptationTag
invertible matrix which converts a CIE XYZ colour, measured using the actual illumination conditions and relative to the actual adopted white, to a CIE XYZ colour relative to the PCS adopted white with complete adaptation

3.1.4
colour lookup table
array of values corresponding to the output of a transform applied to a grid of values which span the input data encoding