SLOVENSKI STANDARD

SIST EN 61966-7-1:2007

januar 2007

Večpredstavnostni sistemi in oprema - Meritve in upravljanje barv - 7-1. del: Barvni tiskalniki - Zrcalni odtisi - Vhodi RGB (IEC 61966-7-1:2006)

(istoveten EN 61966-7-1:2006)

Multimedia systems and equipment - Colour measurement and management - Part 7-1: Colour printers - Reflective prints - RGB inputs (IEC 61966-7-1:2006)

ICS 17.180.20; 33.160.60

Referenčna številka
SIST EN 61966-7-1:2007(en)

EUROPEAN STANDARD

NORME EUROPÉENNE

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EN 61966-7-1

August 2006

ICS 33.160.60; 35.180; 37.100.10

Supersedes EN 61966-7-1:2002

English version

Multimedia systems and equipment - Colour measurement and management Part 7-1: Colour printers - Reflective prints - RGB inputs
(IEC 61966-7-1:2006)

Systèmes et appareils multimédia -
Mesure et gestion de la couleur
Partie 7-1: Imprimantes couleur -
Imprimés par réflexion -
Entrées RVB
(CEI 61966-7-1:2006)

Multimediasysteme und -geräte -
Farbmessung und Farbmanagement
Teil 7-1: Farbdrucker -
Reflektierende Drucke -
RGB-Eingänge
(IEC 61966-7-1:2006)

This European Standard was approved by CENELEC on 2006-07-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

This European Standard exists in two official versions (English and German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Ref. No. EN 61966-7-1:2006 E

Foreword

The text of document 100/1061/FDIS, future edition 2 of IEC 61966-7-1, prepared by IEC TC 100, Audio, video and multimedia systems and equipment, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 61966-7-1 on 2006-07-01.

This European Standard supersedes EN 61966-7-1:2002.

This European Standard includes the following technical changes with respect to EN 61966-7-1:2002:

a) In addition to the default illuminant, D50, D65, F11 and illuminant A were added as optional illuminants.

b) The numbering of the colour patches in the test-chart file was changed for easy understanding of the measurement location.

c) Two test-chart files: short-term instability test chart and spatial non-uniformity test chart were added.

The following dates were fixed:

– latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2007-04-01
– latest date by which the national standards conflicting with the EN have to be withdrawn	(dow)	2009-07-01

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 61966-7-1:2006 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following note has to be added for the standard indicated:

IEC 61966-2-1 NOTE Harmonized as EN 61966-2-1:2000 (not modified).

Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

The following referenced documents are indispensable for the application 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.

NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

Publication	Year	Title	EN/HD	Year
IEC 60050-845	1987	International Electrotechnical Vocabulary (IEV) - Chapter 845: Lighting	-	-
ISO 216	1975	Writing paper and certain classes of printed matter - Trimmed sizes - A and B series	EN ISO 216	2001
ISO/CIE 10526	1999	CIE standard illuminants for colorimetry	-	-
ISO/CIE 10527	1991	CIE standard colorimetric observers	-	-
CIE 15	-[1)]	Colorimetry	-	-

[1)] Undated reference.

INTERNATIONAL STANDARD

IEC 61966-7-1

Second edition
2006-05

Multimedia systems and equipment –
Colour measurement and management –

Part 7-1:
Colour printers – Reflective prints – RGB inputs

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International Electrotechnical Commission
Международная Электротехническая Комиссия

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CONTENTS

INTERNATIONAL ELECTROTECHNICAL COMMISSION

MULTIMEDIA SYSTEMS AND EQUIPMENT – COLOUR MEASUREMENT AND MANAGEMENT –

Part 7-1: Colour printers – Reflective prints – RGB inputs

FOREWORD

1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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International Standard IEC 61966-7-1 has been prepared by Task Area 2: Colour measurement and management, of IEC technical committee 100: Audio, video and multimedia systems and equipment.

This second edition cancels and replaces the first edition published in 2001. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition.

a) In addition to the default illuminant, D50, D65, F11 and illuminant A were added as optional illuminants.
b) The numbering of the colour patches in the test-chart file was changed for easy understanding of the measurement location.

c) Two test-chart files: short-term instability test chart and spatial non-uniformity test chart were added.

The text of this standard is based on the following documents:

FDIS	Report on voting
100/1061FDIS	100/1082/RVD

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

IEC 61966 consists of the following parts, under the general title *Multimedia systems and equipment – Colour measurement and management:*

Part 1: General (proposed work item)

Part 2-1: Colour management – Default RGB colour space – sRGB

Part 2-2: Colour management – Extended RGB colour space – scRGB

Part 2-4: Colour management – Extended-gamut YCC colour space for video applications – xvYC (to be published)

Part 2-5: Colour management – Optional RGB colour space – opRGB (under consideration)

Part 3: Equipment using cathode ray tubes

Part 4: Equipment using liquid crystal display panels

Part 5: Equipment using plasma display panels

Part 6: Front projection displays

Part 7-1: Colour printers – Reflective prints – RGB inputs

Part 7-2: Colour printers – Reflective prints – CMYK inputs (proposed work item)

Part 8: Multimedia colour scanners

Part 9: Digital cameras

Part 10: Quality assessment – Colour image in network systems (proposed work item)

Part 11: Quality assessment – Impaired video in network systems (proposed work item)

The committee has decided that the contents of this publication will remain unchanged until the maintenance result date indicated on the IEC web site under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

- reconfirmed;
- withdrawn;
- replaced by a revised edition, or
- amended.

A bilingual version of this standard may be issued at a later date.

INTRODUCTION

This part of IEC 61966 is applicable to characterization of colour printers that produce colour on opaque substrate corresponding to digital data files in which colour image information is expressed in a red–green–blue colour space. The characterization will be realized by objective measurements to be utilized for colour management in open systems. The measured and reported results are used to relate the equipment-dependent and undefined red –green–blue colour space to the default RGB colour space defined as the sRGB by IEC 61966-2-1. This standard is also applicable to assessment of colour image attributes on reflective prints reproduced from colour digital image files.

The recommended usage of the standard is for evaluation of the output of home and office RGB printers.

MULTIMEDIA SYSTEMS AND EQUIPMENT – COLOUR MEASUREMENT AND MANAGEMENT –

Part 7-1: Colour printers – Reflective prints – RGB inputs

1 Scope

This part of IEC 61966 specifies a set of data in colour test chart files for measurements, sampling of successive prints, measurement conditions and forms of reporting the results so as to make possible the characterization of the colour printer and comparison of the results of measurements. The sets of data for measurements are in colour test chart files expressed in a red–green–blue colour space, to which corresponding colour images are reproduced on reflective substrate. The methods of measurement in this standard are designed to be applicable to reflective colour prints for consumer use. The reflective colour prints may be produced by non-impact colour printers, incorporating such technologies as ink-jet, sublimation transfer, thermal transfer, electro-photography and other similar technologies.

This standard does not specify limiting values for various attributes.

2 Normative references

The following referenced documents are indispensable for the application 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.

IEC 60050(845):1987, *International Electrotechnical Vocabulary (IEV) – Chapter 845: Lighting*

ISO 216:1975, *Writing paper and certain classes of printed matter – Trimmed sizes – A and B series*

ISO/CIE 10526:1999, *CIE standard illuminants for colorimetry*

ISO/CIE 10527:1991, *CIE standard colorimetric observers*

CIE 15, *Colorimetry*

3 Terms and definitions

For the purposes of this document, terms and definitions which relate to lighting in IEC 60050(845), as well as the following, apply.

3.1
colour printer
system composed of an application programme to handle colour digital image files, a driver for equipment that produces colour images on a substrate, and the equipment itself which accepts equipment specific data for each input channel and is able to process by such technologies as ink jet, sublimation transfer, thermal transfer, or electro-photography and other similar technologies

NOTE The colour printer includes a system whereby the equipment that reproduces prints is connected direct to another piece of equipment in which a set of colour digital image data is contained.