

**Multimedia systems and equipment - Colour measurement and management -- Part 2-5: Colour management - Optional RGB colour space - opRGB**

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<p>Standard on kinnitatud Eesti Standardikeskuse 20.02.2008 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.</p>	<p>This standard is ratified with the order of Estonian Centre for Standardisation dated 20.02.2008 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.</p>
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<p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>The standard is available from Estonian standardisation organisation.</p>

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**Multimedia systems and equipment -  
Colour measurement and management -  
Part 2-5: Colour management -  
Optional RGB colour space -  
opRGB  
(IEC 61966-2-5:2007)**

Mesure et gestion de la couleur  
dans les systèmes  
et appareils multimédia -  
Partie 2-5: Gestion de la couleur -  
Espace chromatique RVB optionnel -  
opRVB  
(CEI 61966-2-5:2007)

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Optionaler RGB-Farbraum -  
opRGB  
(IEC 61966-2-5:2007)

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**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**

## Foreword

The text of document 100/1212/CDV, future edition 1 of IEC 61966-2-5, prepared by technical area 2, Colour measurement and management, of IEC TC 100, Audio, video and multimedia systems and equipment, was submitted to the IEC-CENELEC parallel Unique Acceptance Procedure and was approved by CENELEC as EN 61966-2-5 on 2007-12-01.

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) 2008-09-01
- latest date by which the national standards conflicting  
with the EN have to be withdrawn (dow) 2010-12-01

Annex ZA has been added by CENELEC.

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## Endorsement notice

The text of the International Standard IEC 61966-2-5:2007 was approved by CENELEC as a European Standard without any modification.

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## 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.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60050-845	1987	International Electrotechnical Vocabulary (IEV) - Chapter 845: Lighting	-	-
ISO 3664	2000	Viewing conditions - Graphic technology and photography	-	-
ISO/CIE 10527	1991 <sup>1)</sup>	CIE standard colorimetric observers	-	-
CIE 15	2004	Colorimetry	-	-
CIE 17.4	1987	International Lighting Vocabulary	-	-
CIE 122	1996	The relationship between digital and colorimetric data for computer-controlled CRT displays	-	-
CIE 1931	- <sup>2)</sup>	CIE XYZ color space	-	-

<sup>1)</sup> ISO/CIE 10527:1991 is replaced by ISO 10527:2007.

<sup>2)</sup> Undated reference.

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## INTRODUCTION

The colour gamut for various image I/O devices has been gradually extended in recent years. IEC 61966-2-1 “Multimedia Systems and Equipment – Colour Measurement and Management – Part 2-1: Colour Management – Default RGB Colour Space – sRGB” is the International Standard issued in 1999, based on the colour characteristics of contemporary CRT displays.

Subsequently, displays with a wider colour gamut have been commercialized in order to better cover the colour gamut that is available for digital still cameras, printers and other devices. This International Standard specifies a colour image encoding similar to the sRGB encoding, but based on a wider gamut colour space than sRGB. The rendering of the image for specific applications is beyond the scope of this standard. A display that has a colour gamut wider than conventional displays has been selected as the “Reference image display system characteristics” in this standard. These wider colour gamut displays provide advantages in commercial printing industry workflows and are intended to be used by professional photographers, prepress industry including DTP and designers.

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# MULTIMEDIA SYSTEMS AND EQUIPMENT – COLOUR MEASUREMENT AND MANAGEMENT –

## Part 2-5: Colour management – Optional RGB colour space – opRGB

### 1 Scope

This part of IEC 61966 is applicable to the encoding and communication of RGB colours optionally used in computer systems and similar applications by defining encoding transformations for use in defined reference conditions.

If actual conditions differ from the reference conditions, additional rendering transformations may be required. Such additional rendering transformations are beyond the scope of this standard.

### 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* / CIE 17.4:1987, *International Lighting Vocabulary (Joint IEC/CIE publication)*

ISO 3664:2000, *Viewing conditions – Graphic technology and photography*

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

CIE 15:2004, *Colorimetry, 3rd ed.*

CIE 122:1996, *The relationship between digital and colorimetric data for computer-controlled CRT displays*

CIE 1931, *CIE XYZ color space*

### 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply. Definitions of colour space, illuminance, luminance, tristimulus and other related lighting terms are provided in IEC 60050(845).

#### 3.1

##### **ambient illuminance level**

illuminance level due to lighting in the viewing environment, excluding that from the display, measured in the plane of the display faceplate