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INTERNATIONAL ELECTROTECHNICAL COMMISSION

MULTIMEDIA SYSTEMS AND EQUIPMENT – COLOUR MEASUREMENT AND MANAGEMENT –

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

FOREWORD

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International Standard IEC 61966-2-5 has been prepared by technical area 2: Colour measurement and management, of IEC technical committee 100: Audio, video and multimedia systems and equipment.

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

CDV	Report on voting
100/1212/CDV	100/1282/RVC

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.

The list of all parts of the IEC 61966 series, under the general title *Multimedia systems and equipment – Colour measurement and management,* can be found on the IEC website.

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- withdrawn,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 publication may be issued at a later date.

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*