

**Multimedia systems and equipment - Colour  
measurement and management - Part 12-2: Simple  
Metadata format for identification of colour gamut**

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## EESTI STANDARDI EESSÕNA

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ICS 17.180.20; 33.160

English Version

**Multimedia systems and equipment - Colour measurement and management - Part 12-2: Simple metadata format for identification of colour gamut  
(IEC 61966-12-2:2014)**

Systèmes et équipements multimédias - mesure et gestion de couleur - Partie 12-2: format de métadonnées simple pour l'identification de la gamme de couleurs  
(CEI 61966-12-2:2014)

Multimediasysteme und -geräte - Farbmessung und Farbmanagement - Teil 12-2: Einfaches Metadaten-Format zur Erkennung von Farbumfängen  
(IEC 61966-12-2:2014)

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**CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels**

## Foreword

The text of document 100/2129/CDV, future edition 1 of IEC 61966-12-2, prepared by technical area 2: Colour measurement and management, of IEC technical committee 100: Audio, video and multimedia systems and equipment was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 61966-12-2:2014.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2015-02-22
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2017-05-22

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In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 61966-2-5      NOTE      Harmonised in EN 61966-2-5 (not modified).

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**Annex ZA**  
(normative)  
**Normative references to international publications  
with their corresponding European publications**

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE 1 When an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here:  
[www.cenelec.eu](http://www.cenelec.eu)

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60050-845	-	International Electrotechnical Vocabulary (IEV) -- Chapter 845: Lighting	-	-
IEC 61966-2-4	-	Multimedia systems and equipment - Colour measurement and management -- Part 2-4: Colour management - Extended-gamut YCC colour space for video applications - xvYCC	EN 61966-2-4	-
IEC 61966-12-1	2011	Multimedia systems and equipment - Colour measurement and management -- Part 12-1: Metadata for identification of colour gamut (Gamut ID)	EN 61966-12-1	2011
ISO 15076-1	2005	Image technology colour management - Architecture, profile format and data structure -- Part 1: Based on ICC.1:2004-10	-	-

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## INTRODUCTION

New technologies in capturing and displaying wide-gamut colour images enable a new market of wide-gamut video colour content creation. Recent video standards for wide gamut colour space encoding such as IEC 61966-2-4 (xvYCC) were developed in order to be able to distribute content with a colour gamut that is extended with respect to classical colour gamuts such as defined by standards ITU-R BT.601 (standard definition television) and ITU-R BT.709 (high definition television). With the increasing popularity of wide gamut and high dynamic range contents and displays, the variety of colour gamuts of displays is expected to increase. This issue can be an obstacle to adoption of wide-gamut video colour contents in professional content creation since the compatibility of the contents to the employed displays, as well as the compatibility among different displays, is not ensured. The term display includes here any video colour reproduction equipment, such as direct view displays and projectors. Thanks to improvements in technology, the variety of colour gamuts and colour reproduction capacities of displays increases while the colour gamut and the colour encoding rules of existing colour space encoding standards are fixed.

To address this issue, IEC 61966-12-1: "Metadata for identification of colour gamut (Gamut ID)" specifies a colour gamut metadata scheme for video systems including information for colour reproduction. This metadata can apply to video content or displays. More specifically, improvements can be achieved if the wide-gamut colour content is created with the knowledge of the display colour gamut as well as if the colour reproduction in the display is done with the knowledge of the colour gamut of the pictorial content.

IEC 61966-12-1 has the capability to describe arbitrary 3D colour gamuts in a given colour space and include the full/medium profile for professional use and the simple profile for consumer use with easier product implementation. This approach is effective, but some ambiguities can occur in practical use. For example, if typical CE devices are able to decode the simple profile only, due to CPU and software limitations.

In this case, even if a sender device and a receiver device are "based on IEC 61966-12-1 standard",

- a) the receiver device cannot handle the Gamut ID of incoming contents, if the sender device sends only full or medium profile.
- b) the sender device should convert a full profile to a simple one for CE-devices, if the receiver can receive the simple profile only. But the conversion is not possible for all the cases.

Therefore, a simple Gamut ID profile standard of this standard has been developed to address this problem.

For published parts of this series of standards refer to the IEC website.