



SLOVENSKI STANDARD
SIST ISO/IEC 13818-2:2005/Amd 2:2010
01-oktober-2010

Informacijska tehnologija - Splošno kodiranje gibljivih slik in pripadajočih avdio informacij: Video
Dopolnilo 2: Podpora za barvne prostore

Information technology - Generic coding of moving pictures and associated audio information: Video
AMENDMENT 2: Support for colour spaces

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Technologies de l'information - Codage générique des images animées et du son associé: Données vidéo
AMENDEMENT 2: Prise en charge des espaces chromatiques

Ta slovenski standard je istoveten z: ISO/IEC 13818-2:2000/Amd 2:2007

ICS:

35.040	Nabori znakov in kodiranje informacij	Character sets and information coding
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SIST ISO/IEC 13818-2:2005/Amd 2:2010 en,fr

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INTERNATIONAL STANDARD

ISO/IEC 13818-2

Second edition
2000-12-15

AMENDMENT 2
2007-10-15

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2008-05-01

Information technology — Generic coding of moving pictures and associated audio information: Video

AMENDMENT 2: Support for colour spaces

*Technologies de l'information — Codage générique des images
animées et du son associé: Données vidéo*
(AMENDEMENT 2: Prise en charge des espaces chromatiques)

[SIST ISO/IEC 13818-2:2005/Amd 2:2010](https://standards.iso.org/standards/catalog/standards/sist/d4d588d4-b8e0-44b9-a2e9-ccb9ebf1123e/sist-iso-iec-13818-2-2005-amd-2-2010)

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Foreword

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International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of the joint technical committee is to prepare International Standards. Draft International Standards adopted by the joint technical committee are circulated to national bodies for voting. Publication as an International Standard requires approval by at least 75 % of the national bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO and IEC shall not be held responsible for identifying any or all such patent rights.

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This corrected version incorporates a correction to the edition number on the cover page, replacing "First edition" with "Second edition". [SIST ISO/IEC 13818-2:2005/Amd 2:2010](https://standards.iteh.ai/catalog/standards/sist/d4d588d4-b8e0-44b9-a2e9-ccb9ebf1123e/sist-iso-iec-13818-2-2005-amd-2-2010)

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INTERNATIONAL STANDARD
ITU-T RECOMMENDATIONInformation technology – Generic coding of moving pictures and
associated audio information: Video

Amendment 2

Support for colour spaces

1) Subclause 4.1

Add the following definitions at the end of subclause 4.1:

Floor() the largest integer less than or equal to the argument.

Round() $\text{Sign}(x) * \text{Floor}(\text{Abs}(x) + 0.5)$, for an argument x

2) Table 6-7

Replace Table 6-7 with:

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Table 6-7 – Colour primaries

Value	Primaries			Informative remarks
0	Forbidden			
1	primary green blue red white D65	x 0.300 0.150 0.640 0.3127	y 0.600 0.060 0.330 0.3290	ITU-R Rec. BT.709-5 ITU-R Rec. BT.1361 conventional colour gamut system or extended colour gamut system IEC 61966-2-4 Society of Motion Picture and Television Engineers RP 177 Annex B
2	Unspecified			Image characteristics are unknown or are determined by the application
3	Reserved			For future use by ITU-T ISO/IEC
4	primary green blue red white C	x 0.21 0.14 0.67 0.310	y 0.71 0.08 0.33 0.316	ITU-R Rec. BT.470-6 System M (historical) United States National Television System Committee 1953 Recommendation for transmission standards for colour television United States Federal Communications Commission Title 47 Code of Federal Regulations (2004) 73.682 (a) (20)
5	primary green blue red white D65	x 0.29 0.15 0.64 0.3127	y 0.60 0.06 0.33 0.3290	ITU-R Rec. BT.1700 625 PAL or 625 SECAM ITU-R Rec. BT.1358 625 ITU-R Rec. BT.470-6 System B, G (historical) ITU-R Rec. BT.601-6 625
6	primary green blue red white D65	x 0.310 0.155 0.630 0.3127	y 0.595 0.070 0.340 0.3290	ITU-R Rec. BT.1700 NTSC ITU-R Rec. BT.1358 525 Society of Motion Picture and Television Engineers 170M (functionally the same as the value 7) ITU-R Rec. BT.601-6 525

Table 6-7 – Colour primaries

Value	Primaries	Informative remarks
7	primary x y green 0.310 0.595 blue 0.155 0.070 red 0.630 0.340 white D65 0.3127 0.3290	Society of Motion Picture and Television Engineers 240M (functionally the same as the value 6)
8-255	Reserved	For future use by ITU-T ISO/IEC

3) Table 6-8

Replace Table 6-8 with:

Table 6-8 – Transfer characteristics

Value	Transfer characteristic	Informative remarks
0	Forbidden	
1	$V = 1.099 L_c^{0.45} - 0.099$ for $1 \geq L_c \geq 0.018$ $V = 4.500 L_c$ for $0.018 > L_c \geq 0$	ITU-R Rec. BT.709-5 ITU-R Rec. BT.1361 conventional colour gamut system (functionally the same as the value 6)
2	Unspecified	Image characteristics are unknown or are determined by the application.
3	Reserved	For future use by ITU-T ISO/IEC
4	Assumed display gamma 2.2	ITU-R Rec. BT.470-6 System M (historical) United States National Television System Committee 1953 Recommendation for transmission standards for colour television United States Federal Communications Commission Title 47 Code of Federal Regulations (2004) 73.682 (a) (20)
5	Assumed display gamma 2.8	ITU-R Rec. BT.1700 (2007 Revision) 625 PAL or 625 SECAM ITU-R Rec. BT.470-6 System B, G (historical)
6	$V = 1.099 L_c^{0.45} - 0.099$ for $1 \geq L_c \geq 0.018$ $V = 4.500 L_c$ for $0.018 > L_c \geq 0$	ITU-R Rec. BT.1700 NTSC ITU-R Rec. BT.1358 525 or 625 Society of Motion Picture and Television Engineers 170M (functionally the same as the value 1) ITU-R Rec. BT.601-6 525 or 625
7	$V = 1.1115 L_c^{0.45} - 0.1115$ for $L_c \geq 0.0228$ $V = 4.0 L_c$ for $0.0228 > L_c$	Society of Motion Picture and Television Engineers 240M
8	$V = L_c$	Linear transfer characteristics
9	$V = 1.0 - \log_{10}(L_c) + 2$ for $1 \geq L_c \geq 0.01$ $V = 0.0$ for $0.01 > L_c \geq 0$	Logarithmic transfer characteristic (100:1 range)
10	$V = 1.0 - \log_{10}(L_c) + 2.5$ for $1 \geq L_c \geq 0.0031622777$ $V = 0.0$ for $0.0031622777 > L_c \geq 0$	Logarithmic transfer characteristic (316.22777:1 range)

Table 6-8 – Transfer characteristics

Value	Transfer characteristic	Informative remarks
11	$V = 1.099 L_c^{0.45} - 0.099$ for $L_c \geq 0.018$ $V = 4.500 L_c$ for $0.018 > L_c > -0.018$ $V = -(1.099 (-L_c)^{0.45} - 0.099)$ for $-0.018 \geq L_c$	IEC 61966-2-4
12	$V = 1.099 L_c^{0.45} - 0.099$ for $1.33 > L_c \geq 0.018$ $V = 4.500 L_c$ for $0.018 > L_c \geq -0.0045$ $V = -(1.099 (-4 * L_c)^{0.45} - 0.099) \div 4$ for $-0.0045 > L_c \geq -0.25$	ITU-R Rec. BT.1361 extended colour gamut system
13-255	Reserved	For future use by ITU-T ISO/IEC

4) Subclause 6.3.6 semantics of matrix_coefficients and Table 6-9

Replace semantics of matrix_coefficients and Table 6-9 with:

matrix_coefficients – This 8-bit integer describes the matrix coefficients used in deriving luminance and chrominance signals from the green, blue, and red primaries, and is defined in Table 6-9

(Table 6-9 – Matrix coefficients
(standards.iteh.ai))

Value	Matrix	Informative remarks
0	Forbidden	
1	$E'_Y = 0.7152 E'_G + 0.0722 E'_B + 0.2126 E'_R$ $E'_{PB} = -0.3854 E'_G + 0.5000 E'_B - 0.1146 E'_R$ $E'_{PR} = -0.4542 E'_G - 0.0458 E'_B + 0.5000 E'_R$	ITU-R Rec. BT.709-5 ITU-R Rec. BT.1361 conventional colour gamut system and extended colour gamut system IEC 61966-2-4 xvYCC ₇₀₉ Society of Motion Picture and Television Engineers RP 177 Annex B
2	Unspecified	Image characteristics are unknown or are determined by the application
3	Reserved	For future use by ITU-T ISO/IEC
4	$E'_Y = 0.59 E'_G + 0.11 E'_B + 0.30 E'_R$ $E'_{PB} = -0.331 E'_G + 0.500 E'_B - 0.169 E'_R$ $E'_{PR} = -0.421 E'_G - 0.079 E'_B + 0.500 E'_R$	United States National Television System Committee 1953 Recommendation for transmission standards for colour television United States Federal Communications Commission Title 47 Code of Federal Regulations (2004) 73.682 (a) (20)
5	$E'_Y = 0.5870 E'_G + 0.1140 E'_B + 0.2990 E'_R$ $E'_{PB} = -0.3313 E'_G + 0.5000 E'_B - 0.1687 E'_R$ $E'_{PR} = -0.4187 E'_G - 0.0813 E'_B + 0.5000 E'_R$	ITU-R Rec. BT.1700 625 PAL or 625 SECAM ITU-R Rec. BT.1358 625 IEC 61966-2-4 xvYCC ₆₀₁ ITU-R Rec. BT.470-6 System B, G (historical) (functionally the same as the value 6) ITU-R Rec. BT.601-6 625
6	$E'_Y = 0.5870 E'_G + 0.1140 E'_B + 0.2990 E'_R$ $E'_{PB} = -0.3313 E'_G + 0.5000 E'_B - 0.1687 E'_R$ $E'_{PR} = -0.4187 E'_G - 0.0813 E'_B + 0.5000 E'_R$	ITU-R Rec. BT.1700 NTSC ITU-R Rec. BT.1358 525 Society of Motion Picture and Television Engineers 170M IEC 61966-2-4 xvYCC ₆₀₁ (functionally the same as the value 5) ITU-R Rec. BT.601-6 525