SLOVENSKI STANDARD

SIST ISO/IEC 13818-2:2005/oAmd 2:2010

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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

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**

<u>**ICS:**</u>

35.040	Nabori znakov in kodiranje informacij	Character sets and information coding

SIST ISO/IEC 13818-2:2005/oAmd 2:2010   **en,fr**

INTERNATIONAL
STANDARD

**ISO/IEC
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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

ISO/IEC 13818-2:2000/Amd.2:2007(E)

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Foreword

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Amendment 2 to ISO/IEC 13818-2:2000 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 29, *Coding of audio, picture, multimedia and hypermedia information*, in collaboration with ITU-T. The identical text is published as ITU-T Rec. H.262 (2000)/Amd.2 (01/2007).

This corrected version incorporates a correction to the edition number on the cover page, replacing "First edition" with " Second edition".

INTERNATIONAL STANDARD
ITU-T RECOMMENDATION

Information 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()   Sign(x) * Floor(Abs(x) + 0.5), for an argument x

2) Table 6-7

Replace Table 6-7 with:

Table 6-7 – Colour primaries

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

ISO/IEC 13818-2:2000/Amd.2:2007 (E)

Table 6-7 – Colour primaries

Value	Primaries			Informative remarks
7	primary	x	y	Society of Motion Picture and Television Engineers 240M
	green	0.310	0.595	(functionally the same as the value 6)
	blue	0.155	0.070	
	red	0.630	0.340	
	white D65	0.3127	0.3290	
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	$V = 1.0 - \text{Log}_{10}(L_c) \div 2$
	      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	$V = 1.0 - \text{Log}_{10}(L_c) \div 2.5$
	      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

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