

PB_05.005b_2024-04-30 Supplement Fileformat UHDTV-SDR

SUPPLEMENT
SPECIFICATION
FILEFORMAT
BROADCAST
UHDTV-SDR

Author:	Heinzl, Fürst / TSA-H	Created:	2024-04-19
Proved:	Andreas Fraundorfer / TSA-H	Proved:	2024-04-24
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Intermediate Format Specification UHD TV-SDR

Version 1.1

XAVC_UHD_SDR¹	
Container ²	MXF OP1A
Codec	XAVC Class 300 CBG
Resolution	3840 x 2160
Frame Rate	50p
Video Bit Rate	500 Mbit/s
Chroma Subsampling	4:2:2
Bit Depth	10 Bit
BlackRefLevel	64
WhiteRefLevel	940
Color Range	897
Color Primaries ³	ITU-R BT. 2020
Transfer Characteristic ³	ITU-R BT. 2020
Coding Equations ³	ITU-R BT.2020 NCL
Peak Luminance	100 Nits
Audio ⁴	8 Tracks ⁵ 16 Tracks ⁶
Channel Count	1 Audiochannel = 1 Audiotrack
Bit Depth	24 Bit
Sampling Rate	48 KHz
Coding	PCM
Multichannel audio	Discrete

⁵Raw Material	
Audio track allocation	
Audiotrack 1	Original Sound Left or Mic 1
Audiotrack 2	Original Sound Right or Mic 1
Audiotrack 3	Cam Mic Left or Mic 2
Audiotrack 4	Cam Mic Right or Mic 2
Audiotrack 5	Reserved
Audiotrack 6	Reserved
Audiotrack 7	Reserved
Audiotrack 8	Reserved

6Programm Exchange	
Start Timecode	00:00:00:00
System Item Timecode	continuous
Content	no bars and tones - picture starts on first frame
Loudness	EBU R128
Audio track allocation: Multichannel Production	
Audiotrack 1	Stereo Left
Audiotrack 2	Stereo Right
Audiotrack 3	Multichannel Left
Audiotrack 4	Multichannel Right
Audiotrack 5	Multichannel Center
Audiotrack 6	Multichannel LFE
Audiotrack 7	Multichannel Surround Left
Audiotrack 8	Multichannel Surround Right
Audiotrack 9	Stereo Left - 2nd Language / Audio Description
Audiotrack 10	Stereo Right - 2nd Language / Audio Description
Audiotrack 11	Multichannel Left - 2nd Language / International Stereo Left
Audiotrack 12	Multichannel Right - 2nd Language / International Stereo Right
Audiotrack 13	Multichannel Center - 2nd Language / Reserved
Audiotrack 14	Multichannel LFE - 2nd Language / Reserved
Audiotrack 15	Multichannel Surround Left - 2nd Language / Reserved
Audiotrack 16	Multichannel Surround Right - 2nd Language / Reserved
Audio track allocation: Stereo Production	
Audiotrack 1	Stereo Left
Audiotrack 2	Stereo Right
Audiotrack 3	International Stereo Left
Audiotrack 4	International Stereo Right
Audiotrack 5	Stereo Left - 2nd Language / Audio Description
Audiotrack 6	Stereo Right - 2nd Language / Audio Description
Audiotrack 7	Reserved
Audiotrack 8	Reserved
Audiotrack 9	Reserved
Audiotrack 10	Reserved
Audiotrack 11	Reserved
Audiotrack 12	Reserved
Audiotrack 13	Reserved
Audiotrack 14	Reserved
Audiotrack 15	Reserved
Audiotrack 16	Reserved

Footnote
¹ XAVC Intra according SMPTE RDD32:2017
² Header Partition Status "Closed and Complete"
³ According IRT Operational Guideline -Draft "HDR signalisation in MXF for H.264, Version 0.1" https://beschaffung.orf.at/agb
⁴ Unused tracks have to be filled with silence or muted. Use of reserved tracks require bilateral agreement. 8 Tracks only allowed for Raw Material.

For technical support please contact: Quality Content Management E-Mail: qcm@orf.at