ORF TECHNIK

Intermediate Format Specification - HD

Version 1.1

XDCAM_HD_422[1]

Container[2]	MXF OP1A
Codec	4:2:2P@HL Long GOP
Resolution	1920x1080
Frame Rate	50i
Field Dominance	Top Field
Video Bit Rate	50 Mbit/s
Chroma Subsampling	4:2:2
Bit Depth	8 Bit
BlackRefLevel[3]	16
WhiteRefLevel[3]	235
Color Range[3]	225
Transfer Characteristic	ITU-R BT. 709
Peak Luminance	100 Nits
Audio[4]	8 Tracks
Channel Count	1 Audiochannel = 1 Audiotrack
Bit Depth	24 Bit
Sampling Rate	48 KHz
Coding	PCM
Multichannel audio	Dolby E 16Bit: L/R, C/LFE, SL/SR Dolby E 20Bit: L/R, C/LFE, SL/SR, Stereo

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Programme 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	Dolby E
Audiotrack 4	Dolby E
Audiotrack 5	Stereo Left - 2nd Language / Audio Description
Audiotrack 6	Stereo Right - 2nd Language / Audio Description
Audiotrack 7	Dolby E - 2nd Language / International Stereo Left
Audiotrack 8	Dolby E - 2nd Language / International Stereo Right
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

Raw - 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

Advert	
Start Timecode	00:00:00:00
System Item Timecode	continuous
Clip Duration	≥ 5 seconds clip duration = playout duration
Content	no bars, black frames and tones - picture starts on first frame and ends on last frame
Loudness	EBU R128
Audio track allocation:	
Audiotrack 1	Stereo Left
Audiotrack 2	Stereo Right
Audiotrack 3	Reserved
Audiotrack 4	Reserved
Audiotrack 5	Reserved
Audiotrack 6	Reserved
Audiotrack 7	Reserved
Audiotrack 8	Reserved

[1] XDCAM HD 422 (MPEG HD422) according SMPTE RDD09:2013
[2] Header Partition Status "Closed and Complete" No Pre-Charge/Roll-Out allowed
[3] According EBU R 103 "Video Signal Tolerance In Digital Television Systems"
[4] Unused tracks have to be filled with silence or muted In case of Dolby E "Fixed Channel Status Data" have to be set to "Non PCM" Use of reserved tracks require bilateral agreement

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