

10-10-10 Recommendation

File Based delivery broadcast content in the Netherlands

Project 10-10-10 aims to stimulate cooperation within the Dutch audiovisual industry. One of the objectives is the standardization of the exchange of files between parties. This document describes the technical recommendation for sharing files.

Video

With respect to video formats, a distinction is made between SD and HD:

SD: MXF D10-30 of D10-50

HD: MXF 1080i50 XDCAM HD 422 Long GOP 50

Aspect Ratio: 16:9 Full Height Anamorphic

Audio

With respect to audio formats, three options should be considered: mono, stereo and multichannel audio. The audio standard to be used should be agreed on by content receiver and sender on forehand.

Mono ⌘

Track-number ⌘	Content ⌘
1 ⌘	Mono ⌘
2 ⌘	Mono ⌘
3 ⌘	⌘
4 ⌘	⌘

Stereo with Music and Effects (EBU R123 - Option 4B) ⌘

Track-number ⌘	Content ⌘
1 ⌘	Stereo L ⌘
2 ⌘	Stereo R ⌘
3 ⌘	M&E ⌘
4 ⌘	M&E ⌘

Stereo with discrete multichannel audio (EBU R123 - option 8A) ⌘

Track-number ⌘	Content ⌘
1 ⌘	Stereo L ⌘
2 ⌘	Stereo R ⌘
3 ⌘	MCA L ⌘
4 ⌘	MCA R ⌘
5 ⌘	MCA C ⌘
6 ⌘	MCA LFE ⌘
7 ⌘	MCA L SUR ⌘
8 ⌘	MCA R SUR ⌘

In some cases Dolby-E can be used:

Stereo with encoded multichannel audio (EBU R123 - option 4A)

Track-number ⌘	Content ⌘
1	Stereo L
2	Stereo R ⌘
3	Dolby E
4	Dolby E

The stereo signals are required in all cases for multichannel audio.

Loudness

Compliant with EBU R128 recommendation.

Timecode

Timecode should conform defined Timecode Track in Material Package of the MXF File. Content starts on timecode as given in the metadata (Start of Message). VITC is not used.

Colorbar / Slade

No colorbar, slade or black is required. Length of content equals the given length in the metadata XML file.

Metadata

Metadata should be delivered in a separate XML file. This model is based on the international standard SMTE RP210V12.

Project 10-10-10 will provide tools to the market that enables them to create the XML Metadata files. The following fields of metadata are required by the Dutch broadcasters.

Production Framework	
Publication title	Main title of production
Original language spoken	ISO 639 Extended Language Code for the original primary spoken language with optional country variant
Language class	
Descriptive Comment	The comment or note as text. E.g. Head banding,
SD / HD flag	Indicates whether the production is in SD or HD
Language	
Second language spoken	W3C RFC 4646 of ISO 639-3
Broadcast data	
Organization name	Name of the organization that provides the broadcast
Airdate	dd:mm:jjjj
Season number	Year/season of production
Season Episode number	Serial number of episodes / episodes within a season
Season Episode title	Name of the episode / episode
Absolute production length	The absolute duration of the project, publication etc
Production part class	The separate sections between commercial breaks
Mark In	Specifies an optional IN point mark. The position is measured relative to the origin, in edit units, and applies to the track of material in which it is specified.
Mark Out	Specifies an optional OUT point mark. The position is measured relative to the origin, in edit units, and applies to the track of material in which it is specified.
Subtitling	
Present	Indication whether there are subtitles
Method	Subtitles burned, mixed, separately entered, etc
Aspect Ratio	
Recording Aspect Ratio	Hor. Vert. aspect ratio of the recording device
Display Aspect Ratio	Hor. Vert. aspect ratio of production to be shown on display other than those intended
Sound Parameters	
Audio reference level	dBm, dBfs, 15dBu, +9 dBm, or EBU proposal -9 dBfs nominal, -5dBfs peak
Audio Mono Channel Count	The number of mono channels in the mix
Audio Track	track 1,2,3 etc
Audio Stereo Channel Count	The number of stereo channels in the mix
Audio Track pair	Track pair 1-2, 3-4 etc
Electro-spatial data	Mono, Dual mono, Stereo A+B, Stereo M&S, Dolby surround, MPEG BC/NBC etc
Audio Track paar	Track paar 1-2, 3-4 enz
Electro-spatial gegevens	Mono, Dual mono, Stereo A+B, Stereo M&S, Dolby surround, MPEG BC/NBC etc
Sound coding	
STEREO	SD & HD: 1&2: Left & Right (PCM), 3&4: Optional additional audio background/comments (PCM)
Surround (Dolby ProLogic)	SD & HD: 1&2: Left & Right (Surround-encoded), 3&4: Optional additional audio background/comments (Surround-encoded)
STEREO+DOLBY-E	Only in HD: 1&2: Left & Right (PCM), 3&4: Dolby-E bitstream (including L/R/C/LFE/LS/RS)
5.1 in PCM	"Six individual audio channels. See XDCAM HD or XDCAM HD422 including 2, 4 or 8 audio channels support (each in a separate track, so one channel / track)
Vision Parameters	
Codec definition	"Specifies the used codec in MXF wrapper D10, D11 etc. numbered item standard RP224, Default Type b.v. D-10 mapping 30Mbps of 50 Mbps 625/50-1.
Copy and paste to browser http://www.smpte-ra.org/mdd/RP224v10-publication-20081215.xls "	Code uit de thesaurus met standaarden RP 224 Copy en paste naar browser http://www.smpte-ra.org/mdd/RP224v10-publication-20081215.xls
Event	
Event indicator	A term that describes the event, in terms of the production process. Eg Project mission, special scene, major landmarks, etc.
Event Start Date and Time	The start date and time of the event
Event End Date and Time	The end date and time of the event
Key persons	
Producent	The name of the producer
Voice Talent	The name of the voice over

File naming

Names of content and metadata file should be equal, except the file-extension.

Name should be unique and based on the UTF-8 standard (0-9, A-Z,a-z,"-'").

Extension for content file should be (filename).mxf.

Extension for metadata file should be (filename).xml.

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