



TimeLine

Content Services

38, Bolshoy Tishinskiy per. Moscow 123557 Russia

Tel: +7 (495) 605 3860

info@timeline.ru

www.timeline.ru

Source Requirements to Create Digital Cinema Packages

v.6

The following is required to create a DCI compliant Digital Cinema Package. When providing your source master, please adhere to the following specifications:

VIDEO. Picture Source Requirement Options

FILE FORMATS:

QuickTime/MXF Movie with embedded audio (No fields - Progressive):

- Uncompressed 10-bit 4:2:2, 24fps
- ProRes 422 HQ
- ProRes 4444
- Avid DNxHR 444
- Avid DNxHR HQX
- H265
- H264 (Must be over 20 Mbps; High Profile)

OR

Uncompressed Image Sequence:

- TIFF Files, 16-bit
- DPX Files, 10-bit
- Cineon Files., 10-bit

COLOR SPACE:

- sRGB
- Rec.709 2.2 Gamma Video range 64-940
- P3 DCI X'Y'Z Full Video range 0-1013

If you plan to deliver a logarithmic file sequence, please get in touch with TimeLine Content Services to check compliance.

RESOLUTION AND ASPECT RATIO:

	For 2K	For 4K
SCOPE 2.39:1	2048 x 858 pix	4086 x 1716 pix
FLAT 1.85:1	1998 x 1080 pix	3996 x 2160 pix
1.78:1 and bellow	1920 x 1080 pix	3840 x 2160 pix

All DCPs are created to fit into one of the following container sizes.

If your source material does not fit in one of the containers listed above, it will be letterboxed, Pillar-Boxed, or resized to fit. However, if you are only delivering Flat or HD (16x9) to TimeLine, they will Pillar-Box to create the Scope version. TimeLine can perform a rescale from HD resolution to 2K resolution where possible. (Please note: this will result in a smaller image on-screen, but no content is lost). If you do not wish this rescale process, please inform TimeLine upon submission of materials.

If your video is not High Definition (HD) but Standard Definition (SD – PAL or NTSC), up-conversion (de-interlacement + resize) will be applied and additional charges will be incurred. Obviously this support is not optimal: the resolution is not increased with the up-conversion process. TimeLine will accept no liability for the overall picture quality of any Digital Cinema title sourced from Standard Definition material.



**FRAME RATE:
24fps (preferred)**

If your commercial was originally made for TV (25 fps), one frame per second will have to be deleted in order to convert the footage to 24 frames per second. Unfortunately, removing frame will result in a noticeably jerky motion. Video supplied as anything other than 24fps (25, 23.98, 50 or 60 fps), will require a frame rate conversion to 24 fps and additional charges will be incurred.

**PIXEL ASPECT RATIO:
Square Pixels (Full Frame)**

Frames should always be supplied progressive, NOT interlaced

3D SOURCE FILES:

For 3D content, 2 picture tracks are required: one for left eye and one for right eye.

Video Tapes is not accepted so far. Side by side is an alternative but not the best option as resolution would be decreased. Progressive pictures are recommended as opposed to interlaced pictures as the de-interlacing process would have to take place on each eye separately which could lead to small differences between the eyes.

TITLE SAFETY:

If **2K** (1998 x 1080) image source cinema title safety area: 1798 x 972 pix

If **HD** (1920 x 1080) image source cinema title safety area: 1605 x 903 pix

To check for cut off in your video please download our projection mask (at www.timeline.ru).

[Title Safe for 2K](#)

[Title Safe for HD](#)

Load it into your editing system as a layer over your video and you will see what will be cut off.

ADDITIONAL FORMATS:

TimeLine can accommodate other formats that are not on our core specifications. Please contact our Senior Manager of Creative Services, with any question.

AUDIO. Sound Source Requirement Options

FULL 5.1MIX preferably 6 discrete channels or **Stereo MIX** soundtrack.

Audio may be supplied embedded into the file if delivering QuickTime video sources.

If **5.1 MIX**, please provide the separate mono stems:

- CH1 = L – Left Front
- CH2 = R – Right Front
- CH3 = C – Center
- CH4 = LFE – Low Frequency Effects
- CH5 = Ls – Left Surround
- CH6 = Rs – Right Surround

We will not accept any mixed or compressed files including AC-3 or AAC files.

IMPORTANT: 5.1 audio mix must include LT/RT on CH7 and CH8 (complete down mix)

If **Stereo MIX**, please provide the separate stereo mix stems, if at all possible, and TimeLine will re-master it into a full Dolby 5.1 mix and additional charges will be incurred.

- Linear PCM Broadcast WAV, WAV or AIFF files
- Sample Rate: 48 kHz or 96 kHz
- Bit Rate: 24-bit or 16-bit
- Audio reference level should be -20 dBFS
- Frame Rate: 24 FPS. Audio supplied as anything other than 24 fps will require a frame conversion session and additional charges will be incurred.
- Mono or stereo files split, each file properly named
- No sync plop, audio files should be exact picture length.
- To ensure no problems with sync, line up the WAV with the picture. PCM Header information should be supplied

IMPORTANT AUDIO LEVEL REQUIREMENT: Please note that cinemas have a technical requirement that the Audio does not exceed a loudness level of 82db LEQ. This is an average frequency level, over the entire length of the spot.

- If you cannot provide a 5.1 audio mix we will accept stereo as well. Please note that by default all stereo files will be up-mixed to 5.1 during our encoding process. Please let us know if you do not want your file to be up-mixed.
- Please ensure that the sound is mixed against the same picture as the one you are supplying us so that there aren't any sync issues later in the process.
- The Dolby Surround 5.1 cinema mix should be budgeted for by the creative agency, and processed at a Dolby approved sound studio. We accept Unmixed sound stems (music, FX, dialogue, voiceover) as separate files.
- We specialize in 5.1 mixing for cinema commercials also.

SUBTITLES

TI CineCanvas (Interop)

Interop compliant subtitles are based on the "Subtitle Specification for DLP Cinema Projection Technology" published by Texas Instruments. The default file extension is „.xml“.

SMPTE 428-7 D-Cinema Distribution Master – Subtitle

SMPTE compliant subtitles are based on the specification "428-7 D-Cinema Distribution Master – Subtitle" published by the SMPTE. The default file extension is „.xml“.

SMPTE 429-5 D-Cinema Packaging – Timed Text Trackfile

SMPTE compliant subtitles are based on the specification "429-5 D-Cinema Packaging – Timed Text Trackfile" published by the SMPTE. This is the distribution format for unencrypted or encrypted subtitles. The default file extension is “.mxf”.

EBU STL files are also acceptable and can be converted by TimeLine into the correct format and additional charges will be incurred.

- All subtitle reels should be delivered starting at midnight for each subtitle (00:00:00:00).
- All subtitles should be delivered at 24fps.
- Where ever possible supply the font file as Ariel Unicode compressed at size 42.

If none of these 2 formats can be delivered, please submit a timecoded text file

Subtitles rendered on the HD Tape along with the picture. In this case take care to the size of the subtitles and the positioning: a cinema screen is much bigger than a TV screen, no needs of a big type size.

- All subtitles should be horizontally justified from center (Rather than from left or right).
- When aligning dual line fonts vertically our ideal line spacing's are 7 and 14 from the bottom.
- All subtitles should be vertically justified from the bottom (Rather than from Top).
- We highly recommend the drop shadow effect to allow subtitles to stand out against light areas of picture.

NB: If there are subtitles that overlap the reel join please leave the overlapping subtitle in the outgoing reel as opposed to the incoming.

FILES NAMING

File names must start with a letter, and can contain letters, digits, or underscores and cannot contain following characters \ / : * ? " < > and spaces.

Please upload the sequence in a folder named with requested information as follows:

Product-Title_Length_Fps_ColourPrimaries_Range_Format

Where:

Product-Title – Name of feature film, trailer or commercial

Length – duration in second

Fps - framerate of source file

ColourPrimaries – color space

Range – video range (Legal или Full)

Format – picture format (2D или 3D)

For example: MYFILMNAME_30s_24fps_rec709_Full_2D

For 3D:

Video Files for left and right eyes should be uploaded into separate folders.

ENCRPTION

- TimeLine recommends all feature length content be distributed in encrypted form
- For delivery of encrypted DCP content to TimeLine from other facilities, a distribution KDM targeted at the DCP and TimeLine's keystore system must be created. Our keystore certificate is available on request.
- All DKDMs should be SMPTE ST 430-1 compliant and in the "Transitional 1" formulation. They should contain no "ContentAuthenticator" element. "DeviceList" should contain only the certificate thumbprint or the DCI "assume trust" certificate thumbprint. It is now common industry practice to eliminate the "ContentAuthenticator" from the KDM when making a KDM for Interop content (per ISDCF).

DELIVERY

FTP SOURCE TRASFER:

Upload to TimeLine FTP Content Hub: please contact us for link and login details

Once connected to the FTP Content Hub, please follow the steps below to upload material:

Click "Create Folder" and name this as per above naming convention

Click "Add Files" and upload your frame sequence to this folder

Please ensure all les are zipped and labelled clearly.

Please contact TimeLine when les have uploaded.

OTHER METHODS SOURCE TRASFER:

- Client supplied FTP link
- TimeLine can supply you with a direct production house FTP link
- Aspera, Dropbox, Hightail, WeTransfer, or other online transfer link
- USB / Hard Drive / Stick (NTFS / FAT 32). Please arrange your own courier for drop o and collection.

DCP DELIVERY:

- When using our Aspera or FTP servers for digital delivery of a DCP, please upload the entire DCP folder and do not upload any archive files (e.g. zip, rar). When uploading multiple DCPs you will be provided with individual login credentials for each film.
- When sending DCPs on physical discs, please use an external 3.5" USB or eSATA hard drive with 220V compatible power supply. We do not accept 2.5" hard drives or USB sticks for DCP delivery.
- DCP distribution disks shall contain a standard "MBR" partition table. This is meant to specifically exclude "GPT", "BSD", and other partition table types. The MBR partition table shall contain one and only one partition record. The single partition record shall be the first Primary partition record. The partition identifier shall be 0x83, indicating a Linux native partition.
- The distribution media partition shall be formatted in either the EXT2 or the EXT3 format. When the file system is formatted, the inode size shall be set to 128 bytes. EXT3 is preferred.
- Per SMPTE 429-9-2007, the storage volume (partition) shall contain exactly one Asset Map.
- Proper file naming convention of your file must be observed. See: <http://digitalcinemanamingconvention.com/>

DKDM DELIVERY:

- Please contact TimeLine to get e-mail with personalized access information to our secure upload area. All DKDMs need to be uploaded to our central server via SSL upload. Please do not send DKDMs via e-mail.
- Access information to the DKDM upload area will be sent to the e-mail contact you provided in the "Participation Form".
- It is required that for each encrypted CPL one DKDM is issued for our certificate.
- All DKDMs must be valid from the moment the DCP is received by TimeLine.
- Should you require further assistance with the DKDM upload please contact us.

Please note that source materials will be deleted from the server once the DCP is approved at the pre-distribution screening we host for you.

Once a DCP has been created, no further revisions are possible without incurring extra charges (including the re-DCP fee).

Materials are due no later than 5 – 7 BUSINESS DAYS PRIOR TO YOUR START DATE.

If the source material is not fully compliant with the present document and for more information, please contact TimeLine Content Services by email: info@timeline.ru