



INTERNATIONALE FILMFESTSPIELE BERLIN

TECHNICAL GUIDELINES 2018



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BERLINALE 2018

TECHNICAL GUIDELINES

SUMMARY FOR 2018

- **Delivery deadline for festival/exhibition copies:** The delivery deadline for all cinema presentation material is February 2nd, 2018. This deadline is mandatory for all participants. Meeting this deadline is especially relevant, since all film and video formats - for festival and EFM alike - must pass a comprehensive and time-consuming quality management process before their first showing.
- **Video Screenings:** In 2018, we will no longer accept or support tape media (HDCAM, HDCAM SR, etc.). Accepted video formats are Blu-ray discs (EFM only) and QuickTime ProRes422 files. Blu-Ray discs must not be DRM protected by any copy-protection scheme. However, we strongly recommend that EFM clients send ProRes files instead of Blu-ray discs, wherever applicable. All delivered video media will be processed into encrypted DCPs, which will be used for the Berlinale and EFM screenings only and will be deleted after the festival.
- **Digital Delivery through Aspera Upload:** We continue to accept and prefer digital delivery of both DCPs and ProRes files via upload to our central servers through the Aspera file transfer service, which is free of charge. However, a broadband internet access with more than 50Mbit/s upload bandwidth is needed. If you would like to digitally transmit your exhibition copy, please contact films@berlinale.de for credentials for our Aspera server and for more detailed information.
- **DCP Best Practice:** We have compiled a separate document with more detailed recommendations on DCP mastering, packaging and delivery, which may be especially useful for participants with little DCP experience. The document can be requested by e-mail (dcinema@berlinale.de).
- **D-Cinema KDMs:** Since 2012, we request Distribution KDMs (DKDMs) for all encrypted DCPs. The keys are to be sent to our central server via SSL-encrypted web upload and are automatically verified upon entry. We cannot accept DKDMs sent by e-mail. All DKDMs must be valid from the moment the DCP arrives in Berlin until February 26th, 2018.



DCP DIGITAL CINEMA SCREENINGS

GENERAL REMARKS

- All DCPs and DKDMs must arrive no later than February 2nd, 2018.
- The DKDM must be valid as soon as the DCP is received by the Festival and must stay operative until February 26th, 2018.
- Aspera uploads must be completed no later than February 2nd, 2018. Depending on your internet connection, please start the uploads ahead of time.
- DCP hard drives must be sent in appropriate packaging to prevent them from damage during transport and must include all necessary cables and power adapters (230 V).
- We accept both SMTPE and InterOP DCPs.
- We accept both 2K and 4K DCPs. 4K screenings are only available in selected theatres. See the appendix for details.
- We can accept high-frame-rate DCPs (HFR), but we will only be able to screen them in selected theatres. Please prenotify the festival's Film Office (films@berlinale.de) if you are planning on presenting a high-frame-rate DCP.

DKDMs

Using DKDMs is currently the only alternative for managing the vast number of DCP screenings during the Berlinale and the EFM. Without them, the Festival would not be able to execute suitable quality assurance measures and to exercise its responsibility for the smooth functioning of all screenings.

As soon as they arrive in Berlin, all DCPs are checked for technical quality and compatibility in a multi-level analysis. There will be over 70 D-Cinema servers in use during the festival, and since screening times and venues for a film can sometimes change on short notice, we maintain a complex distribution process for the preparation, verification and performance of the screenings.

Since 2012 we have therefore developed a secure workflow based on DKDMs, which is distinguished by the following characteristics:

- All DKDMs are solely handled and processed within a trusted environment.
- KDMs are issued only for systems employed by the Berlinale and only as they are needed for the festival's purposes.



- The cert chains of all festival servers have been thoroughly examined and verified.
- After the DKDM has been uploaded, the Festival can be authorised to use the DKDM to repackage or repair the DCP in case we should encounter issues during our quality assurance process.
- An overview of all KDMs generated from your DKDM is available at the KDM upload website.

TECHNICAL REQUIREMENTS

Image-Encoding

JPEG 2000 maximum bit rate 250 Mbps
 frame rate 24 fps, 25 fps, 30 fps or 48 fps

Packaging Format

JPEG 2000 MXF Interop DCP or SMPTE DCP

Security

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).

Subtitles

We recommend "burned-in" subtitles for all DCPs. However, we will also accept XML and PNG subtitles. Please note that there are special subtitle regulations that apply to all films presented in the Competition section. You will receive detailed information once the film is accepted into Competition.

Data Media

DCP content

- When using our Aspera 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 hard-drives, we generally prefer external 3.5" USB 3 or eSATA hard drives with 230V compatible power supply.



- 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://isdcf.com/dcnc/>

DKDMs

- Once your screening schedule has been confirmed, you will receive an e-mail with personalised 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" for the festival or during the EFM film registration.
- 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 the Festival until February 26th, 2018.

Should you require further assistance with the DKDM upload please contact us at kdms@berlinale.de.

Soundtrack

5.1 Channel PCM

7.1 Channel PCM at certain venues

Atmos or Auro at certain venues - please contact us at films@berlinale.de



VIDEO SCREENINGS

GENERAL REMARKS

All video formats will be converted into encrypted D-Cinema Packages (DCPs) to ensure the best possible image and sound quality during playback. In order to allow for all programmed films to be included in this process, it is indispensable that all screening material arrives in Berlin no later than February 2nd, 2018.

In order to guarantee an unobstructed distribution process, the following technical specifications for the delivered content are mandatory.

- There must be only one film title per medium. Do not send multiple films on one medium.
- Subtitles must be positioned in the "active" picture area of the projected frame and not in the dark "letterbox" area.
- All content must be unencrypted.
- In order to achieve the best possible screening quality, the Festival prefers the frame rate on the screening medium to be the same as in the source material.
- The Festival executes technical quality checks of all video media. In order to be able to carry out these checks, the material must be delivered in time.
- DCPs will be created for Festival use only. We will not be able to send you a copy of the DCP.
- We strongly recommend sending ProRes files instead of Blu-ray discs, wherever applicable.

PRORES 422 FILES

QuickTime ProRes422 files need to be encoded using the following settings in QuickTime:

| | |
|-------------------|--------------------------------------------------------------------------------------------------|
| Frame Dimensions: | 1920 x 1080 |
| Scanning Method: | progressive |
| Colour Format: | 4:2:2 YCBCR (4:4:4 is not supported) |
| Frame rates: | 23.98 fps, 24 fps, 25 fps, 29,97 fps |
| Gamma: | Apple ProRes codecs have a native gamma of 2.2 |
| Audio: | 5.1 Linear PCM |
| Subtitles: | Subtitles must be "burned-in" and positioned in the "active" picture area of the projected frame |



- The file is to be delivered on an external 3.5" USB or eSATA hard drive with 230V compatible power supply. We do not accept 2.5" hard drives, firewire hard drives or USB sticks.
- The audio should be 5.1. For the detailed channel layout there is a "How-To", which can be provided upon request.
- If you cannot provide a 5.1 audio 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.

Should you require any further information, please contact us directly (films@berlinale.de).

We can also provide screenshots of the correct export settings upon request.

BLU-RAY DISCS

Discs are only allowed for screenings in the EFM. Furthermore, they can only be played in appointed theatres. Please consult with the EFM's programming department and refer to the theatre list in the appendix of this document.

Blu-ray Video-Disc: Codecs: MPEG-2 HL@MP / MPEG4-AVC / H.264

Region code: ABC / FREE (no flag set)

Copy protection: none

- Blu-Ray discs must not be DRM protected by a copy-protection scheme (e.g. AACES Encryption, BD+, BD-ROM Mark, Cinavia).
- Only professionally mastered Blu-ray discs are accepted. Discs burned on a personal computer run the risk of creating problems during the screening. In case the Blu-ray disc is created on a personal computer, however, please make sure to run it on a regular hardware player and do a comprehensive check routine before sending it.
- There must be only one film title per disc. Do not send multiple films on one disc.
- Subtitles need to be "burned-in" (hard-coded) into the "active" picture area of the image. Blu-ray discs with separate subtitle tracks will be rejected.



DEADLINES AND SHIPPING

DEADLINES

Festival and EFM

- All prints and screening material must arrive in Berlin **no later than February 2nd, 2018.**

In January 2018, however, some sections of the festival (except *Competition*) are offering advanced press screenings to selected films in their programmes, so that it may well become necessary to supply the festival version of your film before this date. For clarification please check directly with the section into which your film has been invited.

EFM Only

EFM Express Handling Fee

For EFM customers only, EFM management grants the option of delivering a film's screening copy even after the official deadline of February 2nd, 2018. If you make use of this option, an express handling fee of 250€ per screening copy applies.

The latest possible date for delivery is **5 days before the first screening of the film.**

The express handling fee of 250€ applies to all EFM screening copies that arrive later than February 2nd, 2018.

Films that are screening at festivals held immediately before Berlin (e.g.: Sundance, Rotterdam, Gothenburg, Palm Springs) can **no longer be exempted** from this fee. For those films to avoid being subject to the express handling fee provision, we warmly recommend either:

- to send us the data carrier (hard drive) of your film as early as possible and in good time before those respective festivals begin. We can ingest (upload) your film data onto our central storage system, and afterwards your hard drive can be shipped to the festival preceding the EFM/Berlin.
- or to digitally transmit a copy of your film directly onto our central storage system through the Aspera file transfer service.

If a technical problem occurs due to a delayed delivery of screening elements (including DKDMs) beyond the late deadline, the EFM reserves the right to cancel the respective screening. However, screening fees will still be due in full.



SHIPPING OF FILMS

Digital Delivery (Upload)

File-based media (DCPs and ProRes) can be delivered digitally by file transfer. Please note that the same deadline applies to digital deliveries as to shipped media and that all transfers must be completed in time. The Festival uses the encrypted Aspera file transfer service for all digital transfers. This service is free of charge but a broadband internet access with more than 50Mbit/s upload bandwidth is needed. For details and login information please contact films@berlinale.de.

Physical Delivery

- The full cost of transport, including customs fees and insurance, as well as the return freight, must be borne by the producer or his authorised representatives.
- All shipments must be sent prepaid. Shipments sent through international courier services must clearly indicate on their waybill that all costs for duties and taxes are to be billed to the sender. Please note that any shipping charges incurred by the Festival will be invoiced back to the sender with an additional 25€ administrative charge.
- All shipments from outside the European Single Market must obtain customs clearance before being imported into Germany. For this purpose, all said shipments must have three copies of proper customs documentation (i.e.: commercial invoice) included with the courier waybill, providing all the required information. If you are shipping via international post, please affix a customs declaration label to the outside of the package.
- The sender should inform the Festival beforehand by fax or by e-mail of the title of the film, the date and means of shipment and the shipment number or airway bill number.
- Please do not hesitate to contact us for all questions related to shipping and customs. (films@berlinale.de).



Delivery address for shipping

Shipments should be addressed to:

Internationale Filmfestspiele Berlin

Film Office

Voxstraße 3

10785 Berlin

Germany

Tel: +49 30 25920 888 / -858 / -850

E-mail: films@berlinale.de

Persons of contact: Steffen Vogt / Roland Steiner / Ralf Micus

Dispatch and Return of prints

After the festival, all film prints and screening material will be returned by the Festival according to the owner/client's written instructions and on the owner/client's expenses.

Please send your shipping instructions by e-mail to the festival's Film Office (films@berlinale.de).

During the festival and until March 31th, 2018, you have the option to personally collect your material from our offices. The Film Office should be notified 24 hours in advance of the date and time of the pickup.

Hard drives and other data carriers that have not been requested and dispatched until April 30th 2018, will be destroyed subsequently.



APPENDIX

Screening Rooms

| Cinemas | Seats | 35mm | Audio 35mm | DCP | 3D DCP | Video | Audio DCP/Video |
|---------------------|-------|-------------|---------------------------------------------|-----|--------|-------|---------------------------|
| Akademie der Künste | 518 | X | Dolby SR Dolby SR-D | X | | X | 5.1 |
| Arsenal 1 | 234 | X | Dolby A / SR Dolby SR-D DTS | X | | X | 5.1 |
| Arsenal 2 | 73 | X | Dolby A / SR Dolby SR-D DTS | X | | X | 5.1 |
| Berlinale-Palast | 1633 | X (70mm) | Dolby A / SR Dolby SR-D (EX) DTS (ES) | X | X | | 5.1 7.1 Dolby Atmos |
| CinemaxX 1 | 292 | | | X | | X | 5.1 7.1 |
| CinemaxX 2 | 110 | | | X | | X | 5.1 7.1 |
| CinemaxX 3 | 483 | | | X | | X | 5.1 7.1 |
| CinemaxX 4 | 290 | | | X | | X | 5.1 7.1 |
| CinemaxX 5 | 259 | | | X | | X | 5.1 7.1 |
| CinemaxX 6 | 269 | X | Dolby A / SR Dolby SR-D DTS | X | | X | 5.1 7.1 |



| Cinemas | Seats | 35mm | Audio 35mm | DCP | 3D DCP | Video | Audio DCP/Video |
|-------------|-------|------|-----------------------------------|-----|--------|-------|-----------------|
| CinemaxX 7 | 585 | | | X | | X | 5.1 7.1 |
| CinemaxX 8 | 252 | X | Dolby A / SR Dolby SR-D DTS | X | | X | 5.1 7.1 |
| CinemaxX 9 | 254 | | | X | | X | 5.1 7.1 |
| CinemaxX 10 | 170 | | | X | | X | 5.1 7.1 |
| CinemaxX 11 | 50 | | | X | | X | 5.1 |
| CinemaxX 12 | 50 | | | X | | X | 5.1 |
| CinemaxX 13 | 50 | | | X | | X | 5.1 7.1 |
| CinemaxX 14 | 50 | | | X | | X | 5.1 7.1 |
| CinemaxX 15 | 50 | | | X | | X | 5.1 7.1 |
| CinemaxX 16 | 46 | | | X | | X | 5.1 |
| CinemaxX 17 | 46 | | | X | | X | 5.1 |
| CinemaxX 18 | 46 | | | X | | X | 5.1 |
| CinemaxX 19 | 46 | | | X | | X | 5.1 |



| Cinemas | Seats | 35mm | Audio 35mm | DCP | 3D DCP | Video | Audio DCP/Video |
|---------------|-------|------|------------|-----|--------|-------|---------------------------|
| CineStar 1 | 182 | | | X | | X | 5.1 7.1 |
| CineStar 2 | 275 | | | X | | X | 5.1 7.1 |
| CineStar 3 | 365 | | | X | X | X | 5.1 7.1 Auro |
| CineStar 4 | 182 | | | X | | X | 5.1 7.1 |
| CineStar 5 | 206 | | | X | X | X | 5.1 7.1 |
| CineStar 6 | 140 | | | X | | X | 5.1 |
| CineStar 7 | 359 | | | X | | X | 5.1 7.1 Dolby Atmos |
| CineStar 8 | 515 | | | X | X | X | 5.1 7.1 |
| CineStar IMAX | 324 | | | X | | X | 5.1 7.1 |
| Colosseum 1 | 525 | | | X | X | X | 5.1 |
| Cubix 7 | 322 | | | X | X | X | 5.1 7.1 |
| Cubix 8 | 322 | | | X | X | X | 5.1 7.1 |
| Cubix 9 | 724 | | | X | X | X | 5.1 7.1 |



| Cinemas | Seats | 35mm | Audio 35mm | DCP | 3D DCP | Video | Audio DCP/Video |
|--------------------------------------|-------|------------------|-----------------------------------|-----|--------|-------------------------|-----------------|
| Delphi Filmpalast | 661 | X | Dolby A / SR Dolby SR-D DTS | X | | X | 5.1 |
| dffb-Kino | 65 | | Dolby A / SR Dolby SR-D (EX) | X | | X | 5.1 |
| EFM CineMobil | 80 | | | X | | X | 5.1 |
| Filmtheater am Friedrichshain 1 | 323 | | Dolby A / SR Dolby SR-D DTS | X | X | X | 5.1 |
| Friedrichstadtpalast | 1635 | | Dolby A / SR Dolby SR-D DTS | X | | X | 5.1 7.1 |
| Haus der Berliner Festspiele | 986 | | | X | | X | 5.1 7.1 |
| Haus der Kulturen der Welt Kino 1 | 1025 | | Dolby A / SR Dolby SR-D DTS | X | | X | 5.1 |
| International | 551 | X (No 1:1,78) | Dolby A / SR Dolby SR-D DTS | X | | X | 5.1 |
| Marriott Studio | 30 | | | | | Blu-ray disc only | 5.1 |
| MGB-Kino | 200 | | | X | | X | 5.1 |
| Parliament | 62 | | | X | | X | 5.1 7.1 |



| Cinemas | Seats | 35mm | Audio 35mm | DCP | 3D DCP | Video | Audio DCP/Video |
|----------------------|-------|------------------|-----------------------------------|-----|--------|-------|---------------------------|
| Zeughauskino | 160 | X (No 1:1,78) | Dolby A / SR Dolby SR-D DTS | | | | 5.1 |
| Zoo-Palast Kino 1 | 850 | | | X | X | X | 5.1 7.1 Dolby Atmos |
| Zoo-Palast Kino 2 | 275 | | | X | X | X | 5.1 7.1 |
| Zoo-Palast Kino 3 | 159 | | | X | X | X | 5.1 7.1 |
| Zoo-Palast Kino 4 | 161 | | | X | X | X | 5.1 7.1 |
| Zoo-Palast Kino 5 | 157 | | | X | X | X | 5.1 7.1 |
| Zoo-Palast Club A | 36 | | | X | | X | 5.1 7.1 |
| Zoo-Palast Club B | 39 | | | X | | X | 5.1 7.1 |