What A DCP Is:

A DCP (Digital Cinema Package) is the standard file-based theatrical screening format that has almost entirely replaced film prints over the last 10 years. A DCP exists as a folder of data files instead of film reels, videotape, or disks. DCPs are made by converting your common master video/audio files into the DCP file based format.

DCPs have the potential to look and sound better than videotape, Blu-ray, or DVD. As with any format, the quality is dependent on the relative quality of your project and the master file that a DCP is made from. Even though DCP is a file format, the files will not play on your computer unless you have special software or equipment and knowhow.

A feature length DCP can be hundreds of gigabytes and are typically stored/transported on hard drives and sometimes thumb/flash drives for shorts and trailers. DCP hard drives often use special hard drive formatting that most personal computers can't read or write. The drives are shipped or hand-carried screening venues. Thee files are usually ingested into the theater's projection servers from drives and almost never actually played directly from the drives they are transported on. In limited cases some venues or festivals accept cloud based links or upload to their systems. While, possible they are not yet entirely common due to large file size and limited capability and/or willingness on the part of theaters to work this way.

What The DCP Process Is Not:

A DCP conversion is a specialized file transfer. It's not a creative step and doesn't involve changing, tweaking your film or adding any enhancing filters. The goal is quite the opposite, which is create an end result that as as indistinguishable as possible from the intended visual and sound of the master files. However DCP creation is also much more than just pointing software to the file and pushing the export button. The nuance of making great trouble-free DCPs, is attention to detail, recognizing issues, awareness of gotchas in the field and having solutions for any issues that come up.

Should You, A Friend, Or Your Editor Make Your DCP?

Like many tasks, making DCPs requires the combination of both good tools and a person who is skilled the task. Someone who understands the nuances of the DCP format, proper testing, and the pitfalls out in the field. Someone who can skillfully recognize and overcome any problems with source materials and then deliver a compatible end-result. Among many considerations: Evaluating the materials, identifying problems, confidence in the workflow, proper handling of frame rates, re-timing of frame rates/audio rates, pixel dimensions, aspect ratios, color space, gamma, sound mix tracks, testing workflows, hard drive formats, upload and download scenarios, industry standards, gotchas, etc. If you have these resources and are confident and willing to take on the task, then you are probably okay to make your own DCP.

Should You Use Free or Built-In Tools?

DCP options are indeed a world of contradictions. On one end of the spectrum are DCP providers using mega expensive hardware based systems. On the other end are the "free" or cheap do-it-yourself options or cloud based options. Reason would suggest that free and mega expensive can't possibly be equal. Somewhere in-between that spectrum are affordable, knowledgeable/skilled hands-on providers using solid hardware, software and workflows for creating and testing DCPs.

Should You Use Free or Built-In Tools (Continued)?

In choosing cheap or free options, it's really a matter of confidence in the tools and skills. But also the relative risk is for passing along a bad or poorly made DCP. Some filmmakers use free/cheap options with enough success to give a sense that free or cheap is fine. Some free/cheap may very well be fine, in the hands of a knowledgeable person. Some people may have gotten lucky. Also, what's "good enough" for a particular screening might not be good enough elsewhere. For the less fortunate, there can be show stopping problems with cheap tools or limited experience. As they say "you don't know, what you don't know." Right?

What About Cloud Based DCP Services?

Cloud based options sounds sexy and modern, but they also puts the responsibility on the filmmakers to feed the cloud system a perfect file, exactly they way the system needs it. Otherwise it's "garbage in- garbage out." It also becomes the filmmakers task to manage hard drive types, drive formatting and/or folder based file sharing that may have additional learning curves.

DCP Frame Rates:

- DCPs are most commonly at 24 frames per second (fps) which covers source frame rates of both 23.976 and 24 fps without frame rate conversion.
- A 24 frame DCP is compatible at most DCP theaters and considered the most compatible frame rate.
- Some venues and festivals will still ONLY support 24 fps DCPs.
- If your project has a frame rate OTHER THAN 23.976 or 24, yours will have other considerations.
- Some theaters/festivals can also handle DCPs that are 25, 30 and other frame rates, but you need to be certain and verify with them that they support your frame rate.
- You can either make a DCP in one of the matching supported frame rates or a decide to frame convert to 24 if your venue only supports 24.
- If you have a 29.97/30 frame project it will look better as a 30 frame DCP, but you need to confirm the venue's acceptance of a 30 frame DCPs. If the 30 frame DCPs are not supported by your venue, then a frame conversion to 24 will be the final option.
- For best screening results, a frame conversion from 29.97/30 to 24 should be avoided if at all possible by delivering 30 frame DCP if supported.
- Frame rate compatibility is entirely in the hands of what the venue or festival accepts.
- If a 25 frame project needs to be covered to 24, it can be done as a re-time which is cleaner than a frame conversion. The re-time method changes run-time and audio pitch needs correction is typical this method, but the visual is cleaner compared to a frame conversion. Same is true for 24 to 25.

HD, 2K, UHD, or 4K?

- DCPs can only be made in either 2K or 4K.
- 2K refers to pixels that have common 2K widths such as 1998x1080 (flat) and 2048x858 (scope).
- 4K refers to pixels in common 4K widths such as 3996x2160 (flat) or 4096x1716. (scope).
- HD (High Definition) and 2K projects typically become 2K DCPs.
- UHD (Ultra High Definition) and 4K projects typically become 4K DCPs, or down-converted to 2K DCPs.
- HD refers to projects that are 1920 pixels wide by 1080 pixels tall.
- UHD refers to projects that are 3840 pixels wide by 2160 pixels tall.
- It really only makes sense to make a 4K DCP if you have a 4K or larger master. Up-converting to 4K from 2K or HD is probably not beneficial.
- Most providers charge more to make 4K, so if DCP creation cost is a major consideration, 2K is usually cheaper.
- Compatibility is also a consideration. A theater must be able to accept a 4K and play it on a 4K projector in order for a 4K to make any sense. Some theaters can open a 4K DCP, but still only project it in 2K. Some theaters can't open or reliably play a 4K DCP, so you need to verify that.

HD, 2K, UHD, or 4K (Continued)?

- Larger than 4K masters files will need to be down-converted to 4K or 2K. There are no DCP options bigger than 4K.
- If cost and/or compatibility is not a concern then a 4K DCP is the right choice for 4K (or UHD) projects.

Aspect Ratios: Full, Flat, Scope, Or Other?

- Note: "Full Frame" is a term that means the picture fills the whole screen, without letter-boxing or pillar-boxing or squeezing, in its native pixel dimension. If a master file has letterbox or pillbox, it is not "Full Frame"
- Note: "Aspect Ratio" is defined by the pixel dimension of the actual image, not including any letter-boxing or pillar-boxing. For example 1998 pixels wide divided by1080 pixels tall is 1.85. 1.85 is a standard aspect ratio and in DCP terms is called "Flat."
- DCPs are either 2K or 4K and there are only three aspect ratios supported in Full Frame, so there are only six options total.
- Two of the six options are called "Full" (not to be confused with "Full Frame"). "Full" is currently out of favor as it is considered the IMAX format and therefore is discouraged or not accepted by many theaters, festivals or distributers. It is no longer recommended unless specifically for IMAX use.
- For the record though, "Full" which has a 2K size of 2048x1080 for 2K and 4096x2160. When the image is full frame the aspect ratio is about 1.90.
- If your master is genuinely a full frame "Full" 2048x1080 or 4096x2160. It can still be used if that's all you have, it will be letterboxed into one of the other supported DCP types.
- Ruling out "Full" usually leaves only four DCP options. "Flat" or "Scope" in either 2K or 4K:
- Flat is 1998x1080 in 2K or 3996x2160 in 4K and has an aspect ratio of 1.85 Full Frame.
- Scope is 2048x858 in 2K and 4096x1716 in 4K and has an aspect ratio of 2.39 Full Frame. This size is also known as "Widescreen."
- If you have the luxury of mastering your film to the PERFECT size for Full Frame DCPs, then master in one of the four here:
- 1998x1080 for Full Frame "1.85" 2K, 3996x2160 for "1.85" 4K (called Flat).
- Or… 2048x858 for Full Frame "2.39" 2K, 4096x1716 for 2.39 4K (called Scope).
- There are many reasons why the PERFECT export is not available. If not, there are still options.
- A common non-standard situation is the 16x9 or 1.78 aspect ratio (such as Full Frame HD or UHD). There is no 1.78 DCP option, so instead, it is customary to put 1.78 into a Flat (1.85) DCP without cropping. Then it is contained in the Flat DCP with a thin black left/right Pillarbox. The pillars are 34 pixels in 2K and 78 pixels in 4K.
- HD letterboxed to other aspect ratios are scaled to the best matching DCP container, the best available choice between full frame, letterbox or pillarbox.
- Similarly, files of any size that are any aspect ratio other than 1.85 or 2.39, will fit into a DCP with ether some letterboxing or pillarboxing, not cropping.
- If your project is not exactly the size of a scope or a flat, it will be contained in the closest of the two options and padded with letterbox or pillarbox to make up the difference.

Color Space and Gamma:

- Your project is most likely in a YUV (REC 709) or RGB color space or one of those variants.
- Your DCP will be in a DCP/projection specific color space known as XYZ. When viewed outside of a projection environment, without a color space conversion DCPs looks weird. Not to worry. Please simply deliver us your material in your native finished color space. Our workflow will recognize the metadata of your colorspace and we do the XYZ conversion as part of our process.
- If you know any details about your color grading setup (such as gamma 2.2 or 2.4) please let us know and we'll dial that into your DCP transfer. If you are unsure of your gamma we will set your source to 2.2 by default.

Subtitles:

It is preferable to pre-burn subtitles into your film and use that master to make the DCP from. Burned in subtitles is also the preference or requirement of many film festivals. Burned in Subtitles avoids any mistakes or issues with details such as subtitle timing, font size, color, screen position and other playback mishaps.

Encryption:

Encryption is an optional security measure available for DCPs. If you wish to encrypt your DCP it will need permanent management for every screening. It's more complicated and management intensive than a digital "lock & key," or a password. Each screen it plays on needs to provide credentials ahead of time called "server certificates" which are small files that are usually passed along via email. Then those certificates are paired with the credentials of the encrypted DCP, to create single or multiple number of KDMs (Key Delivery Messages), sometimes called "keys. These KDMs pair it to a specific set of equipment at a specific theater to authorize playing of the DCP. A valid timeframe is also set from just one specific day to several years depending on what the screening needs are.

KDMs can only be made by the original creator of the encrypted DCP, or by a third party has been given the credentials by the DCP provider to made KDMs using a master KDM called a DKDM (Distributer Key Delivery Message).

While piracy might be of concern, keep in mind that DCPs already have built in hurdles that make them harder than the average files to steal. First, they are in a proprietary format that can't easily be viewed unless you have special software and knowhow. They are even harder to convert to other more viewable formats. They are also relatively large files so they are time consuming to upload and download or copy. Also, they often travel on CRU drives and if so, these drives can only be mounted with a special interface. Furthermore, the drives are often formatted with Linux EXT type drive format, which is not easy to read or write to personal computer without special software and knowhow.

Also worth noting is that some festivals do not accept encrypted DCPs, because encrypted DCPs and KDMs can become a nuisance to deal with and jeopardize screening events if there problems.

Despite those concerns, Encryption is viable as long as all parties can handle the extra steps and if there is enough time to verify that the ingest and KDMs are functioning properly at the theater and if all parties are available to deal with any problems that crop up ahead of screening.

What We Need When You Work With Us:

Quick Guide / Picture:
• Your master quality, picture file, commonly in 23.98 or 24fps (such as ProRes HQ, 4444, DNX, MXF).
• Ideal pixel dimension for 2K is Full Frame: 1998x1080 or 2048x858. If your master is Full Frame HD then 1920x1080 is correct for 2K.
• Ideal pixel dimension for 4K is Full Frame: 3996x2160 or 4096x1716. If your master is Full Frame UHD then 3840x2160 is correct for 4K.
• If your master is not one of the options above, it will be fit into the very best option by scaling and/or adding or removing letterbox/pillarbox.
• Full Frame 2048x1080/4096x2160 has fallen out of favor and often not compatible at theaters unless for IMAX screens. We can use if we letterbox it.
• Your Master's color space is commonly Rec709. Color space info is carried in you Master's file's metadata and will be matched accordingly.
• Your Master's gamma is most commonly 2.2 or 2.4. If you know know your finishing gamma, let us know. If not known, we will set up source to our house standard of 2.2.
• If your film is not in 23.98fps or 24fps, or not High Def or larger, there are options to discuss. Call us.
• Source files such as .H264 or .MP4 are not recommended. Standard Def or 720p is not recommended.
• Bars, tones, slates, slates, countdowns, (or none) are all okay. If there, we'll use them and then edit them out.
• Image sequences (DPX/TIFF) or tape sources are okay, though require additional services and take longer.

Quick Guide / Sound:
• The sound mix can be attached to the picture master or provided as separate WAV or AIF files.
• If finished sound is separate, the picture master should have an audio guide track to assist the re-sync check of your audio.
• Separate WAV files are ideally 24bit/48K and one single track per channel. So stereo is 2 discrete mono files, 5.1 is 6 discrete mono files, 7.1 is 8 discrete mono files.
• The most common issues we run into are in attached audio tracks. Providing separate audio usually helps us solve this.

Quick Guide / Media Hand-Off To Us… Then Back To You:
• Put file(s) on a hard drive. Drop off your drive in-person or ship it to us. Include the drive's power supply if needed.
• Mac, PC, Linux formatted hard drives (or USB flash/thumb/sticks) are okay to use to hand off your files.
• Ideally your hard drive has a true USB 3.0, E-Sata, Firewire or Thunderbolt connection.
• Label your hard drive with contact info and project name. Please avoid sending us any files we don't need.
• We will need to hold your source drive for the duration of the job. So be prepared to leave the drive with us. While-you-wait copy-over of your material is generally not available.
• Include a brief note with your contact info & project name and we will follow up to get the order going.
• Master files are usually very large. If you have excellent internet speed you may use our upload page instead: https://tree-falls-post.filemail.com
• If already on the cloud you may email us a link. Please make sure it is a direct download link (not a share). It has to be a link that does't require logins to signing up for services.
• If you have been provided a spec sheet for a specific delivery, please pass along.
• Note: unless we are instructed otherwise and/or no spec sheet is provided, all DCP drives given back to you, or sent to third parties on your behalf, will be formatted in Linux EXT-2, Inode 128.
• As of Jan 1, 2020, we now make all DCPs in the SMPTE variant of DCPs regardless of frame rates. The older "Interop" format for 24 fps, will only be made on request or as per spec sheets that insist on the older 24 fps format.
• Downloadable links, or direct upload service to a specific server is available.

Deeper Details:

Your Project's Current Frame Rate And Possible Conversion Scenarios:

In most cases you simply provide your project to us in its finished produced frame rate:

• 23.98 fps projects, we re-time to 24fps during the DCP process, resulting in a 24fps DCP.
• 24 fps projects remain in 24fps and result in a 24fps DCP.
• 24 frame DCPs are considered universally supported at most every DCP theater.
• Other DCP frame rates are often supported, but support of other frame rates needs to be verified with individual theaters or festivals that they are going to. Frame rates such as 25 and 30 fps.
• 25 fps easily convert to a 25 fps DCP as the frame rates match.
• 29.97 fps projects are best made and screened as 30 fps DCPs. Check with theater/festival first
• 29.97fps projects that can only be screened at 24 fps compatible theaters need to be converted to 24fps. This scenario is not ideal due to frame blending and motion lag artifacting but can be done if you have no other option.
• We improve 29.97 conversions by doing them in 2 steps, first to 23.98fps and then re-timed to 24fps.
• In many 29.97fps to 23.98fps frame conversion cases we use Teranex hardware to convert as the first step to the DCP process.
• 29.97fps in SD will be Teranex up-converted to 23.98fps. Then re-timed to 24fps.
• 23.98fps in SD will be scaled up with software up-converted and then re-timed to 24fps.
• 25 fps projects can remain in 25fps and result in a 25fps DCP if your venue will accept it. Or we can discuss conversion options. There is nuance to this process and decisions to be made, so please contact us to discuss if a 25-to-24
• Same discussion if a 24-to-25 conversion is needed.

Sound:

• Ideally your DCP should have a 5.1 surround mix or a minimum LCR (Left, Center, Right) mix.
• You can supply the mix, either already attached to the picture media, or as separate audio files.
• If separate, we will be ideally looking for 6 separate mono WAV (OR AIF) files per channel, as 48K, 24 Bit (Left, Right, Center, Lfe, Left Surround, Right Surround).
• It is okay if the head and tail build of the audio and picture don't match (for example, the audio has tones and the picture doesn't or visa-versa). We will re-sync and trim accordingly.
• Please try to provide the sound mix in the frame rate of the picture master.
• For example if the picture is 23.98fps, then provide the sound in 23.98fps. 23.98fps projects will be conformed to 24fps in our DCP workflow. If you know the picture and sound are at mismatched frame rates, just let us know what you know so we have a heads up. We can usually adjust that on our end. If you don't know or don't tell us – don't worry, we'll figure it out and fix it along the way.

If your project was never mixed in 5.1 and you only have a stereo mix there are still several possible options:

• Speak with the person who mixed your sound originally and see if a 5.1 versioning is feasible.
• It is also possible to ask for an "L,C,R" (left, center, right), where dialogue plays mostly center and music and effects play mostly left and right. This helps the audio "image" to fill the screen where a stereo mix doesn't as well. Some DCPs must have a minimum of a L,C,R. For example, some Academy Awards submissions have been known to require a minimum L,C,R.
• If working with us, it is possible for us to create a 5.1 "spread" from stereo mix split/stems as an optional service. In order to do this we need to get your stereo D/M/E stems. They are stems meaning that the split Dialogue and Music and Sound Effects are on three sets of stereo tracks in their mix relative levels. Meaning that if you play all three stereo stems together, the end result is the mix that you are used to and nothing different. In order for this to work, you would need to have created or already have stereo D/M/E stems in your file archive. Otherwise you have to get those from your sound person. Or have those made.

Sound (continued).

- It is possible to use up-mix software, with varying results. Up-mixes should be reviewed carefully if attempted, to make sure they do more good than bad.
- There is no reason why we can't simply use your stereo mix (sometimes referred to as a 2.0 mix) on your DCP. Sometimes that works for certain projects and rarely rejected.
- It is our opinion that a well mixed stereo track is better in most cases than a jury rigged and/or badly executed surround mix, fake surround mix, or unattended software up-mix.
- While there is no "official" loudness standard for short or feature DCPs, we've found the best results to be between 70 and 82 leq(m) as measured average over the entire run time of a project. We also recommend a maximum peak of any individual mix track of no more than -1 (1 db below the maximum digital peak of 0).

Ideal Masters For DCPs:

- A self contained Quicktime file (Ideally of the entire project in one reel) – such as ProRes HQ, ProRes, DNX, with embedded audio. Square pixels, no un-squeeze/stretch needed.
- We can accept files with extra material, such as bar/tones/slate/textless and extra audio tracks if that's all you have on hand. We cut off all the extras for the DCP and use just the main sound mix.
- If you are generating a fresh export just for the DCP, please add 10 seconds of black to the tail. It's optional but helpful for good reasons not really worth explaining. We do cut it off before making the DCP.
- Any subtitles need to be burned into your picture on your end.
- Also accepted are DPX/TIFF image sequences with separate audio tracks. Please discuss with us first, though. Any subtitles need to be burned into your DPX or TIFF on your end.
- Separate audio is preferred as a the intended or backup to audio on the Quicktime.
- If separate audio, it is ideal to have some kind of audio guide track on the Quicktime file to aid us during our re-sync of your mix. The guide track does not have to be the final mix as long as the dialogue sync is generally valid in the guide audio track.
- Sound Mix tracks (if separate from picture) are 24 bit WAV or AIF files. 16 bit files are acceptable if that's all you have.
- It's better if the provided audio tracks are at the same frame rate as the picture master. For example, 23.98fps projects should have 23.98fps audio. If we determine there is mismatch, we can usually adjust it, but it helps if what you give us already has a matching frame rate.
- A 5.1 mix should be single mono/discrete track per track of mix.
- So a 5.1 mix would have 6 separate files, one each – Left, Right, Center, Lfe, Left Surround, Right Surround and labeled in a way that we can identify what is what.
- Or a stereo or LT/RT mix would have one stereo file or 2 single mono/discrete files of left/right.
- If you have both a solid 5.1 and stereo mix, we only want the full mix 5.1 tracks. We do not need any of the split audio tracks. For example we do not need the DME or M&E. tracks to make a DCP. Better to not give us extra tracks if at all possible.
- Other okay sources: HDCAM SR, HDCAM, D5 (though require an extra steps of digitizing and/or conversions).
- Not Ideal: (due to lower quality and extra steps required): H.264, Mp4, 720p, Standard Def, Blu-ray, DVD.
- Standard Definition (SD) source adds challenges. Expectations may need to be managed, as there is much less image real estate to work with — and it has to be scaled up significantly in size as well as frame rate converted in most cases. In the case of 29.97 SD material it also often has a distinctively interlaced look that might need adjustment.
- Audio sources that are not ideal are AC3 or MP3.
- We do not accept un-exported workstation projects form any platform.

DCP Hard Drives, Link And / Or Upload Options:

In the last few years, "hand-off" decisions for finished DCP have become more complicated as there are now numerous methods of delivery, when in the past, there was mostly one. In terms of which method to use, you are at the command of what any venue or festival is willing and able to accept. Still most common is a hard drive, but with further decisions. It's not 100 percent possible to satisfy every future situation with just one choice. Also practices vary slightly if the project is feature length, or short. For each screening situation of distribution handoff, you need to get guidance from the theater, festival or distributor and hopefully they can email you a spec sheet that you can digest yourself and/or forward to us. If information is sparse, here are some common scenarios:

Feature Length:

• CRU drives: From a 2020 perspective, these drives might seem big, clunky and look like old technology, CRU drives (pronounced C.R.U. or "Crew") are your best bet, especially if you have no information to work with and could only choose one option without knowing future needs. These are still the go-to standard for delivery to a commercial movie theater for if your film isn't part of a large distribution chain. A CRU is not something you can connect to your own computer unless you have special hardware. Also they are usually formatted as Linux EXT-2 (or 3), unless requested otherwise. Like any drive, these drives are worth retrieving from the theater or festival for the future screenings. Or they can be erased and re-used for revisions or future projects. More than one project can live on the same drive as long as there is enough drive space to hold them.

• One slight advantage of CRU drives is that they have a "built for warfare" look and feel and are transported in padded packages or cases. People take them more seriously and tend to handle them with more care than a portable USB drive, because they look important. Plus these drives are big enough to handle good sized labels with detailed specs about the film and the drive. While the go-to standard, there are exceptions out there and CRUs won't work for every last theater or festival, just most all of them. In terms of cost, they are about double the cost of the next cheapest option.

• Next cheapest option… Portable USB drive. Relatively inexpensive, and are more likely to be formatted in Windows NTFS, but EXT-2 is certainly possible. Mac formatted drives are going to be a deal breaker in many theaters. What the recipient can and will accept for drives and drive formats is completely at their control — meaning, what they say they are able to accept. Other drawbacks is that USB drives may not be taken as seriously and are more likely to be tossed around, or dropped. Abuse like that can knock them out of service. Also the USB connections of "cheap" portable drives can't take a lot of abuse.

• USB- Flash/Thumb/Sticks. Cheaper as well and can be formatted as requested but generally not viable for large large files of feature length DCP. Even though large enough flash drives can be purchased, you are more likely to get resistance because the ingest into the theater systems from a flash drive is usually slower from hard drive. Also since so small, labeling is challenged. We use flash drives that accept a stringer and then we attach the stringer to a toe-tags label. Other negatives, they are easy to lose, easy to roll over with a chair or accidentally sent through the wash.

• Downloadable links are possible and we certainly have that capability, but can be a bit tricky. Mainly, you have to have an agreeable recipient. Presently not a lot of theaters are capable/willing to work with links or other methods of online file sharing. The files are large and require both the sender and recipient to have very fast internet. It is more likely that a festival will organize uploads/downloads on their own than directly at the theater. When asked to make a link our go-to service is "Filemail" as it has a robust upload/download interface that takes advantage of best available bandwidth. The other main advantage of Fillemail is that when using its interface (and unlike web browser services) it does a great job of handing a folder of files, without taking the time to zip or making an enormous unsupported zip files that will never unzip after a lengthy download. DCPs are a folder of files with a specific folder name that needs to stay in tact as a folder. Several other common cloud/ file share services struggle or are clunky in dealing with a folder of large files.

DCP Hard Drives, Link And / Or Upload Options (Continued):

• Uploading to a festival or theater via "their" server or file sharing service. Directly to a theater is less likely. Directly to festivals is becoming more common. If the recipient accepts films this way, they have hopefully worked out the pitfalls of folder based file sharing. We have the capability to load to most servers. As with all of these options, it's more in the hands of what the recipients allow.

• Considerations for International delivery: Online file delivery has lots of good arguments for international destinations since the extended shipping time and potential customs delays are removed. But you need an agreeable recipient with fast enough internet access.

Short films/Trailers:

• USB- Flash/Thumb/Stick are the most common way to get a short to a theater or festival on physical media. Since the films are shorter and the size of the files are smaller, Theaters and festivals are usually agreeable, even if the ingest time is a little slower. In a couple of rare instances we've seen festival insist on a CRU drive for a short. As with all examples, it's all in the hands of the recipients.

• Links and uploads are sometimes accepted for shorts and are more feasible than features, since the lengths are shorter and so the files are quite a bit smaller (compared to features).

Notes About Travel Hard Drives You Send / Hand Off To Us:

Here are a few friendly suggestions that will keep everything flowing and help you avoid the avoidable:

• Whenever possible, please supply your material on a hard drive with a USB3 connection. We support others, but this is the most straight forward.
• If your drive requires a power supply, we need you to send that along with the drive.
• Please remember that hard drives are a delicate combination of mechanics and electronics and don't do well when handled roughly or dropped.
• If shipping the drive to us, please pack it for a bumpy ride with proper padding. Original packaging makes a great inner shipping package. Then more.
• If you are hand delivering a hard drive to us, packing it for the trip is a very good idea. More than once has a hard drive been lost to an unexpected fast stop in a car ride causing a hard drive to fly from the passenger seat to the passenger floor. Know what we mean?
• Even with most proper of handing drives sometimes fail at inopportune times. Most all of the time, they are fine. But… drives can fail in transit, they can fail while sitting on our worktable, they can fail on their way back to you. Sometimes without reasonable explanation.
• So we are urge you—if at all possible, please don't send us any files we don't need or files that you can't afford to lose in a drive failure. Plus, extra and unrelated files also adds potential confusion.
• Ideally the drive we get from you should has only exactly the files what we need on it for the DCP. Please don't send your "only" copy of the film or a drive that doubles as your backup of your entire operation. If the drive must contain other material, please consider sequestering all unrelated material into a folder that is called something like "do not use" or "ignore."
• Please label the drive and the drive's box and with your name, company name and phone number.
• Please label the project files and folders on the drive with a name that we are aware of. Something that would make sense to someone who isn't intimately familiar with the project.

Upload elements via Internet rather than sending/hand off on a hard drive:

- Master files for DCP can get very large. If you have fast internet, we do as well, and web based file transfers file might be reasonable, perhaps 200 gigabytes during one business day. Unless you are just down the street and then hand delivering the files will be faster. If sharing large files, back-time by at least one day and allow for time to recover from errors or the need for a second try.
- Uploads are also okay for short projects, or separate audio coming from a different location or for small patches or fixes.
- Better/faster/easier is for you to use link via our Filemail account: https://tree-falls-post.filemail.com
- it's easy to use. You do not need an account. Just fill in the form and drag the file/folder and hit send.
- If you have material already on the cloud elsewhere, it MUST be set as a downloadable link. It will not work for us if it just is a "share" or a system that requires a login or if we need to start a new account somewhere. There are a surprising number of competing files sharing systems out there and it is not possible for us to have an account with all of them. So we don't.

Miscellaneous:

- Our "house standard" for head and tail on festival bound and screening DCPs is to add 2 seconds of black and silence before first frame of picture and 2 second black/silence tail after last frame of picture & credit roll. This will satisfy the requests for padding that we see from some festivals.
- Padding is reduced to 1 second head/tail on trailers.
- If your DCP is going straight to distributors and intended as a distribution master, we do not pad the head or tail.
- It is perfectly fine and useful to include your bars/tones/slates/2-pops and such in the media you provide us. In our process, we will remove all of that and add a clean head and tail.
- If you have a picture master already prepped with lots more audio tracks than needed and separate WAV Files, it's okay. We will sort it out.
- We are unable to support add Subtitles unless you (or we) burn them into the picture before the conversion to DCP. Also many festivals and some theaters insist on the burned-in method anyway.
- DCPs cannot be "revised" or changes inserted into them, if any changes are needed they need to be re-done.
- Sorry, we do not support 3D projects.