# Inception
## digital services
### a Bonded Services Company

# THIRD PARTY MANUAL
## VERSION 4.1

# INTRODUCTION TO INCEPTION

*Inception Digital Services, LLC ("IDS") is a leading digital distribution service provider to film studios, television networks, video distributors and independent content owners offering a wide range of digital encoding, electronic packaging, and secure high-speed content delivery.*

*IDS possesses certified delivery access to all major online, broadcast media, and VOD platforms including iTunes, Amazon, Netflix, Verizon, Sony Playstation, Microsoft Xbox, CinemaNow, InDemand, Comcast, Echostar, Blockbuster, Hulu and Vudu.*

*Within this manual are the asset requirements and specifications for IDS to properly encode, transcode, QC, package and upload each videos.*

# TABLE OF CONTENTS

# ASSET REQUIREMENTS

*The following details the assets needed for processing and delivery.*

# SECTION CONTENTS

# ACCEPTABLE TAPE SOURCES FOR SD CONTENT

Digibeta
Beta SP
HDD

# SD SOURCE FILE SPECIFICATIONS

| VIDEO | | | | |
|---|---|---|---|---|
| CODEC | Apple ProRes 422 (HQ) | OR | | Bit Rate ≥ 50 Mbps<br>4:2:2 Color Space |
| RESOLUTION | NTSC: 720x480 for display at either 853x480 (16x9 content) or 640x480 (4x3 content)<br><br>PAL: 720x576 for display at either 1024x576 (16x9 content) or 768x576 (4x3 content) | | | |
| SCAN TYPE | All files must be progressive | | | |

| STEREO AUDIO |
|---|
| PCM Audio, Little or Big Integer<br>Stereo Pair (as mapped below) |

| Stereo Pair on 1 track<br>(PREFERRED) | TRACK | 1 |
|---|---|---|
| | CHANNEL | Stereo Left<br>Stereo Right |

| MULTI CHANNEL AUDIO<br>(5.1 Surround plus Stereo) |
|---|
| PCM Audio, Little or Big Integer<br>8 Separate Audio Tracks, mapped as below |

| TRACK | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| CHANNEL | Left | Right | Center | LFE | Left Surround | Right Surround | Stereo Left | Stereo Right |

# ACCEPTABLE TAPE SOURCES FOR HD CONTENT

HD Cam
HD Cam SR
D5
HDD

# HD SOURCE FILE SPECIFICATIONS

| VIDEO | | | | |
|---|---|---|---|---|
| CODEC | Apple ProRes 422 (HQ) | OR | | Bit Rate ≥ 200 Mbps<br>4:2:2 Color Space |
| RESOLUTION | 1920x1080 square pixel aspect ratio | | | |
| SCAN TYPE | All files must be progressive | | | |

| STEREO AUDIO |
|---|
| PCM Audio, Little or Big Integer<br>Stereo Pair (as mapped below) |

| Stereo Pair on 1 track<br>(PREFERRED) | TRACK | 1 |
|---|---|---|
| | CHANNEL | Stereo Left<br>Stereo Right |

| MULTI CHANNEL AUDIO<br>(5.1 Surround plus Stereo) | | | | | | | |
|---|---|---|---|---|---|---|---|
| PCM Audio, Little or Big Integer<br>8 Separate Audio Tracks, mapped as below | | | | | | | |

| TRACK | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| CHANNEL | Left | Right | Center | LFE | Left Surround | Right Surround | Stereo Left | Stereo Right |

# MULTI CHANNEL AUDIO CONFIGURATION (5.1 PLUS STEREO)

| TRACK | CHANNEL | DESCRIPTION |
|:---:|:---:|:---:|
| 1 | Left | Music and Effects |
| 2 | Right | Music and Effects |
| 3 | Center | Dialogue |
| 4 | LFE | Low Frequency Effects |
| 5 | Left Surround | Music and Atmosphere Effects |
| 6 | Right Surround | Music and Atmosphere Effects |
| 7 | Left Total | Left Stereo Total |
| 8 | Right Total | Right Stereo Total |

**( Inception**
**digital services**
*a Bonded Services Company*

# TRAILER CONTENT SPECIFICATIONS

*The following is content that is NOT suitable for all audiences and, thus,*
*considered "Unacceptable Content" within a trailer.*

*Content that fits the following criteria must be removed completely for the trailer to be acceptable.*
*Unacceptable content may NOT be fixed with censoring, including but not limited to:*
*audio "bleeping", visual black bars and/or visual blurring.*

☐ Scenes with sexual activity
- *ménage a trios*     *-group sex*     *- sadism*
- *masochism*     *- bondage*     *- necrophilia*
- *full nudity (partial nudity is allowed)*

☐ Sexual slang, references to venereal diseases, sexual references involving minors

☐ Overt references to or scenes depicting rape and sexual molestation

☐ Children in extreme peril, including verbal or physical abuse
- *Children being anyone who is or depicts a person under the age of 18*
- *Scenes of violence or guns/weapons involving minors*

☐ Scenes of excessive violence

☐ Scenes containing extreme or severe:
- *Dismemberments*     *- Mutations or Mutilations of bodies*

☐ People or animals on fire (except when the portrayal is clearly unrealistic to audience, i.e. a comic book character)

☐ Use of tobacco, alcohol, or drugs by children

☐ Any use or reference to
- *scenes glamorizing drug use*

☐ Offensive/Obscene gestures

☐ Offensive language, lyrics, text or graphics (in any language). Cannot be seen, heard, or read on screen.
- *Fuck*    *- Shit*    *- Goddamn*    *- Jesus Christ*    *- Penis / Dick*
- *Vagina / Pussy / Cunt*    *- Motherfucker*    *- Tits*    *- Bullshit*    *- Dyke*
- *Faggot / Fag*    *- Racial slurs*    *- Derogatory comments*    *- Etc.*

☐ Use of the following words are allowed no more then once in a trailer
- *Bitch*    *- Damn*    *- Crap*
- *Hell*    *- Boobs*    *- Ass*

☐ Extremely intense or frightening images

☐ Sacrilege, including sacrilegious epithets referring to specific religious figures such as "Jesus Christ" or "Goddamn" when used in a blasphemous way

☐ Video Cards with unacceptable content:
Unacceptable video cards include:
- *Video Information Cards*    *- Green Band*
- *Color Bars*    *- Web URL*
- *DVD Logos*    *- HD Logo*
- *"Coming Soon"*    *- "In Theatres Now"*
- *QR Codes*    *- Dolby*
- *Hash Tags*    *- Etc.*

# METADATA NEEDED FOR DELIVERY

*For all deliveries, an excel spreadsheet (provided) that contains
the following information must be filled out in completion.*

| | |
|---|---|
| Provider | This value should be the Apple-defined label given for partner identification. |
| Video Subtype | This value indicates how Apple should represent this video in the iTunes Store. FEATURE or CONCERT |
| Vendor ID | The permanent value that uniquely identifies this film separately from any other film given by the provider. Only acceptable symbol is an underscore. |
| Country of Origin | The ISO 3166-1 alpha 2 code of the country where the film was primarily produced. |
| Original Spoken Locale | Specifies the language spoken by the actors in the film. |
| Title | The name of the film. |
| Synopsis | A general summary of the film's content and story line. |
| Production Company | The customer-presentable name of the production company that created this film. Only one production company can be specified. |
| Theatrical Release Date | This is the date the film was first released in theaters. |
| Primary Genre | Films must specify at least one genre. |
| Rating System | An accepted rating system. |
| Rating | A valid rating from an accepted ratings system. More than one rating can be specified, but only one rating per ratings system is allowed. |
| Rating Reason | The given reason for the films rating. |
| Caption Code | Must provide correct Closed Caption code. |
| Actor Name/ Character Name | Actors in the film, listed with the Characters they played. |
| Director | The Director(s) of the film. |
| Producer | The Producer(s) of the film. |
| Screenwriter | The Writer(s) of the film. |
| Sales Territory | The territory in which this video product is cleared for sale or VOD. |
| Cleared for Sale | Specifies whether or not this video can be sold for EST sale in the product's territory. TRUE or FALSE. |
| Cleared for HD Sale | Specifies whether or not the video is cleared for HD EST sale in the product's territory. TRUE or FALSE. |
| Wholesale Price Tier – SD | The wholesale price tier for the film. FILM: 1-5, CONCERT: 201-204. |
| Wholesale Price Tier – HD | The wholesale price tier for the HD version of the film, if different than the SD. |
| Sales Start Date | The date this film is available for EST sale to customers in the specified iTunes Store territory only. AKA the "street date" of the video. |
| Cleared for VOD | Specifies whether or not the video is cleared for rent,VOD sale, in the product's territory. TRUE or FALSE. |
| VOD Type | Specifies whether the film is a NEW RELEASE or a LIBRARY title. |
| Available for VOD | The date this film is available for video on demand purchase in the specified iTunes Store territory only. |
| Physical Release Date | The release date of the first physical product (i.e. VHS, Beta, laserdisc, and DVD). |
| Cleared for HD VOD | Specifies whether or not this video is cleared for VOD in HD in the product's territory. TRUE or FALSE. |

# KEY ART SPECIFICATIONS

JPEG Image (.jpg)

2x3 Aspect Ratio

1400x2100 pixels MINIMUM

72 DPI

RGB Color Profile

## UNACCEPTABLE CONTENT WITHIN KEY ART

URLs, DVD/BluRay Logos, Release Date, or promotional tagging.

Art CANNOT contain Credit Blocks or Film Festival Laurels.

## ART MODIFCATION PACKAGES

For all deliveries requiring IDS to modify art, a layered .PSD file of the key art is required.

# AUTOMATIC ASSET FAILURES

*The following details the issues on an asset that will cause the file to be failed*
*while the file is in the Ingest stage. This happens BEFORE the digital file is created and/or QC'd.*

## SECTION CONTENTS

# AUTOMATIC FAILURES

Any issue on this list will fail a file BEFORE the asset goes through the IDS QC Process.

### Asset does NOT have 1 second of black at beginning and end
This occurs when video has less than 1 full second of black picture AND silence before and after the video.
Anything more or less that 1 second will not be accepted.

### Asset is SD 4x3 Letter boxed
This occurs when video has black matting on the top and bottom of the picture. On an SD asset, this is
ONLY acceptable if the 4x3LB file is the only master available. If it is not, a new master will need to be requested.

### Asset is SD Pillarboxed
This occurs when the video has black matting on the right and left sides of the video. On an SD asset,
this will not be accepted. A new master will be requested.

### Asset is HD 16x9 Pillarboxed
This occurs when the video has black matting on the right and left sides of the video. On an HD asset, this is ONLY acceptable if the
4x3LB file is the only master available. If it is not, a new master will need to be requested.

### Asset is HD 4x3 Letterboxed
This occurs when video has black matting on the top and bottom of the picture.
On an HD asset, this is will not be accepted. A new master will be requested.

### Asset is windowboxed
This occurs when video has black matting on all four sides. This will not be accepted for any asset.
A new master will be requested.

### Asset lacks any credits
All Feature Video Assets must have some sort of credits at either the beginning or end of the video, if not both.
An asset lacking any credits will not be accepted. A new master will be requested.

### Asset is missing audio
This occurs when video asset recieved lacks the matching audio. This will not be accepted,
and a new master will be requested.

### Incorrect resolution for delivery
This occurs when an Asset for HD delivery is received at less than 1080p resolution. (Ex. 720p to be sent as 1080p)
Files cannot be upresed, and will not be accepted. A new master will be requested.

### Foreign language audio with no subtitles
This occurs when an Asset does not have the correct subtitles for the country of delivery. For example, all films for an American audi-
ence must have English Subtitles if the audio is not in English. The subtitles are preferred as a separate file.

### Video hit on the Tape
This occurs when an Asset has a loss of data in a picture due to tape issues and/or mastering issues.
If the hit is on the received asset, the asset will not be accepted and a new master will be requested.

### Audio Hit on the Tape
This occurs when an asset  audio contains Digital glitches, pops, garbles, clipping that occur in the audio when they should not. If the
audio hit is on the received asset, the asset will not be accepted and a new master will be requested.

# TOP REASONS FOR ASSET FAILURE

**1) Insufficient or Excessive Slugs at Head and/or Tail.**
All content requires 1 second of black and silence at the head and tail of the file.

**2) Uneven Cadence in Mixed Media.**
This can cause dropped frames, duplicate frames, and interlacing artifacts. Experiment with both 23.98p and 29.97p processing to determine which frame rate gives you the least amount of issues. If unsure of the proper process,
it is best to send an unprocessed file.
*http://www.projectorpeople.com/resources/pulldown-3.asp*
*http://www.neuron2.net/LVG/interlacing.html*

**3) Video has been Standards Converted (typically PAL to NTSC).**
This leads to ghosting throughout the content. Our platforms require files to be at the native frame rate of the original source.
*http://en.wikipedia.org/wiki/Broadcast_television_systems*

**4) Video has been Improperly Processed.**
29.97i content with cadence (pulldown applied) should be inverse telecined to 23.98p
while fully interlaced 29.97 video content should be made 29.97p. If unsure of proper process
it is best to send an unprocessed file in its original format.

**5) Video/Audio Tape Hits.**

**6) Data Corruption.**
Caused by loss of digital information during transfer or storage. This can either cause progressively worsening video hits
or cause the file to not open at all. One option could be to checksum files before and after transfer to ensure no data has been lost.
*http://en.wikipedia.org/wiki/Data_corruption*

**7) Compression Artifacts/Pixelation/Macroblocking.**
Often caused by up-converting low resolution content.
*http://en.wikipedia.org/wiki/Compression_artifact*
*http://en.wikipedia.org/wiki/Pixelation*
*http://en.wikipedia.org/wiki/Macroblocking#Macroblocking*

**8) Aliasing.**
Manifests as "stair-stepping" or "jaggies" on diagonal lines in the picture.
*http://www.michaeldvd.com.au/Articles/VideoArtefacts/VideoArtefactsAliasing.html*

**9) Insufficient Bit Rate.**
HD content requires a bit rate of around 150-200 Mbps while SD requires 40-60 Mbps.
Many codecs do not support a high enough bit rate.
*http://www.techterms.com/definition/bitrate*

**10) Not Best Possible Resolution/Aspect Ratio.**
Content must be delivered at the widest aspect ratio available in the marketplace. This includes DVD's, Blu-ray and digital.
For example, a 1.78:1 aspect ratio file cannot be delivered if there is a 2.35:1 master available.
4x3 letterboxed and 16x9 pillar boxed material is not acceptable unless there is NO other format available.
Trailers must never be a wider aspect ratio than the feature.
*http://vimeo.com/videoschool/lesson/236/aspect-ratios-explained*

**11) Improper 5.1 + 2.0 Audio.**
Audio mapped Left, Right, Center, LFE, Left Surround, Right Surround, Left Total, Right Total
with dialogue primarily on the Center channel.
*http://hometheater.about.com/od/hometheateraudiobasics/qt/5-1vs7-1diff.htm*

# QUALITY CONTROL EXAMPLES

---

*Before a video is packaged and sent, IDS performs a Quality Check of the video.
Here are some examples of the more common issues
the QC team will find, and a brief description of each issue.*

---

## SECTION CONTENTS

## Interlacing

*Horizontal scan lines throughout picture. This occurs frequently around graphics.*



**Notice the horizontal lines that run throughout the entire image, particularly noticeable along the edges.**
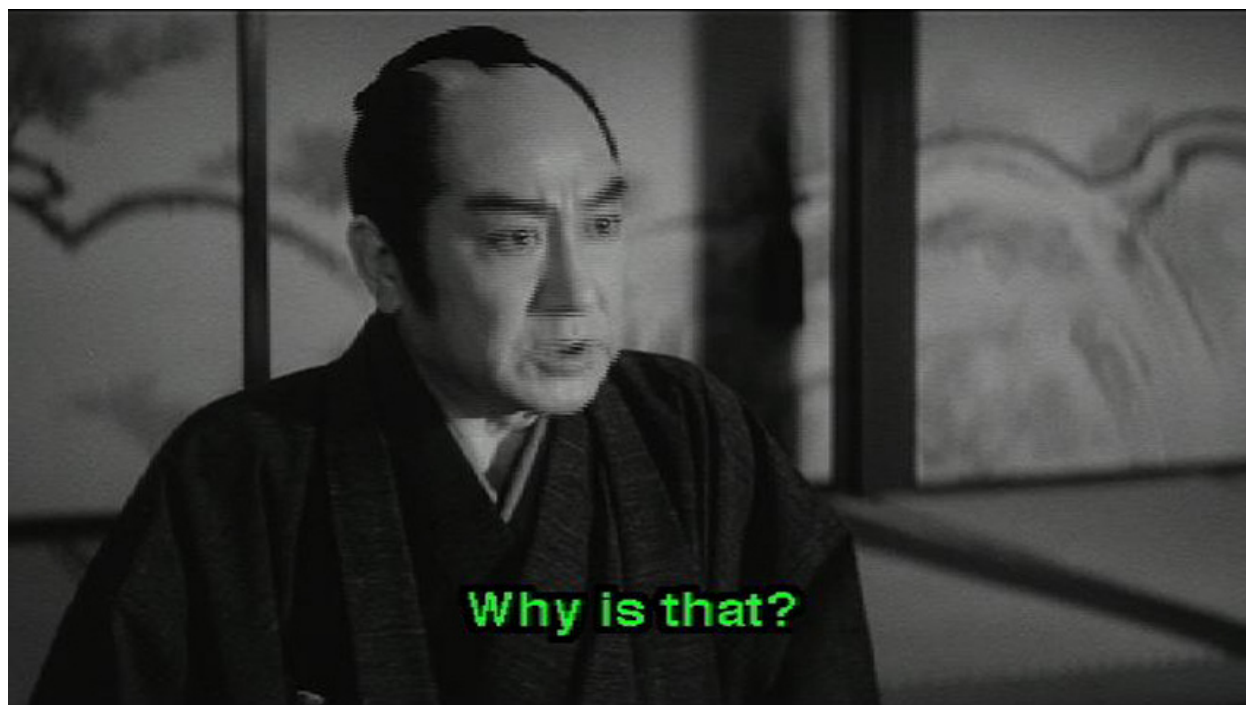


**Notice the horizontal lines that run throughout the entire image.**

# Interlacing Artifacts

*Horizontal scan lines that appear in some sections of the image.*



Notice the scan lines that appear around the actor's head and along his hand holding the phone to his ear.



Notice the scan lines that appear around and on the actor's head and face.

# Video Hits

*Loss of data in a picture due to tape issues and/or mastering issues.*



**Notice the colored blocks scattered throughout the frame, that are obviously not part of the original image.**



**Notice the blocks scattered throughout the frame that look as though part of another image.**

# Ghosting

*A shadow on an image due to formatting conversions.*



**Notice the shadow of the same image around the actor's hand and head.**



**Notice the overlay/shadow of the image on the dog's tail, legs and mouth.**

## Aliasing

*Jagged edges throughout or in some sections of the image.*



**Notice the block-stepping on all edges, most noticeable on the shoulder.**

## Tearing

*A video artifcact where the continuity between scan lines is lost, resulting in visible horizontal shifts inside the image. Banding is a severe form of even tearing across the entire image.*
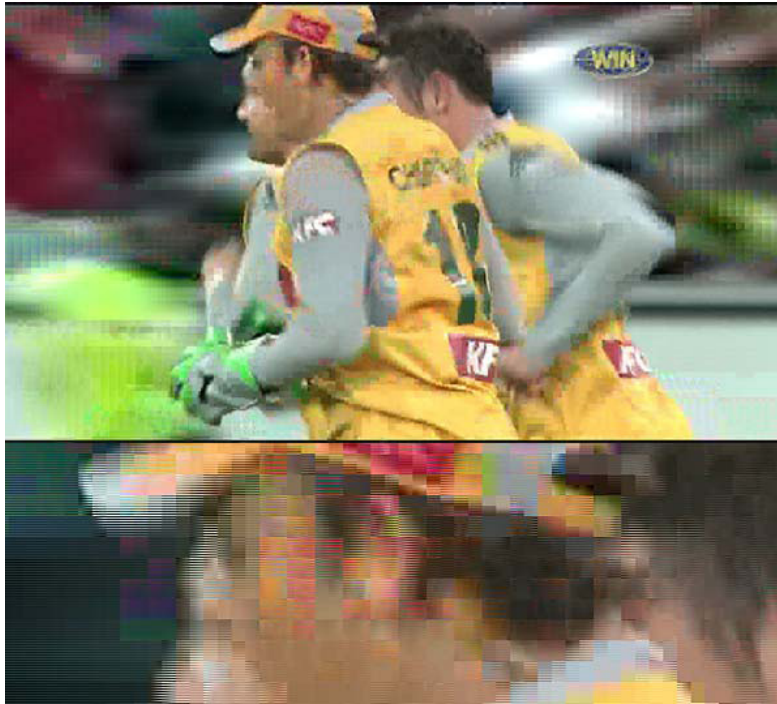


**Notice the offset of lines through the actors face (running across the image)**

## Macro-Blocking

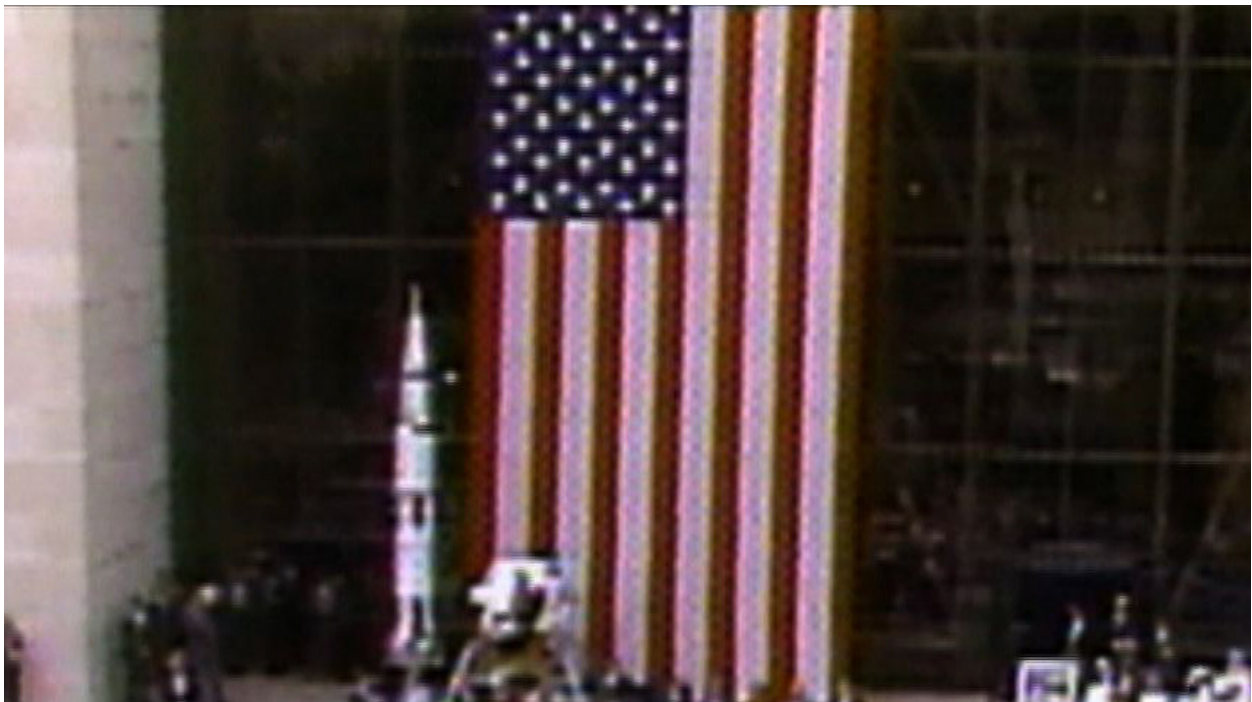*Loss of picture in several blocks of pixels. This is very rare to find in a file past ingestion.*



**Notice the even blocking throughout the image.**

## Dot Crawl

*Consists of animated checkerboard patterns which appear along vertical color transitions.*



**Notice the checkerboard pattern on the edges of the colors on the flag.**

# Dead Pixels: Crop Top/Bottom/Sides

*Dead pixel lines on the top, bottom or sides.*



Notice what seems to be a black border on all four edges of the image.

---

# Pixelation

*The resolution of an image or a portion of an image is lowered introducing visible pixels.*



Notice the sharp, square edges throughout, most noticeable on color transitions.

# Moire

*(More-AY) When two grid lines are overlaid at an angle, or when they have slightly different mesh size.*



**Most common on Black and White images, notice the rainbow effect throughout the image.**



**Notice the floor in the background, the grid-like lines create the rainbow effect across the entire area of the image.**

# VIDEO REPAIRS

*This is a guide on the best ways to edit and repair files with issues either inherent to the source, or created in the IDS workflow.*

## SECTION CONTENTS

# INTERLACING ARTIFACTS

*Horizontal scan lines that appear in some sections of the image.*

1. **TERANEX FIX**
   - Request a Teranex repair from the account Rep.
   - Upon receipt of the Teranex repair work order, Teranex the asset in one of the following two (2) ways:
     - Use Clean Cadence setting. (This will be the fix used for most content coming through the workflow)
     - Convert to Progressive (29.97p for video source, 23.98psf for film source).
     - These fixes yield a 90% success rate.
   - If unsure of what setting to use test a five (5) minute clip with known issues to determine best result.
   - See Teranex section for more information.

2. **MOTION FIX**
   - Use only on trailers, music videos or very quick segments of the feature (credits, transitions, etc.).
   - After opening motion, be sure to use "Import as Project..." from "File" pulldown to ensure the project settings match the asset.
   - Use "Deinterlace" filter. Choose from the following three method options at either "Upper" or "Lower" field dominance:
     - Duplicate
     - Interpolate
     - Blend
   - Choose which method looks best, and "Export..." the video from the "File" pulldown menu.
   - A fix in Motion yields a 50% success rate.

3. **FCP PATCH FIX**
   - Use only on a single frame of interlacing.
   - Patch in FCP using the previous or following frame.



Notice the scan lines that appear around the actor's head and along his hand holding the phone to his ear.

# VIDEO HIT

*Loss of data in a picture due to tape issues and/or mastering issues.*

1. Confirm whether or not hit is inherent to source material. (check multiple decks/stations, check channel conditions)

2. If hit is NOT inherent to the tape:
   - Re-Ingest the section of the video.
   - Patch re-ingested section into file.

3. If hit is on ONE frame, and IS inherent to the tape:
   - Patch in FCP using the previous or following frame.

4. If hit is a corruption (the hit gets worse as you scroll over it)
   - Re-Ingest the entire video.



**Notice the colored blocks scattered throughout the frame, that are obviously not part of the original image.**

# TEARING/BANDING

*Tearing is a video artifcact where the continuity between scan lines is lost, resulting in visible horizontal shifts inside the image. Banding is a severe form of even tearing across the entire image.*

1. Typically tearing is inherent to the source material, however, this must be confirmed, nonetheless. (check multiple decks/stations, check channel conditions)

2. If tearing is caused by bad cadence in the source material, request a teranex repair.
   - Upon receipt of the Teranex repair work order:
     - Use Clean Cadence setting.
     - Continue to process within normal workflow.
     - This yields a 20% success rate.

3. If tearing is on ONE frame, and IS inherent to the asset:
   - Patch in FCP using the previous or following frame.



Copyright ©2006 Bad Rap, LLC.

**Notice the offset of lines through the actors face (running across the image)**

# DUPE/DUP FRAMES

*Frames that are duplicated/repeated.*

1. If dupe frames are consistent throughout:
   - double check if capture has cadence and was made 29.97 progressive by mistake.
   - attempt to inverse telecine the capture file.

2. If dupe frames are just on small clips of slow motion effects:
   - these are inherent in the content and cannot be fixed.

3. If dupe frames are caused by uneven cadence in source material, request a teranex repair.
   - Upon receipt of the Teranex repair work order:
     - Use Clean Cadence setting.
     - Continue to process within normal workflow.
     - This yields a 20% success rate.

4. If dupe frames are in short segments and evenly spaced throughout the segment:
   - Cut out problem segment from file and open JES Deinterlacer.
   - On the front page: Enter frame number to skip. ("Skip every _____ frame" selection)
   - Use "Bare project" selection.
   - Export video, being sure the export settings are the same as source.
   - see JES Deinterlacer for more information.
   - Convert fixed segment file back to correct frame rate. ***process still under investigation***
   - Edit segment back into full content in FCP. Export.
   - This repair yields a 20% success rate.

# DROP FRAMES

*Frames that are missing from a sequence of frames, i.e. picture seems to jump ahead.*

1. Check if drop frames are inherent in source material (tape, hard drive, etc).

2. If drop frames are inherent to source material, a new source must be requested.

3. If drop frames were added during processing:
   - Try ingesting section through Teranex.
     - Use Clean Cadence setting.
     - Continue to process within normal workflow.
     - This yields a 75% success rate.
   - Test a different Compressor Template. This yields a 20% success rate.
   - Try making progressive in JES Deinterlacer (will only work if there is a clean cadence present throughout).
     - Use "Make Progressive" project for video source.
     - Use "Inverse Telecine" project for film source.
     - see JES Deinterlacer for more information.
     - This yields a 20% success rate.
   - Try ingesting through Adobe. ***process still under investigation***

4. If drop frames are introduced into source material that has been standards converted (for example: PAL to NTSC):
   - Request a master in the native format.
   - Check the film's country of origin on IMDB and determine if master's format is correct. Ingesting from a natively formatted master has the best chance of fixing the issues. Yields a 90% success rate.

# GHOSTING

*A shadow on an image due to formatting conversions.*

1.  Check if ghosting is inherent in source material (tape, hard drive, etc).

2.  If ghosting is inherent to source material, a new source must be requested.

3.  If ghosting was added during processing:
    - Try ingesting section through Teranex.
        - Use Clean Cadence setting.
        - Continue to process within normal workflow.
        - This yields a 75% success rate.
    - Test a different Compressor Template. This yields a 20% success rate.
    - Try making progressive in JES Deinterlacer (will only work if there is a clean cadence present throughout).
        - Use "Make Progressive" project for video source.
        - Use "Inverse Telecine" project for film source.
        - see JES Deinterlacer for more information.
        - This yields a 20% success rate.
    - Try ingesting through Adobe. ***process still under investigation***

4.  If ghosting is introduced into source material that has been standards converted (for example: PAL to NTSC):
    - Request a master in the native format.
    - Check the film's country of origin on IMDB and determine if master's format is correct.  Ingesting from a natively formatted master has the best chance of fixing the issues. Yields a 90% success rate.



**Notice the shadow of the same image around the actor's hand and head.**

# ALIASING

*Jagged edges throughout or in some sections of the image.*

1. Confirm whether or not aliasing is inherent to source material. (check multiple decks/stations, check channel conditions.

2. If aliasing is NOT inherent to the tape:
   • Re-Ingest the section of the video.
   • Patch re-ingested section into file.

3. If aliasing is inherent to source material:
   • Ingest through Teranex.
     • Under the "enhance" tab in Teranex, turn "anti-aliasing" on.
     • Set detail enhance set to -3 or -4. This softens edges, particularly on text.
   ***process still under investigation***

   OR

   • Output from Compressor with "noise removal" checkbox selected in filters tab. Settings known to have worked include:
     • apply to: all channels
     • iterations: 1
     • algorithm: replace
   ***process still under investigation***

4. Motion can sometimes repair aliasing if it is very clean and even using deinterlace video filter.
   • Use only on trailers, music videos or very quick segments of the feature (credits, transitions, etc.).
   • After opening motion, be sure to use "Import as Project..." from "File" pulldown to ensure the project settings match the asset.
   • Use "Deinterlace" filter. Choose from the following three method options at either "Upper" or "Lower" field dominance:
     • Duplicate
     • Interpolate
     • Blend
   • Choose which method looks best, and "Export..." the video from the "File" pulldown menu.
   • A fix in Motion yields a 40% success rate.

5. If aliasing is added by cropping in Compressor:
   • Give progressive file to Transcoding Technician to crop in Rhozet.
   • Yields a 90% success rate.



**Notice the block-stepping on all edges, most noticeable on the shoulder.**

# DOT CRAWL

*Consists of animated checkerboard patterns which appear along vertical color transitions.*

1.  Dot Crawl cannot be added by any process performed in house.

2.  If dot crawl is inherent to source material:
    *   Ingest through Teranex.
        *   Under the "enhance" tab in Teranex, turn "anti-aliasing" on.
        *   Set detail enhance set to -3 or -4. This softens edges, particularly on text.
    ***process still under investigation***

    OR

    *   Output from Compressor with "noise removal" checkbox selected in filters tab. Settings known to have worked include:
        *   apply to: all channels
        *   iterations: 1
        *   algorithm: replace
    ***process still under investigation***

---

A special note on Dot Crawl:
Dot crawl is a vestige of analog video broadcasting in which chrominance and luminance signals get scrambled along vertical color transitions. Once introduced into digital video there is nothing we can do to completely repair it.

---
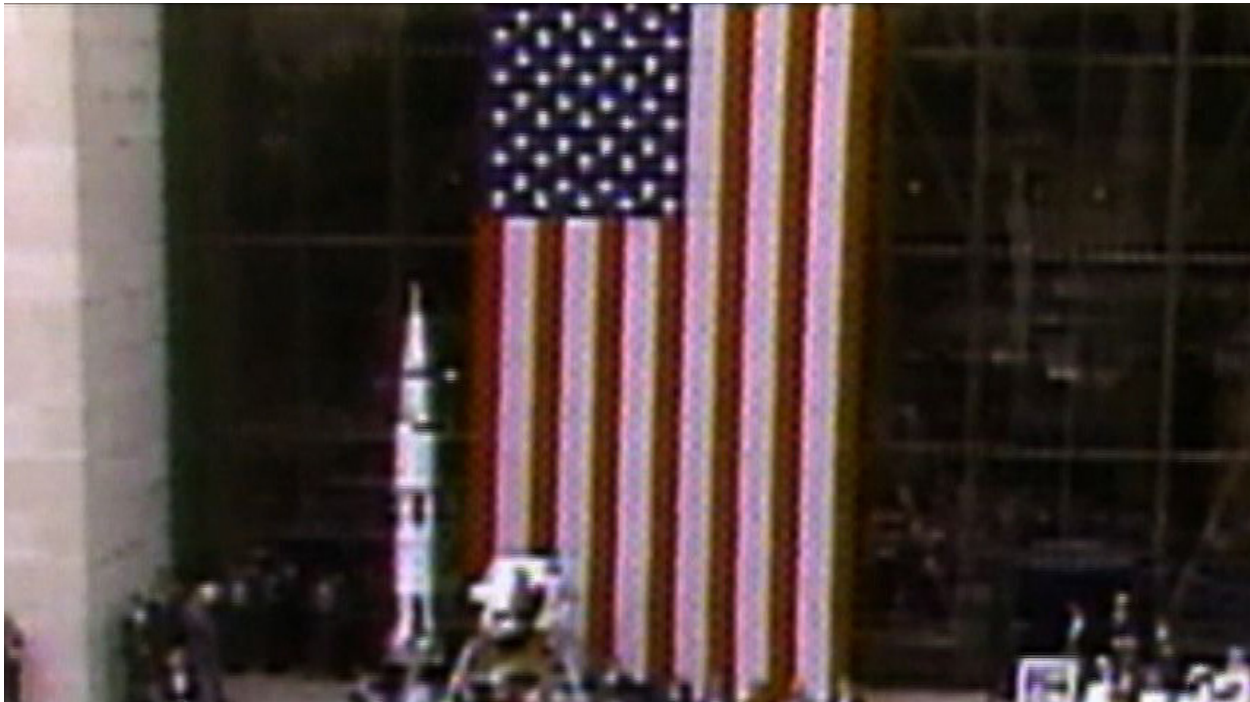


**Notice the checkerboard pattern on the edges of the colors on the flag.**

# PIXELATION

*The resolution of an image or a portion of an image is lowered introducing visible pixels.*

1.  Confirm whether or not pixelation is inherent to source material. (check multiple decks/stations, check channel conditions.

2.  If pixelation is NOT inherent to the tape:
    *   Re-Ingest the section of the video.
    *   Patch re-ingested section into file.

3.  Before attempting any other repair, request a higher resolution master from the rep, if available.

4.  As a last resort, If pixelation is inherent to source material:
    *   Ingest through Teranex.
        *   Under the "enhance" tab in Teranex, turn "anti-aliasing" on.
        *   Set detail enhance set to -3 or -4. This softens edges, particularly on text.
    ***process still under investigation***

    OR

    *   Output from Compressor with "noise removal" checkbox selected in filters tab. Settings known to have worked include:
        *   apply to: all channels
        *   iterations: 1
        *   algorithm: replace
    ***process still under investigation***



**Notice the sharp, square edges throughout, most noticeable on color transitions.**

# MOIRE

*(More-AY) When two grid lines are overlaid at an angle, or when they have slightly different mesh size.*

1.  Confirm whether or not moire is inherent to source material. (check multiple decks/stations, check channel conditions.

2.  If moire is NOT inherent to the tape:
    *   Re-Ingest the section of the video.
    *   Patch re-ingested section into file.

3.  If moire is inherent to source material:
    *   Ingest through Teranex.
        *   Under the "enhance" tab in Teranex, turn "anti-aliasing" on.
        *   Set detail enhance set to -3 or -4. This softens edges, particularly on text.
    ***process still under investigation***

    OR

    *   Output from Compressor with "noise removal" checkbox selected in filters tab. Settings known to have worked include:
        *   apply to: all channels
        *   iterations: 1
        *   algorithm: replace
    ***process still under investigation***

4.  For moire that causes a rainbow effect on black and white images, one option is to apply Final Cut Pro's "Desaturate" filter (Located in Effects/Video Filters/Image Control). This should be used sparingly and only on the problem scene, not the entire movie.

5.  If moire is exacerbated by cropping in Compressor:
    *   Give progressive file to Transcoding Technician to crop in Rhozet.
    *   Yields a 90% success rate.



**Most common on Black and White images, notice the rainbow effect throughout the image.**

# MATTING LOGOS/URLS OUT OF CREDITS

*There are some instances where content contains a URL or Logo that is unacceptable
to send to the platforms and must be matted out.*

Note:  This should only be done on content with a black background.
 Anything else requires a new source from the provider

1.  Drop content into FCP timeline, being sure to match the sequence settings to your content when prompted.

2.  Using the blade tool (b key), make an edit on either side of the content you need to matte.

3.  Double click the clip in the timeline to open it in the Viewer window.

4.  Under the Effects pulldown select Video Filters/Matte and then Eight-Point or Four-Point Garbage Matte as needed.

5.  Click the Filters tab in the Viewer window to change the parameters of your matte.

6.  Each point can be set by clicking the "+" radio button and then clicking where you want it to be on the Canvas preview.

7.  By default the matte appears around the points.  I prefer to matte this way to make sure I only see the content I am trying to get rid of and then I click "Invert".

8.  You can layer as many Garbage Mattes as you need on a clip for more complex matting.

Note:  Adding Motion to mattes is possible for scrolling credits or other moving content but this process can be time consuming and should only be attempted by someone who is very familiar with this type of work to avoid wasting time trying to make it work.

# SPECIAL CROPPING ISSUES

*There are some instances where content has a few scenes which require much greater cropping than the rest of the content, and these spots make up more than 10% of the content's runtime, the provider may request we do an FCP edit to repair those scenes in order to comply with iTunes' cropping specs. We rarely do this and a fixed master should be requested from the provider first.*

1.  Trim to scenes with cropping issues in Quicktime and Save As independent clips being sure to leave some extra footage at head and tail.

2.  Crop individual clips in Compressor being sure not to distort the aspect ratio by cropping unevenly.

3.  Edit cropped clips back into content in FCP and export.

Note:  If content is letterboxed the repaired clips may need to be matted to match the rest of the content

# SUBTITLE BURN-ON

*There are some instances where content is a clean source, meaning no text is on the video.
In certain of these cases the account requests we burn on subtitles to the video
to create a new source with the subtitles on the video.*

1. Drop content into FCP timeline, being sure to match the sequence settings to your content when prompted.

2. Add a new video track by right-clicking above your video track and selecting Add Track.

3. Drop your subtitle .mov onto the new video track.  Across the top of the timeline a red line will appear indicating the video is not rendered.  Do not bother to render it as it might take hours and will only need to re-render if the subtitles are shifted at all.

4. Locate the first subtitle and check if it lines up with the matching dialogue by scrubbing across the timeline using forward and back arrow keys.
   A good way to check if the lines are lining up correctly is to listen/look for proper nouns
   (people's names, place names) which are not typically translated.

5. Once the beginning is synced, check other spots throughout the content to ensure it is in sync throughout.  If it is, export for FCP per normal.  This takes longer than normal export because the video require rendering.

6. If the subtitles drift out of sync you must return the title to the person who made the subtitle file for a fixed file.

Note:  Be sure to keep both sources (CLEAN and SUBTITLED) when process is complete.

# INTERLACED PAL CONTENT

*PAL should never be interlaced, but if it is digitized at the wrong field dominance,
it can appear to have interlacing.*

1. Confirm whether or not interlacing is inherent to source material. (check multiple decks/stations, check channel conditions.

2. If interlacing is NOT inherent to the tape:
   • Re-Ingest the section of the video.
   • Patch re-ingested section into file.

# AUDIO REPAIRS

*The basic workflow and steps to editing/repairing audio content at Inception Digital Services.*

## SECTION CONTENTS

# AUDIO HIT

*Digital glitches, pops, garbles, clipping that occur in the audio when they should not.*

1. Confirm whether or not hit is inherent to source material. (check multiple decks/stations)

2. If hit is NOT inherent to the tape:
    • Re-Ingest the section of the video.
    • Patch re-ingested section into file.

3. If hit IS inherent to the tape:
    • Patch the hit using another audio track, if available.
    • OR rip the DVD and use the DVD audio.

# EXPORTING 5.1 AUDIO FROM FCP

*When editing/repairing a file with 5.1 audio, it is important to export the audio correctly to avoid errors in the file.*

1. When you are ready to export 8 channel audio from your Final Cut timeline, click on the Sequence pulldown and select Sequence Settings.

2. Select the audio outputs tab.

3. On the Outputs pulldown select 8.

4. Change each grouping to Dual Mono and change each Downmix pulldown to 0.  Select OK.

5. Right-click at the head of each audio track, toggle Audio Outputs and select the proper track number. I like to double check all my track output numbers before exporting.

# AUDIO CONFORM

*There are several reasons for the need of an audio conform.*
*Conforming audio means syncing the 5.1 to the Stereo to create a good 8 channel mix.*

1. Place source video and stereo audio in FCP timeline.  Be sure to change your sequence settings to match your video settings when prompted.  Move stereo to audio tracks 7 and 8.

2. Drop 5.1 audio into timeline and confirm it is in the proper channel order (left, right, center, lfe, left surround and right surround).  This should be done by looking at the waveforms and listening to each channel individually.

3. Trim any excess audio from the head of the 5.1, being sure to remove any tone and 2-pops.

4. Sync up 5.1 to stereo using a spot as close as possible to the beginning, preferably the very first audio you hear.

5. Scroll to the end and see if audio is in sync throughout.  If it is, trim any excess audio from tail of 5.1.  This is a good time to double check black slugs at head and tail.

6. Set your audio outputs in System Settings and set tracks to output correctly.  Export.

**IF AUDIO IS NOT IN SYNC WHEN SIMPLY DROPPED INTO THE TIMELINE:**

1. Sync up the beginning of the content then find an obvious sound near the end to use as reference (a car door slamming, etc).

2. Place a marker on that sound on the Video/Stereo tracks in the timeline by clicking those tracks and hitting the "m" key.  Be sure your 5.1 audio tracks are linked by highlighting them all in the timeline and and selecting Link from the Modify pulldown.

3. Find the same sound in the 5.1 audio and place a marker on it.  If sound on 5.1 occurs before the stereo, the 5.1 needs to be slowed down.  If the sound on 5.1 occurs after the stereo, it needs to be sped up.

4. Right-click on your 5.1 audio and click "Speed".  The speed change menu will appear.  Make sure Constant Speed is selected.  There are two typical percentage changes that will work for most audio conforms:
   • If 5.1 marker is before stereo marker, adjust audio speed to 99.9%.
   • If 5.1 marker is after stereo marker, adjust audio speed to 100.1%.

**IMPORTANT:**  Once audio speed is adjusted you can no longer rely on waveforms as they become inaccurate.  Look at the markers you placed and BE SURE TO LISTEN and reset markers as need be as they can sometimes shift around when audio speed is changed!!

5. If one of these percentage changes does not do the trick, start slowly adjusting the duration of the 5.1 audio in the Speed window.  Adjusting the duration frame by frame is much more accurate than adjusting percentage.  Continue to zero in on the proper duration until synch is achieved, then set your audio outputs in System Settings and set tracks to output correctly.  Export.

Remember to check for sync throughout the feature before exporting.

# ASSET CHECKLISTS

*Before being uploaded, all complete packages at IDS will undergo
a thorough inspection, confirming all assets and meta are correct.*

*The following contains example checklists used as guides for pacakge review.*

## SECTION CONTENTS

## Package Pre-Check

☐ Check all assets are in the .itmsp folder in Packaging
- Chapter Images
- Art .jpg
- Captions/Subtitles or PDF
- Best source letter (if needed)
- Preview QCR
- Preview .mov
- Source QCR
- Source .mov
- metadata .xml

## Check All Assets

☐ Chapter Images
- All Images are cropped and the same size
- DPI = 72
- Color = RGB
- Content is acceptable to MPAA/IDS standards
- Last image is of the Credits (if possible)

☐ Art .jpg
- Size  = 1400x2100
- DPI = 72
- Color = RGB
- Content is acceptable to MPAA/IDS standards
- No Logos, URL's, MPAA ratings

☐ Captions/Subtitles or Valid Reason Code

  ☐ Captions
  - .scc NDF
  - In sync beginning, middle, and end

  ☐ Subtitles
  - .itt (see chart for acceptable frame rates)
  - In sync beginning, middle, and end

  ☐ Reason Code
  - Valid Reason Code confirming no Closed Captions for title
  - Code states one of the accepted reasons :
    - "NEVER_IN_US": Video has never been exhibited on U.S. television.
    - "ARCHIVAL_CONTENT": Video is archival content.

☐ Source Notes
- PDF stating we have the best possible source for title

☐ Preview QCR

☐ Preview .mov
- Apple ProRes 422 (HQ)
- First second of black
- Last second of black
- Is there a Logo
- In sync : beginning, middle and end
- All audio Channels have audio, are in order and in sync
- Cropping numbers are provided
- Content is acceptable to MPAA/IDS standards

☐ Source QCR

☐ Source .mov
- Apple ProRes 422 (HQ)
- First second of black
- Last second of black
- Is there a Logo
- In sync : beginning, middle and end
- All audio Channels have audio, are in order and in sync
- Cropping numbers are provided
- Content is acceptable to MPAA/IDS standards

☐ Metadata .xml
  ☐ Match meta top to bottom
  - Copyright Date is in front (no @)
  - Theatrical release Date "YYYY-MM-DD"
  - Genres
  - Ratings
  - Cast Names and Charaters
  - Directors, producers, screenwriters
  - All Chapters are there

  ☐ Check last chapter time with source .mov

☐ Cropping numbers match QCR and source .mov

☐ Captions Codes - If "false" then...
- "NEVER_IN_US": Video has never been exhibited on U.S. television.
- "IN_US_NO_CAPTIONS": Video has been exhibited on U.S. television, but never with closed captions.
- "EDITED_FOR_INTERNET": Video has been substantially edited for Internet distribution.
- "ARCHIVAL_CONTENT": Video is archival content.

☐ Source notes, Captions/Subtitles, PDF's and .mov files are there with Checksums and sizes

☐ Is the source Textless? Is there Forced Narrative? are there Subtitles?

☐ Product Info
- Territory
- Cleared for sale "true/false"
- Cleared for HD sale "true/false"
- Price tier "#"
- Sale Start Date "YYYY-MM-DD"
- Cleared for VOD "true/false"
- VOD type "Library/New Release"
- VOD Date "YYYY-MM-DD"
- Physical release Date "YYYY-MM-DD"
- Cleared for HD VOD "true/false"

# AUDIO CHECKLIST

☐ Audio is present and consistent throughout video
- Audio at beginning (1 second of black before audio starts)
- 1 second of black after audio ends
- Audio at throughout Credits/End of File

☐ Audio exists on every Audio Track

☐ 5.1 labeled correctly/In the proper order
- Track 1: Left
- Track 2: Right
- Track 3: Center
- Track 4: LFC
- Track 5: Left Surround
- Track 6: Right Surround
- Track 7: Left Total
- Track 8: Right Total

☐ Audio clean of the following:
- hits
- 2 Pop
- pops
- drops
- sync issues
- drift issues

☐ Stereo labeled properly

☐ *NO "MONO" EVER*

☐ No MATRIX Stereo

☐ Audio Codec is Correct
- Audio is LPCM
- Audio fits one of the following:

☐ 24-bit Integer (Little Endian), 48.000 kHz

☐ 24-bit Integer (Big Endian), 48.000 kHz

☐ 16-bit Integer (Little Endian), 48.000 kHz

☐ 16-bit Integer (Big Endian), 48.000 kHz

# VIDEO CHECKLIST - FILM

☐ Correct Video Codec
    **Apple ProRes 422 (HQ)**

☐ Correct Video Bit Rate
- HD: 220 Mbps
- SD: 40-60 Mbps

☐ Correct Pixel Ratio
    **HD: Pixel ratio in parenthesis = AUTOMATIC FAIL (Has CLAP)**
    **SD: NO Pixel ratio in parenthesis = AUTOMATIC FAIL**

| **Acceptable Examples:** | SD 4x3: 720x480 (640x480) | SD PAL 4x3: 720x576 (768x576) |
|---|---|---|
| HD: 1920x1080 | SD 16x9: 720x480 (853x480) | SD PAL 16x9: 720x576 (1024x576) |

☐ Correct Aspect Ratio:
- Letterbox (Cropping numbers provided in QCR)
- Pillar Box (Cropping numbers provided in QCR)
    *See Frame Size Aspect Ratio Examples for more information*

☐ One (1) second of black at START of file.
    One second of black before either or both the Video and Audio begin, whichever starts FIRST.
    Can have NO MORE and NO LESS than 1 seconds of black. Anything else Fails QC & must be trimmed.

☐ One (1) second of black at END of file.
    One second of black after either or both the Video and Audio ends, whichever ends LAST.
    Can have NO MORE and NO LESS than 1 seconds of black. Anything else Fails QC & must be trimmed.

☐ Credits
    All videos must have credits at the beginning and/or end of the video.

☐ Video Cards with unacceptable content:
    Unacceptable video cards include:

| | | |
|---|---|---|
| • Video Information Cards | • Web URLs (Trailers Only) | • HD Logo |
| • Color Bars | • DVD Logo | • Etc. |

☐ Video clean of the following issues :

| | | |
|---|---|---|
| • Hits | • Field Order Issue | • Dup Frames |
| • Interlacing | • Dot Crawl | • Dropped Frames |
| • Interlacing Artifacts | • Moire | • Freeze Frame |
| • Aliasing | • Corruption | |
| • Tearing | • Pixelation | |
| • Ghosting | • Dead Pixels (Crop Top, Bottom, Sides) | |

# FILM PACKAGE CHECKLIST - ITUNES

☐ Checksum Assets

    ☐ Source      ☐ Preview      ☐ Key Art      ☐ Chapter Images

    ☐ Source QCR      ☐ Preview QCR      ☐ Caption File      ☐ Subtitle File, etc.

☐ Metadata
    Provider, Vendor ID, Title, Synopsis, Cast, Crew, etc.

☐ Product Info
    VOD/EST Availability and Dates.

☐ Chapter Titles
    As listed in Metadata Excel Sheet. If "Chapter Create" then use "Chapter 1, Chapter 2, etc."

☐ Chapter Times
    In HH:MM:SS format. Round to the nearest second.

☐ Verify spoken locale
    Play both source and preview files. Double check the spoken language matches what is in the metadata. Verify locale names and codes with IDS Naming Spreadsheet.

    ☐ Source Spoken Locale: _____

    ☐ Preview Spoken Locale: _____

☐ Verify aspect ratio

    ☐ Source    _____

    ☐ Preview    _____

☐ Verify chapter times are correct

# REVISION HISTORY

*A comprehensive history of all revisions made to the*
**IDS THIRD PARTY MANUAL**
*arranged by version number, and section,*
*starting with the latest changes first.*

# REVISION HISTORY

## VERSION 4.1
- Added 'MULTI CHANNEL AUDIO CONFIGURATION (5.1 PLUS STEREO)' pg6
Breakdown and description of what should be on each channel.
- Updated 'KEY ART SPECIFICATIONS' pg9.

  Cannot contain Credit Blocks or Film Festival Laurels.

## VERSION 4.0
- Updated 'TRAILER CONTENT SPECIFICATIONS' pg7

  Acceptable content has changed regarding nudity, guns, and censorship.

## VERSION 3.9
- Updated 'GENERAL CHECKLIST: iTUNES' pg37

  No longer accepting PDF Letters - Now accepting Valid Reason Codes.

## VERSION 3.8
- Updated master pages; Content pages now plainer, with logo and copyright statement.
- Added "HDD" as 'ACCEPTABLE TAPE SOURCE' in "ASSET REQUIREMENTS"
- Added CC Line on "METADATA NEEDED FOR DELIVERY" pg7
- Updated "TOP REASONS FOR ASSET FAILURE"
    - Point 2
- Revised "ASSET CHECKLIST" contents

## VERSION 3.7
- Updated format to include new Company Logos and Designs.
- Updated "TRAILER CONTENT SPECIFICATIONS"
    - Compiled detailed list to describe content "Acceptable for All Audiences"
- Updated "AUTOMATIC ASSET FAILURES"
- Added "ASSET CHECKLIST" section
- Added "VIDEO REPAIRS" and "AUDIO REPAIRS" sections